Individual Factors Predicting Mental Health Court Diversion Outcome

by

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A Thesis Submitted in Partial Fulfillment
of the Requirements for the Degree of

Master of Arts

in

The Faculty of Social Science and Humanities

Criminology

University of Ontario Institute of Technology

June 2011

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Abstract

Little research has examined which individual factors may predict mental health court diversion outcome. Using data provided by a non-profit mental health services agency operating in the Durham Region in Ontario, this study examined 419 persons with mental illness participating in a post-charge diversion program. Socio-demographic and clinical characteristics were employed to investigate the relationship between client-specific factors and level of program completion. Logistic regression results revealed that unemployment was a significant predictor of program completion. Employment and symptom severity were predictive of partial completion of court diversion. Additionally, participants who did not complete programming were more likely to have a concurrent disorder and were more likely to be residentially unstable than participants who did complete programming. These findings are discussed with respect to their implications for practice and future research.

Keywords: Mental health diversion, treatment outcome, client-specific characteristics.

Acknowledgments

First and foremost, to my supervisor, Dr. Hannah Scott, thank you for your endless patience and support. You have been a wonderful mentor. Without your thoughtful advice and continuous encouragement this project would not have been possible.

To the members of my supervisory committee, Dr. Kimberley Clow and Dr. Wendy Stanyon, thank you for all of the time and effort you have dedicated to the development of this research project. I am privileged to have benefited from your knowledge and insight.

I would like to express my sincere gratitude to Durham Mental Health Services for graciously agreeing to partner this research project. In particular, I would like to provide a special thank you to Sheri Rice for all of your assistance. Your passion for helping persons living with mental illness is admirable and this project would not have been possible without your involvement.

To my family, thank you for your continuous love and encouragement. You have instilled in me an appreciation of the value of education for which I am forever thankful. I hope I have made you proud. To my close friends Craig Smith and Laura MacDiarmid, without your emotional support and unwavering confidence in me I would not have been able to make it through the difficult days.

Lastly, I would like to gratefully acknowledge the financial support provided by the Social Sciences and Humanities Research Council of Canada as well as the Ontario Graduate Scholarship fund.

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Individual Factors Predicting Mental Health Court Diversion Outcome

Mental health diversion emerged in the early 1990s as a response to the criminalization of mental illness and an overburdened justice system. For the last two decades the population of mentally ill accused in the Canadian criminal justice system has been growing at a staggering rate of more than 10 percent per year (Schneider, 2000, 2010; Schneider, Bloom, & Heerema, 2007). In fact, research from North America has reported that the number of persons with mental illness in jails and prisons is greater than the number of mentally ill individuals being treated in the community, making correctional facilities the largest *de facto* institution for the mentally ill population (Cosden, Ellens, Schnell, Yasmeen, & Wolfe, 2003; Gilligan, 2001; Ryan, Brown, & Watanabe-Galloway, 2010).

A number of social and legal factors are commonly referenced in an attempt to explain the growing number of individuals with mental illness in the justice system. Frequently suggested explanations for this growth include the perception that community-based mental health services are ill-equipped to deal with offender populations (Lamb, Weinberger, & Gross, 2004), the implementation of tougher punishments for substance-related and quality of life offences (Lurigio & Harris, 2007), and the misconception that claiming "not criminally responsible" is a "get-out-of-jail free" card for the criminally accused (Schneider et al., 2007, p. 23). Additionally, it is often suggested that the growing number of mentally ill individuals in the criminal justice system can be attributed to the downsizing and restructuring of formal mental health-care services (Lamb & Weinberger, 1998; Schneider et al., 2007; Torrey, 1997). However, in Canada, the majority of psychiatric bed closures occurred between 1959 and 1969 (Sealy

& Whitehead, 2006), suggesting that deinstitutionalization is not to blame for the current increase in the number of mentally ill accused (Lurie, 2009). Instead, this growth is likely related to a lack of adequate support for mentally ill persons residing in the community, coupled with changes in the legal landscape and amendments to the Criminal Code (Lurie, 2009).[1]

Without access to adequate community support services, many mentally ill individuals suffer frequent relapse, rely on emergency departments for psychiatric care, and end up homeless or in jail (Lamb et al., 2004; Mulvale, Abelson, & Goering, 2007). In fact, according to Hartford, Heslop, Stitt, and Hoch (2005), persons with mental illness who reside in the community may be more vulnerable to arrest and are often jailed for relatively minor offences when compared to their non-mentally ill counterparts. As Lurigio and Harris (2007) have suggested, "These individuals are often arrested, charged, and punished for publicly displaying the signs and symptoms of their disorders in ways that are not (or are minimally) harmful to people or property" (p. 148). As a result, instead of receiving appropriate psychiatric and community-based mental health services, many mentally ill persons are inappropriately incarcerated for minor criminal offenses and become "patients of the criminal justice system" (Schneider et al., 2007, p. 26).

Consequently, many communities have developed justice alternatives, such as diversion, for use with low-risk mentally ill offenders (Ministry of Health and Long-Term Care [MOHLTC], 2006). These programs are intended to provide voluntary

[1] On February 4, 1992, the government of Canada enacted Bill C-30. This legislation made amendments to Criminal Code provisions dealing with mentally disordered offenders. Specifically, the amendments contained in Bill C-30 dealt with issues of criminal responsibility, fitness to stand trial assessments, assessment orders, and dispositions. Prior to this time the law had remained virtually unchanged for over a century (Swaminath, Norris, Komer, & Sidhu, 1993).

rehabilitative programming in place of traditional criminal sanctions (MOHLTC, 2006). Hartford (2004) defined mental health diversion more specifically as:

> A process where alternatives to criminal sanctions are made available to people with mental illness who have come into contact with the law for minor offenses. The objective is to secure appropriate mental health services without invoking the usual criminal justice control of trial and incarceration. Treating the mental disorder, it is hoped, reduces the likelihood of further offending and the focus is on helping individuals to access community support and treatment. (p. 8)

More generally, mental health court diversion is founded upon the principles of therapeutic jurisprudence. The traditional criminal justice system has struggled, and continues to struggle, to meet the needs of individuals with mental illness (Schneider et al., 2007). For mentally ill persons, contact with the criminal justice system can be a frightening and debilitating experience. Therapeutic jurisprudence seeks to use the application of the law to produce therapeutic outcomes for the accused (Wexler, 2009). Unlike the traditional retributive model of justice, therapeutic jurisprudence is a rehabilitative approach, aimed at addressing the underlying causes of criminality and managing future behaviour. It is intended to be implemented alongside the existing justice system to promote therapeutic goals rather than punitive sanctions (Schneider et al., 2007). As such, mental health courts have adopted the principles of therapeutic jurisprudence in an attempt to apply the law in a manner that benefits, rather than disadvantages, offenders with mental illness (Schneider et al., 2007).

Mental health diversion and court support services across the province operate on six fundamental principles. The first principle involves safety and security. Ensuring

public safety, as well as the safety of program clients, is the central tenet of diversion services (MOHLTC, 2006). Secondly, community service agencies rely on the client, the client's support network, and all other relevant information in order to make informed decisions about the appropriateness of diversion. The third principle of implementation is the recovery approach. Diversion programs "emphasize client choice, flexibility in services, individualized supports, and the importance of peers, families, significant others, and communities in supporting people with mental health needs" (MOHLTC, 2006, p. 10). The fourth principle asserts that program clients have timely access to the appropriate services and supports. Fifth, all services and supports should be coordinated across systems to ensure communication and ease of access. The final principle emphasizes the importance of education. It is the responsibility of mental health diversion services to ensure evidence-based practice and provide education to encourage public understanding of the issues plaguing persons with mental illness (MOHLTC, 2006).

Diversion programs for persons with mental illness include a variety of services such as crisis response, housing support, family support, intensive case management, and links to education and employment services. Further, diversion may occur at a number of juncture points during the criminal justice process. As Schneider et al. (2007) described, diversion can occur prior to arrest, before the accused's initial court appearance, following the accused's first appearance, after a bail hearing, prior to the accused's plea, post-plea in the form of an alternate sentence, and even post-sentence. Primarily, however, diversion programs can be classified into two broad categories: pre-charge diversion and post-charge diversion.

Pre-charge diversion programs involve the use of diversion before criminal charges are laid. Individuals who have engaged in criminal conduct do not face legal system involvement but instead, are immediately redirected into the mental health system (Sirotich, 2009). These persons may be referred to mental health service agencies or taken to an emergency department for psychiatric assessment or hospitalization. Pre-charge diversion may occur through a variety of programs, however, the most commonly employed models are police-based response programs, joint police and mental health teams, and crisis response centers (Sirotich, 2009).

In contrast, post-charge diversion programs involve the use of diversion after individuals have been arrested and charged. Lattimore, Broner, Sherman, Frisman, and Shafer (2003) identified three models of post-charge diversion: jail-based programs, court-based programs, and specialized mental health courts. Jail-based models are run by correctional personnel who are responsible for identifying and diverting mentally ill offenders from custody into community-based services (Lattimore et al., 2003). In comparison, court-based diversion programs employ mental health service workers who work within the courthouse. These individuals receive referrals from the court and are responsible for screening and assessing offenders eligible for diversion. In court-based diversion programs, there is not a dedicated docket for offenders with a mental illness. Rather, cases eligible for diversion are heard before various judges in a number of courtrooms. In contrast, in mental health court the diversion process occurs before a specialized court where legal professionals have training in working with persons with mental illness (Sirotich, 2009).

Although mental health diversion is a relatively new area of study with limited outcome-based research, the use of diversion has been associated with positive outcomes for both mentally ill individuals and the community. Early studies evaluating the efficacy of mental health diversion have found that these programs have a positive effect on criminal justice outcomes (Broner, Lattimore, Cowell, & Schlenger, 2004; Broner, Mayrl, & Landsberg, 2005; Cosden, Ellens, Schnell, & Yasmeen, 2005; Cosden et al., 2003; Frisman et al., 2006; Hoff, Baranoski, Buchanan, Zonana, & Rosenheck, 1999; Lamb, Weinberger, & Reston-Parham, 1996; Lamberti et al., 2001; Steadman & Naples, 2005) and, to some extent, on mental health and quality of life improvements (Broner et al., 2005; Mitton, Simpson, Garnder, Barnes, & Mcdougall, 2007; Shafer, Arthur, & Franczak, 2004; Steadman & Naples, 2005). When compared to traditional criminal justice processing, diversion program participation has been shown to delay re-arrest, decrease the number of days spent in jail or prison, and for individuals who successfully complete, mental health diversion programming has been found to be associated with a reduction in recidivism (Broner et al., 2004, 2005; Cosden, et al., 2003, 2005; Frisman et al., 2006; Hoff et al, 1999; Lamb et al., 1996; Lamberti et al., 2001; Naples & Steadman, 2003). For example, an earlier research study conducted by Hoff and colleagues (1999) compared individuals who were diverted with individuals who were eligible for diversion but did not receive these services in an attempt to determine whether participation in a diversion program significantly reduced recidivism. The authors found that enrolment in diversion was associated with a reduction in incarceration days (Hoff et al., 1999). A similar study by Lamberti et al. (2001) noted that completion of a post-charge diversion program was associated with a reduction in the number of participant re-arrests and a

decrease in the average number of days spent in jail. On average, the authors observed that participant jail days dropped from 107 days the year before treatment to 46 days the year following treatment (Lamberti et al., 2001).

More recently, Cosden et al. (2003) conducted a single-site evaluation of a mental health court community treatment program. The authors employed an experimental design, with participants randomly assigned to community-based treatment programming or to a treatment as usual group consisting of traditional criminal justice processing. At the 12-month assessment, Cosden and colleagues (2003) found that a similar proportion of clients in each condition had received a new criminal charge. Nevertheless, the authors reported that, when compared to the treatment as usual group, individuals who participated in intensive community treatment were less likely to have been convicted. In addition, the charges incurred by diversion participants were less serious than their non-diverted counterparts. A subsequent assessment conducted at 24 months revealed that participants of the intensive community treatment program had experienced a greater reduction in jail days (Cosden et al., 2005).

Additionally, participants of diversion programming have reported increased access to community-based mental health treatment services and enhancements in quality of life and mental health functioning (Steadman & Naples, 2005; Sly, Sharples, Lewin, & Bench, 2009). In fact, studies have demonstrated that diverted clients experience improvements in independent living skills, reduced substance abuse (Cosden et al. 2003), lower rates of violent behaviour, a decrease in homelessness, and fewer psychiatric hospitalizations (Lamb et al., 1996). Further, in their comparative analysis of diverted and non-diverted mental health court participants, Steadman and Naples (2005) observed that

diverted individuals were more likely to report receiving three or more counselling sessions and more likely to take prescribed medications than their non-diverted counterparts.

In addition to improved criminal justice and quality of life outcomes, the use of mental health diversion has also been associated with cost benefits (Cowell, Broner, & Dupont, 2004; Mitton et al., 2007; Steadman & Naples, 2005). The cost associated with the incarceration of mentally ill offenders is estimated to be nearly two times that of non-mentally ill offenders (James, 2006; Slinger & Roesch, 2010). As such, researchers have contended that mental health diversion offers an alternative to incarceration that is more cost-effective, eliminating some, if not all, of the additional costs associated with housing mentally ill offenders in the correctional system (Slinger & Roesch, 2010). Cowell, Broner, and Dupont (2004) conducted the first evaluative study of the cost associated with mental health diversion programs. The authors examined the number of times a participant came into contact with the community agency and the cost of each contact (Cowell et al., 2004). The results from the analysis confirmed that diversion was linked to lower correctional costs, particularly for post-charge diversion programs (Cowell et al., 2004). Lastly, a single-site study of a Calgary diversion program conducted by Mitton and colleagues (2007) reported the use of mental health diversion, as a community-based alternative to incarceration, to be associated with a reduction in both criminal justice and acute health care costs. Nevertheless, further research on the efficacy of diversion for mentally ill offenders is needed.

Characteristics of Offenders Participating in Mental Health Diversion

To begin, this section will review the small body of research describing the socio-demographic and clinical characteristics of clients participating in mental health diversion. Previous research from the United States has suggested that participants of American diversion programs are more likely to be male than female (Broner et al., 2005; Lamberti et al., 2001; Steadman, Cocozza, & Veysey, 1999) and are often in early to mid-adulthood (Broner et al., 2004, 2005; Lamb et al., 1996; Lane & Campbell, 2008; Steadman et al., 1999). Clients of mental health diversion services are often unmarried or single (Lamb et al., 1996; Lamberti et al., 2001; Shafer et al., 2004; Steadman et al., 1999). Further, the race and ethnicity of clients participating in mental health diversion is largely reflective of the geographical location of the program. For example, two studies of New York City diversion programs found an overwhelming majority (85% and 87%, respectively) of program participants to be non-White (Broner et al., 2005; Lamberti et al., 2001). However, as the authors note, African American and Hispanic individuals are over-represented among the correctional population in the area in which the program operates (Lamberti et al., 2001). In contrast, a study of a mental health diversion program located in Arizona reported that more than half of the participants were Caucasian (58%) with an additional 20% identifying themselves as Hispanic and 13% identifying as Native American (Shafer et al., 2004). Again, these statistics are comparable to the racial composition of Arizona, where the majority of the population is Caucasian or Hispanic.

Furthermore, American research reporting on the characteristics of mentally ill offenders participating in jail diversion has suggested that clients often possess a secondary school diploma or an equivalent (Broner et al., 2004; Shafer et al., 2004;

Steadman et al., 1999). Nevertheless, at time of entry into the program, clients of mental health diversion tend to be unemployed. All of the studies reviewed reported that less than one-fifth of participants had meaningful employment (Broner, 2004, 2005; Lamb et al., 1996; Lamberti et al., 2001; Shafer et al., 2004; Steadman et al., 1999). In fact, one study revealed that a mere 5% of participants in the sample were employed (Lamberti et al., 2001). Combined, these statistics suggest that while participants of diversion are educated, they face barriers to gaining and maintaining meaningful employment (Hiday, 2006).

The most common primary diagnosis among participants of mental health diversion in the United States tends to be schizophrenia. Studies have reported that between 33% and 57% of diversion clients suffer from schizophrenia (Broner et al., 2004, 2005; Lamb et al., 1996; Lamberti, 2001). Other common diagnoses among diversion participants include bipolar disorder, major depressive disorder, and various other mood disorders (Broner et al., 2004, 2005; Cosden et al., 2003, 2005; Lamb et al., 1996). Further, many clients of diversion also report the presence of a co-occurring mental health and substance abuse issue. Studies of mental health diversion programs across the United States have suggested that as many as 40% (Broner et al., 2005) to 83% (Cosden et al., 2005) of program participants report alcohol, drug, or polysubstance use.

The aforementioned research originates primarily from evaluative studies of mental health diversion programs operating across the United States. Despite the increasing presence of diversion programs in Canada, little research has been published on Canadian models (Sylvestre, Aubry, Smith, & Bridger, 2010; Slinger & Roesch, 2010). However, the few existing studies describing the characteristics of offenders

participating in Canadian mental health diversion report findings consistent with American research. Similar to American diversion program participants, clients from two Canadian studies were primarily male, early to mid-adulthood, and unmarried or single (Dewa et al., 2008; Lane & Campbell, 2008). Further, a study of Ontario diversion program participants suggested that the majority of program clients had a high school diploma or higher (63%) yet they were often unemployed (57%) (Dewa et al., 2008). Similar to research from the United States, Canadian clients commonly reported having either a schizophrenia-related diagnosis or a mood disorder (Dewa et al., 2008; Lane & Campbell, 2008). Lastly, Dewa and colleagues (2008) reported that more than one-third of Ontario participants self-reported a co-occurring mental health and substance abuse issue

Client Characteristics Predictive of Treatment Outcome

This section will review research exploring the relationship between individual factors and treatment program completion. Little research from the literature on mental health diversion has explored which individual characteristics may be predictive of diversion program outcome (Broner, Lang, & Behler, 2009; Redlich et al., 2010). As such, this review will draw upon research from the community mental health treatment literature and research examining court-mandated drug treatment programming.

Similar to mental health court diversion, drug courts employ a supervised treatment program as an alternative to incarceration (Schneider et al., 2007). Both initiatives have been theoretically informed by therapeutic jurisprudence and the problem-solving paradigm (Schneider et al., 2007). As a result, both drug and mental health courts rely on the use of a comprehensive treatment plan in an attempt to provide

therapeutic benefit to the client and address the underlying causes of criminal behaviour. Moreover, research has argued that a high rate of co-occurring mental health and substance abuse issues among individuals in the criminal justice system has resulted in a significant overlap in the populations utilizing these services (Abram & Teplin, 1991; Council of State Governments, 2005, 2008). Thus, while differences exist in the operation of drug and mental health courts, similarities among clients accessing these services allow us to draw upon existing research exploring court-mandated substance abuse programming for insight into which client-specific characteristics may influence mental health diversion outcome.

Gender. Research has shown little support for a relationship between gender and treatment program completion. Eighteen studies were reviewed that explored the client's gender as a predictor of community mental health and drug court treatment success. One study reported that male clients were significantly less likely than female clients to leave community mental health treatment prior to completion (Olfson et al., 2009). Olfson et al. (2009) employed cross-tabulation and discrete-time survival analyses on data obtained from the National Comorbidity Survey Replication in order to identify predictors of treatment dropout. The authors reported that men were significantly less likely to withdraw from community mental health treatment (Olfson et al., 2009). This gender difference persisted even after the authors controlled for the number and type of mental disorders.

Similarly, Rempel and Destefano (2001) found that women were more likely than men to withdraw from a court-mandated drug treatment program. Using client data obtained from the Brooklyn Drug Treatment Court, Rempel and DeStefano (2001)

conducted hierarchical logistic regression analyses and found that female clients were more likely than their male counterparts to drop out of treatment programming. However, these differences were no longer significant when the authors controlled for the number of days to first treatment placement. As Rempel and Destefano (2001) have suggested, women often have more difficulty obtaining community treatment services and are often forced to wait longer for access to programming.

In contrast, a study by Gray and Saum (2005) observed that female clients were more likely to complete court-mandated programming when compared to their male counterparts. Gray and Saum (2005) conducted both bivariate analyses and a multivariate logistic regression analysis on data collected from treatment files of individuals ordered to participate in programming by the Delaware Superior Court Drug Court. At the bivariate level, drug court completion varied by gender, with women more likely to complete treatment programming than men. However, this relationship did not maintain significance in the multivariate analysis. As the authors suggested, other factors were potentially more important in terms of understanding what individual characteristics are predictive of drug court completion (Gray & Saum, 2005).

Brown (2010) has suggested that female clients often face more barriers to treatment success when compared to male clients. Upon entry into programming, women are more likely to report lower income, higher rates of unemployment, a history of physical or sexual abuse, and a higher prevalence of anxiety and depression (Butzin, Saum, & Scarpitti, 2002; Peters, Haas, & Murrin, 1999; Schiff & Terry, 1997; Saum, Scarpitti, & Robbins, 2001; Webster et al., 2006). Thus, while a participant's gender may

not be predictive of treatment completion, when examined alongside various other socio-economic and clinical characteristics, gender may reveal more about program outcome.

Age. Studies from the community mental health treatment literature and research examining court-mandated drug treatment programming have often observed that age and treatment completion are positively related. Specifically, research has suggested that as the client's age increases the likelihood of successful program completion also increases (Edlund et al., 2009; Hickert, Boyle, & Tollefson, 2009; Mateyoke-Scrivner, Weber, Staton, & Leukefeld, 2004; Miller & Shutt, 2001; Olfson et al., 2009; Rempel & Destefano, 2002; Reneses, Muñoz, & López-Ibor, 2009; Rossi et al., 2002; Saum et al., 2001; Saxon, Ricketts, & Heywood, 2010). Mateyoke-Scrivner et al. (2004) conducted face-to-face interviews with 500 participants of two drug court programs operating in the state of Kentucky. Interviewers asked the participants questions pertaining to their demographics, employment and income, drug use, and criminal history. Using a logistic regression analysis, the authors found age to be predictive of drug court treatment completion. In fact, Mateyoke-Scrivner et al. (2004) reported that for every one year increase in a participant's age, clients were approximately 5% more likely to successfully graduate from a drug court program.

Further, in Saum and colleagues' (2001) logistic regression model predicting graduation from a court-mandated drug treatment program, older age was one of the strongest predictors of success. The data for this project were retrieved from the program files of 452 clients participating in Delaware's Superior Court Drug Court. Of the demographic variables examined in the multivariate analysis, only age reached statistical

significance. Older clients were more likely to graduate from drug court than their younger counterparts (Saum et al., 2001).

In fact, all of the studies reporting a significant relationship between the participant's age and treatment program completion found older offenders to be more successful than younger offenders (Edlund et al., 2009; Hickert et al., 2009; Mateyoke-Scrivner et al., 2004; Miller & Shutt, 2001; Olfson et al., 2009; Rempel & Destefano, 2002; Reneses et al., 2009; Rossi et al., 2002; Saum et al., 2001; Saxon et al., 2010). Rempel and Destefano (2002) theorized that younger substance abusing clients might be at a higher risk for dropout due to pressures from deviant peer groups. Further, it has been suggested that younger participants of substance abuse programming might have a lower stake in conformity than older participants. As Butzin et al. (2002) and Rempel and Destefano (2002) have argued, younger individuals may not have "aged out" of non-conformist behaviours such as drug use.

Further, age may also play an important role in predicting mental health treatment engagement and withdrawal. Edlund and colleagues (2009) have argued that the increased likelihood for mental health treatment program non-completion among younger clients may be the result of greater morbidity and dysfunction among individuals who are diagnosed with mental illness at an early age.

Race. Studies exploring the relationship between race and treatment completion have primarily originated from the United States. In one of the earliest studies exploring graduation from drug treatment court, Schiff and Terry (1997) observed non-White participants to be less successful in completing treatment programming than White participants. The study examined outcomes among a sample of first-year participants of

the drug treatment court in Broward County, Florida. Participant data was obtained from interview questionnaires soliciting personal demographic, behavioural, and drug use history information. Logistic regression analysis was used to identify significant predictors of program completion. According to Schiff and Terry (1997), race is among the most useful participant characteristics for predicting program graduation.

Hartley and Phillips (2001) and Sechrest and Shicor (2001) also reported differences in terms of race and drug treatment court outcome. Hartley and Phillips (2001) conducted a logistic regression analysis of variables retrieved from the case files of 196 participants of a mid-Atlantic drug treatment court. The analysis revealed that non-White participants were less likely to complete treatment programming successfully. Similarly, in Sechrest and Shicor's (2001) exploratory evaluation of 102 substance abuse offenders participating in the Riverside Drug Court, logistic regression analysis revealed the participant's race to be a strong predictor of program success, with Whites being more likely than both African-American and Hispanic clients to complete treatment programming. Further, Gray and Saum (2005) also found race to be a statistically significant predictor of court-mandated substance abuse treatment outcome, with non-White individuals significantly less likely to succeed than their White counterparts.

Finally, one of the sole studies exploring the relationship between individual characteristics and mental health court completion found race to be the only client-specific factor to significantly influence treatment success (Redlich et al., 2010). Data were collected from 400 clients participating in four mental health courts across the United States. Using client information provided by the court, the county jail, and the program participant, Redlich et al. (2010) conducted Spearman correlations and a

hierarchical multivariate regression to predict the likelihood of mental health court completion. In the bivariate analyses, the only person-specific factor to significantly influence completion status was the participants' race. The authors observed that White individuals were more likely to complete mental health court treatment than non-White individuals. However, this relationship did not maintain its statistical significance in the multivariate analysis.

Overall, findings from American studies of drug and mental health treatment courts suggest that a participant's race may play a significant role in predicting program outcome. Undoubtedly, the structure of programming may inhibit the success of racial and ethnic minorities (Schiff & Terry, 1997; Sechrest & Shicor, 2001). As Hartley & Phillips (2001) suggested, discrimination and a lack of culturally sensitive programming may result in higher termination rates for minority participants. Further, racial differences and language barriers between the client and the treatment provider may also lead to lower success among racialized clients (McKean & Warren-Gordon, 2011). Additionally, social conditions that disproportionately affect the lives of minorities, such as low income, educational barriers and weak family support, may make it difficult for minority clients to participate in, and successfully complete, treatment. However, as Brown (2010) has argued, the exact nature of the relationship between race and program success "is unclear due to the fact that many studies fail to address potential confounding factors, such as employment status and educational attainment" (p. 1876). Further, due to a lack of Canadian research, it is unclear whether participants' race is an important predictive factor of treatment program completion in the Canadian context.

Marital status. The relationship between marital status and treatment program completion has not been widely investigated in the community mental health and drug court treatment literature. A study by Harding et al. (2008) observed marital status to be a significant socio-demographic predictor of withdrawal from community mental health services. The authors conducted interviews among a sample of 194 individuals with severe mental illness participating in a psychosocial rehabilitation program. The interviewers asked questions regarding the client's psychiatric diagnosis and symptoms, substance use, and demographics. Using a logistic regression analysis, the authors found that individuals who were never married were more likely to complete treatment programming than individuals who were currently, or had previously been, married (Harding et al., 2008). Harding et al. (2008) theorized that individuals who are married might already possess important relationship skills that make psychosocial rehabilitation insignificant for recovery.

Similarly, Olfson and colleagues' (2009) study examining data obtained from the National Comorbidity Survey Replication revealed that individuals who were married or cohabiting were at a higher risk for mental health treatment dropout when compared to clients who were single, divorced, or widowed. Olfson et al. (2009) argued that spouses often respond negatively to their partner's treatment. Further, the authors also suggested that clients without a spouse may develop a dependence upon their treatment provider for support and, as a result, may be more likely to comply with treatment conditions (Olfson et al., 2009).

Interestingly, research from the drug treatment programming literature has found conflicting results for the relationship between marital status and treatment program

completion. In contrast to the two mental health treatment studies previously mentioned, Miller & Shutt's (2001) study of a South Carolina drug court found marital status to be positively correlated with treatment program success. Drawing from drug court records, the authors explored success rates for participants with particular background characteristics in an attempt to identify the correlates of drug court success. Among other significant variables, Miller and Shutt (2001) found that married drug court participants were 25% more likely to successfully complete three months of treatment programming.

Additionally, in their exploratory study of withdrawal from substance abuse treatment, Ball, Carroll, Canning-Ball, and Rounsaville (2006) also found marital status to be positively correlated with treatment program success. Interview and self-report data were collected from a small sample of 24 program participants who had withdrawn from outpatient substance abuse treatment. The authors observed that participants who had never been married were more likely to report motivational inconsistencies and problem severity and were less likely to complete programming (Ball et al., 2006). However, diversity in participant populations, variations in study design, and differences in conceptual definitions may account for inconsistent study findings (Berghofer, Schmidl, Rudas, Steiner, & Schmitz, 2002).

Educational attainment. Research reporting on the relationship between participants' educational level and treatment program success has presented inconsistent results. Ten of the 20 studies reviewed found no difference between program completers and non-completers on educational attainment (Berghofer et al., 2002; Edlund et al., 2002; Evans, Hser, & Li, 2009; Gray & Saum, 2005; Hickert et al., 2009; Redlich et al., 2010; Rempel & Destefano, 2002; Reneses et al., 2009; Roll et al., 2005; Rossi et al.,

2009). However, in the literature where education level did predict treatment outcome, higher educational achievement overwhelmingly enhanced the likelihood of program success. For example, in their study of participants of two drug courts operating in the state of Kentucky, Mateyoke-Scrivner and colleagues (2004) reported that for every additional year of education received, clients were 15% more likely to successfully graduate from programming. Furthermore, in a study of outpatient mental health care adherence, Olfson et al. (2009) reported that having less than a high school education was associated with a higher probability of withdrawal from treatment.

In general, research has suggested that having completed a high school diploma, or an equivalent, significantly enhances the likelihood that a participant will successfully complete treatment (Brown, 2010; Butzin et al., 2002; Harding et al., 2009; Hartley & Phillips, 2001; Schiff & Terry, 1997; Sechrest & Shicor, 2001). Olfson et al. (2009) have suggested that individuals who have more education may be more responsive to treatment. These findings suggest that education may be an important explanatory variable in predicting program success (McKean & Warren-Gordon, 2011).

Employment status. A number of studies have observed that employment status is predictive of treatment completion. Participants of drug court and community mental health treatment programming are more likely to succeed if they are employed upon entry into the program or if they obtain employment over the course of treatment (Berghofer et al., 2002; Brown, 2010; Butzin et al., 2002; McKean & Warren-Gordon, 2011). In their study of the predictors of drug court completion, Roll, Prendergast, Richardson, Burdon, and Ramirez (2005) reported employment at the time of participation to be the strongest predictor of successful program completion. The authors analyzed records from 99

individuals enrolled in a drug court program located in southern California. Logistic regression analysis revealed that participants employed at intake were 14 times more likely to successfully graduate than those who were unemployed at entry into the program (Roll et al., 2005). Similarly, Mateyoke-Scrivner et al. (2004) also found that employed drug court participants were more likely to successfully complete the program when compared to their unemployed counterparts.

As Butzin et al. (2002) have argued, the presence of meaningful employment often indicates that a participant has a stake in social conformity and possesses normative attitudes and values. Additionally, employed participants of substance abuse programming may use drugs less frequently or may be dependent upon "softer" substances as opposed to "harder" illicit substances. For participants of mental health treatment programming, unemployment may be indicative of clinical vulnerability (Berghofer et al., 2002). More specifically, mentally ill program participants who are employed may have fewer or less severe symptoms and may be more likely to experience increased functionality when compared to unemployed program participants (Berghofer et al., 2002).

Residential stability. Research has suggested that a participant's residential stability may be an important predictor of program completion (Broner et al., 2009; Moos, King, Burnett, & Andrassy, 1997). Individuals who are residentially unstable are more likely to have an extensive criminal justice history, to be in poor physical and mental health, to have addictive disorders, and to be unmarried, less educated, and unemployed (Broner et al., 2009; Greenberg & Rosenheck, 2008; McNeil, Binder, & Robinson, 2005). A study by Broner and colleagues (2009) explored the ability of

housing type and number of housing transitions to predict successful completion of a mental health court program. Administrative and self-report data were collected for 589 individuals diverted through the Bronx Mental Health Court into community treatment programming. Using logistic regression analysis, the authors found that type of housing was not predictive of mental health court completion. However, residential instability was associated with program non-completion. Specifically, individuals who had a greater number of housing transitions over the 12 months prior to service delivery were more likely to fail to complete programming. Other studies reviewed did not examine the relationship between housing and program completion (Brown, 2010; Butzin et al., 2002; Edlund et al., 2009; Evans et al., 2009; Hartley & Phillips, 2001; Hickert et al., 2009; Miller & Shutt, 2001; Redlich et al., 2010; Rempel & Destefano, 2002; Reneses et al., 2009; Roll et al., 2005; Saum et al., 2001; Saxon et al., 2010; Sechrest & Shicor, 2001).

Substance abuse. Unlike many of the socio-demographic variables, research has shown strong support for the relationship between substance abuse and treatment non-completion. In fact, substance abuse may be the strongest client-specific characteristic associated with community mental health and drug court treatment outcome. All of the studies reporting on this relationship observed substance abuse to be predictive of program non-completion (Ball et al, 2006; Butzin et al., 2002; Evans et al., 2009; Gray & Saum, 2005; Olfson et al., 2009; Saxon et al., 2010). Butzin et al. (2002) examined a sample of 540 offenders ordered to participate in substance abuse treatment by the Delaware Superior Court Drug Court. Data was collected from the clients' discharge report and included the participants' age, gender, education level, employment status, frequency of drug use, and primary drug-of-choice. The authors found that drug court

completers were more likely to be infrequent drug users (Butzin et al., 2002). Likewise, in a multivariate logistic regression analysis conducted by Gray and Saum (2005), substance use severity and frequency decreased the odds of drug court treatment completion. Further, Evans et al. (2009) also observed that individuals who withdrew from court-mandated drug treatment programming were more likely to have a co-occurring mental illness and substance abuse issue and often had a more severe substance addiction than those who remained in treatment (Evans et al., 2009).

Although substance abuse would be expected to be related to drug court treatment outcome, and the aforementioned research seems to suggest that it, these findings appear to extend to mental health treatment outcome, as well. For example, when compared to mentally ill clients who did not report an addiction problem, both Olfson et al. (2009) and Saxon et al. (2010) found that mentally ill clients with a substance abuse issue had a significantly higher risk of withdrawing from community mental health services. These results are not surprising as research has suggested that mental health services for individuals with co-occurring mental health and substance abuse issues are frequently disjointed and fragmented (Drake, Mueser, Brunette, & McHugo, 2004). Furthermore, as Hartwell (2004) has suggested, persons diagnosed with a concurrent disorder commonly endure a double stigma, which can make them undesirable candidates for community mental health treatment.

Additionally, participants' drug of choice has also been demonstrated to be a significant predictor of court-mandated substance abuse treatment program completion. Not surprisingly, drug court participants who reported using "harder" illicit drugs, such as methamphetamines or cocaine, were less likely to successfully complete programming

than those who reported using "softer" illicit drugs, such as marijuana (Hickert et al., 2009). Participants who self-reported cocaine as their drug of choice were at the highest risk for substance abuse treatment non-completion (Brown, 2010; Hartley & Phillips, 2001; Hickert et al., 2009; Lang & Belenko, 2000; Mateyoke-Scrivner et al., 2004; Miller & Shutt, 2001; Rempel & Destefano, 2002; Saum et al., 2001; Schiff & Terry, 1997). For example, upon analysis of data from South Carolina drug court records, Miller and Shutt (2001) found that less than 10% of cocaine users successfully graduated from drug court treatment programming, when compared to 50% of other drug users. As Brown (2010) argued, cocaine use disorders are commonly associated with heightened levels of impulsivity, which may provide an explanation for the increased likelihood of treatment non-completion among individuals who report cocaine use. Moreover, it is important to note that participants' primary drug of choice was not found to be a significant predictor of mental health treatment outcome (Olfson et al., 2009; Saxon et al., 2010).

Psychological illness. Severe and persistent mental illness has been found to be predictive of substance abuse treatment non-completion. Three studies from the drug treatment court literature reported that the greater the severity of the participants' psychiatric illness, the more likely they were to withdraw from court-mandated drug treatment programming (Evans et al., 2009; Hickert et al., 2009; Lang & Belenko, 2000). Evans et al. (2009) analyzed self-report and administrative data from a sample of 908 individuals participating in 30 court-mandated drug treatment programs across California. Using logistic regression analysis, the authors found that a severe problem related to psychiatric health was predictive of substance abuse treatment dropout. Likewise, in their study of 288 participants of a drug court in Salt Lake City, Utah, Hickert et al. (2009)

also reported a link between psychological illness and early treatment termination. Specifically, the authors found that participants' self-reported mental illness was associated with a nearly three times greater likelihood of dropping out. Additionally, when considering a history of mental illness, Lang and Belenko (2000) observed that non-completers of a substance abuse diversion program were four times more likely to have a history of psychiatric illness than completers.

Similarly, two studies have also observed a relationship between mental health treatment non-completion and the severity of a participant's psychiatric illness (Olfson et al., 2009; Saxon et al., 2010) Olfson et al. (2009) found that individuals who had concurrent psychiatric disorders were at a higher risk for dropout from outpatient mental health treatment services. In addition, Saxon and colleagues (2010) conducted an analysis of administrative data from a sample of 1243 mentally ill individuals participating in a community-based psychological treatment program. The results of the authors' logistic regression analysis suggested that greater psychological distress was predictive of mental health treatment termination (Saxon et al., 2010). Together these studies have suggested that psychological illness may be an important predictor of both substance abuse and mental health treatment program success (Lang & Belenko, 2000; Olfson et al., 2009; Saxon et al., 2010).

Further, research has demonstrated that a participant's primary diagnosis may be associated with substance abuse treatment outcome. In their examination of the Delaware Superior Court Drug Court, Gray and Saum (2005) found that the likelihood of treatment completion was lower for participants who self-reported symptoms of depression. Similarly, McKean and Warren-Gordon (2011) observed that sample participants who

reported higher emotional distress were less likely to graduate from the Madison County Adult Treatment Drug Court. As Gray and Saum (2005) argued, symptoms commonly associated with depression, such as helplessness, anger or irritability, self-loathing, and loss of concentration, may reduce functionality and hinder a client's ability to progress in treatment unless addressed immediately upon entry into programming. Addressing these concerns at program entry may stabilize symptoms, increase functioning, and improve the likelihood of client participation and success.

Research from the community mental health treatment literature has also suggested a relationship between the participants' primary diagnosis and treatment program outcome. Interestingly, two studies found that clients with a diagnosis of schizophrenia were more likely to successfully complete mental health treatment (Berghofer et al., 2002; Rossi et al., 2002). More specifically, in their analysis of 323 participants from three community mental health centres in Vienna, Austria, Berghofer and colleagues (2002) reported that clients with a diagnosis of schizophrenia were 22 times more likely to complete treatment programming than participants with other primary diagnoses. As the authors suggested, clients with schizophrenia often receive more consistent and thorough care due to the severity of their illness, improving the likelihood of treatment program completion (Berghofer et al., 2002).

Criminal history. A history of criminal behaviour was found to be negatively related to treatment completion in five studies examining court-mandated substance abuse programming (Brown, 2010; Gray & Saum, 2005; Hickert et al., 2009; Rempel & Destefano, 2002; Saum et al., 2001). For example, in a study of Salt Lake City's drug treatment court, Hickert et al. (2009) found that the presence of an extensive criminal

history was a significant predictor of treatment dropout among participants. Further, in two additional studies, clients with a greater number of lifetime charges prior to entry into court-mandated drug treatment programming were discovered to be less likely to successfully complete when compared to participants who had fewer lifetime charges (Gray & Saum, 2005; Saum et al., 2001). Interestingly, results from Rempel and Destefano's (2002) study of court-mandated treatment revealed that previous misdemeanour convictions were predictive of treatment non-completion, while previous felony convictions were not.

As Saum and colleagues (2001) have argued, clients with a history of criminal activity may continue to engage in illegal behaviour while participating in court-mandated treatment programming. Often, the commission of a new criminal offence while engaged in community-based treatment is grounds for early program termination. Further, individuals with an extensive criminal history may have diverse and demanding needs that are difficult to address through the use of community-based services (Gray & Saum, 2005; Saum et al., 2001)

The Current Study

Research from the community mental health treatment literature and research examining court-mandated substance abuse programming have noted the importance of individual factors in explaining a participant's program success (Brown, 2010; Butzin et al., 2002; Evans et al., 2009; Gray & Saum, 2005; Hartley & Phillips, 2001; Hickert et al., 2009; Lang & Belenko, 2000; Mateyoke-Scrivner et al., 2004; Roll et al., 2005). Yet, little research has examined which factors may influence successful mental health court diversion outcome. As Ryan and colleagues (2010) have suggested, the lack of empirical

research in the mental health literature on the relationship between individual factors and diversion program success "inappropriately suggests to policy makers and administrators that mental health diversion can or should be a 'one-size-fits all' endeavour" (p. 475).

To address the current gap in the literature, this study examines whether individual characteristics influence mental health diversion outcome. Specifically, this research investigates which pre-treatment factors, or characteristics that exist prior to or during a client's participation in mental health diversion, are predictive of level of completion in a post-charge court-based diversion program. Two research questions will be examined. First, can a client's socio-demographic and clinical characteristics help us to predict mental health diversion outcome? Second, which client characteristics are the most predictive of level of program completion? In order to explore these questions, this study will conduct a quantitative analysis of data provided by Durham Mental Health Services (DHMS), a non-profit mental health services agency serving the Regional Municipality of Durham.[2]

Providing mental health services in the community of Durham Region presents a number of unique challenges. Neighbourhoods in the region boast a rich diversity of community values and socio-demographic characteristics. High immigration rates over the last several decades have resulted in a culturally diverse population where residents speak a number of different languages and self-identify with a variety of cultural and religious beliefs (Ontario Shores Centre for Mental Health Services, 2011). Additionally, Durham Region is geographically vast and widely dispersed, consisting of a combination

[2] The Regional Municipality of Durham, informally referred to as Durham Region, is located in Southern Ontario east of Toronto, Ontario. Durham Region is considered part of the Greater Toronto Area. Specifically, the region consists of the following municipalities: Pickering, Ajax, Whitby, Oshawa, Clarington, Uxbridge, Scugog, and Brock.

of highly dense urban areas and less populated rural areas (Durham Region Planning Department, 2009). As such, clients accessing regional mental health-care services are diverse and present a number of unique challenges. Given the heterogeneity of mental illness and the range of clients accessing mental health agencies in the Durham Region, an understanding of the relationship between individual characteristics and treatment success is essential.

Additionally, there is a need in the community for enhanced access to specialized mental health-care services such as mental health diversion. Durham Region is one of the fastest growing communities in Ontario, with approximately 22% growth over the last decade (Durham Region Planning Department, 2009). In the next 20 years the region is projected to grow faster than the provincial average, prompting concerns about future mental health care demands (Durham Region Planning Department, 2009). Population growth, financial barriers, and a continued reliance on the criminal justice system as a means of obtaining mental health treatment could result in reduced access to services across the region. Thus, research examining the correlates of diversion program outcome can be used to link clients with appropriate community-based treatments, improve treatment and program success, and make better use of limited financial resources (Adrians, 2009).

Further, an evaluation of service clients may help to determine whether certain client characteristics are related to therapeutic engagement. In particular, exploring the relationship between individual characteristics and program outcome may help us to identify potential treatment challenges and direct those participants with greater need towards more intensive community-based treatment programming (Butzin et al., 2002).

Results from this research will address a critical gap in the existing literature on mental health diversion by documenting the characteristics of clients who receive these services and how these characteristics interact with treatment outcome.

Given the continued popularity of mental health court diversion and the potential benefits of understanding the relationship between individual factors and program success, this study intends to explore the effect of person-specific characteristics on mental health court diversion outcome. This study will test hypotheses grounded in the extant literature and the theoretical framework of the Health Belief Model, as reviewed in the following section.

Theoretical Framework: The Health Belief Model

The Health Belief Model (HBM) is a social psychological framework designed to assist in the prediction of an individual's health behaviour, including the use of health-related services. As one of the earliest theories of health behaviour change, the model was initially developed in an effort to explain the failure of the public to participate in public health interventions aimed at preventing or detecting disease (Hochbaum, 1958; Rosenstock, 1960, 1974). Today, the HBM has been adapted to explore a wide variety of behavioural health issues such as substance abuse and sexual risk behaviours (Sharma & Romas, 2010).

Theoretical constructs of the Health Belief Model. Underlying the HBM is the notion that health behaviour is determined by personal perceptions about a disease and the strategies available to reduce its occurrence (Hochbaum, 1958). Specifically, the following four perceptions serve as the core constructs of the model: perceived seriousness of the health issue, perceived susceptibility of the health issue, perceived

benefits of the preventative action, and the perceived barriers to participating in the preventative action. Each of these perceptions, individually or in combination, can be used to explain health behaviour (Rosenstock, 1960, 1974).

The construct of *perceived seriousness* refers to a person's feelings regarding the severity of the health issue in question. An individual's perception of seriousness is often based on medical knowledge. However, beliefs about seriousness may also come from concerns a person may have about the difficulties the health issue may create in his or her life (Sharma & Romas, 2010). *Perceived susceptibility* refers to an individual's subjective perception of the risk of disease. Undoubtedly, the greater the perceived personal risk associated with a disease or health concern, the greater the likelihood that an individual will engage in behaviours and interventions to decrease the susceptibility or risk. Often, the theoretical constructs of perceived seriousness and perceived susceptibility are referred to more generally as the *perceived threat* of a health issue.

In addition, the HBM suggests that a person's health-related behaviour is determined by their thoughts and beliefs about the perceived benefits and barriers to participating in a given preventative action (Sharma & Romas, 2010). More specifically, *perceived benefit* refers to an individual's opinion of the value and practicability of an available treatment or preventative behaviour. Maintenance of a health-related action is more likely to occur when the individual perceives the new behaviour to be both useful and feasible. In contrast, the construct of *perceived barriers* addresses the obstacles impeding behavioural change. Obstacles that prevent individuals from adopting a preventative action can include financial expense, lack of accessibility, duration of treatment, complexity of the action, and the dangers associated with the new behaviour.

Not surprisingly, of all the aforementioned theoretical constructs, perceived barriers are often said to be the most significant in determining behavioural change (Janz & Becker, 1984).

More recently, the HBM has been expanded to include cues to action, self-efficacy, and modifying factors (see Figure 1). *Cues to action* are broadly defined as events, people, or things that move people to change their behaviour (Sharma & Romas, 2010). Some examples of cues to action include the illness of a friend or family member, mass media campaigns, or advice from a health care provider. These cues to action are incidents that serve to act as a reminder of the severity or threat of the health issue in question (Henshaw & Freedman-Doan, 2009). Further, in the late 1980s, self-efficacy was added to the original four theoretical constructs of the HBM (Rosenstock, Stretcher, & Becker, 1988). *Self-efficacy* is an individual's belief that he or she can successfully execute the behaviour required to produce a desired outcome (Janz, Champion, & Stretcher, 2002). Believing that one has the ability to achieve behavioural change, and maintain said behavioural change over the long-term, is critical in determining whether or not an individual will participate in the intervention. Lastly, all of the aforementioned constructs are thought to be influenced by modifying factors such as demographic, psychological, social, and structural characteristics. These individual factors are responsible for influencing decision-making, behavioural change, and intervention adoption (Henshaw & Freedman-Doan, 2009).

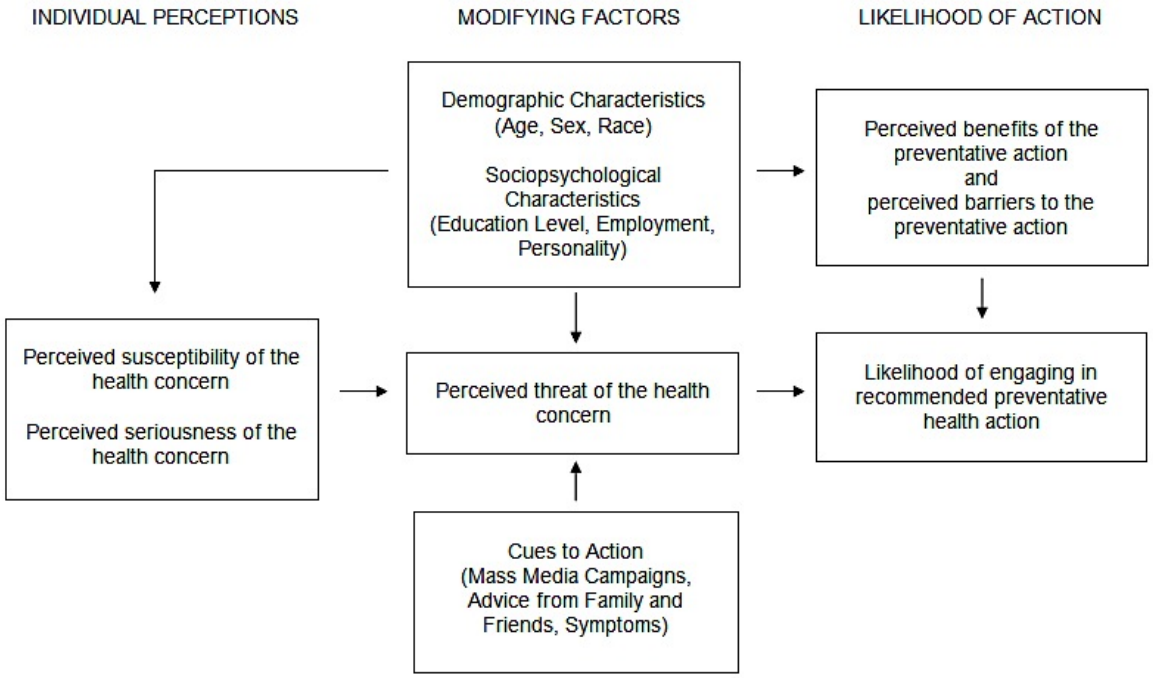

Figure 1. Theoretical propositions of the Health Belief Model. Retrieved from Stretcher, V., & Rosenstock, I. M. (1997). The Health Belief Model. In Glanz, K., Lewis, F. M., & Rimer, B. K., (Eds.). *Health behavior and health education: Theory, research and practice*. San Francisco: Jossey-Bass.

Rationale for use of the Health Belief Model. As Glanz, Rimer, and Lewis (2002) have argued, the HBM is a commonly employed and researched theoretical model of health behaviour change in health education and promotion. While this model is most commonly used to understand physical ailments, it has also been employed to understand behavioural health concerns such as alcoholism and substance abuse (Kottsieper, 2006). More recently, the HBM has been utilized as a model for understanding community mental health treatment utilization and adherence (Gonzalez, Williams, Noël, & Lee, 2005; Kottsieper, 2006; Smith, 2009). It has also been employed to predict service engagement for persons with mental illness (Tait, Birchwood, & Trowler, 2003).

The HBM can also be used to understand why individuals engage in, and adhere to, a mental health diversion program (see Figure 2). An offender's individual characteristics both directly and indirectly influence the perceived threat of criminal justice processing and the perceived benefits and barriers of diversion program participation in order to determine the likelihood of successful program completion. This study will use the HBM as a framework for exploring which modifying socio-demographic and clinical variables help or hinder a mentally ill offender's adherence to a court-mandated diversion program. The use of the present framework will allow for the expansion of the HBM beyond the discipline of health promotion and education and demonstrate its potential applicability in understanding criminal justice outcomes, namely, diversion program completion.

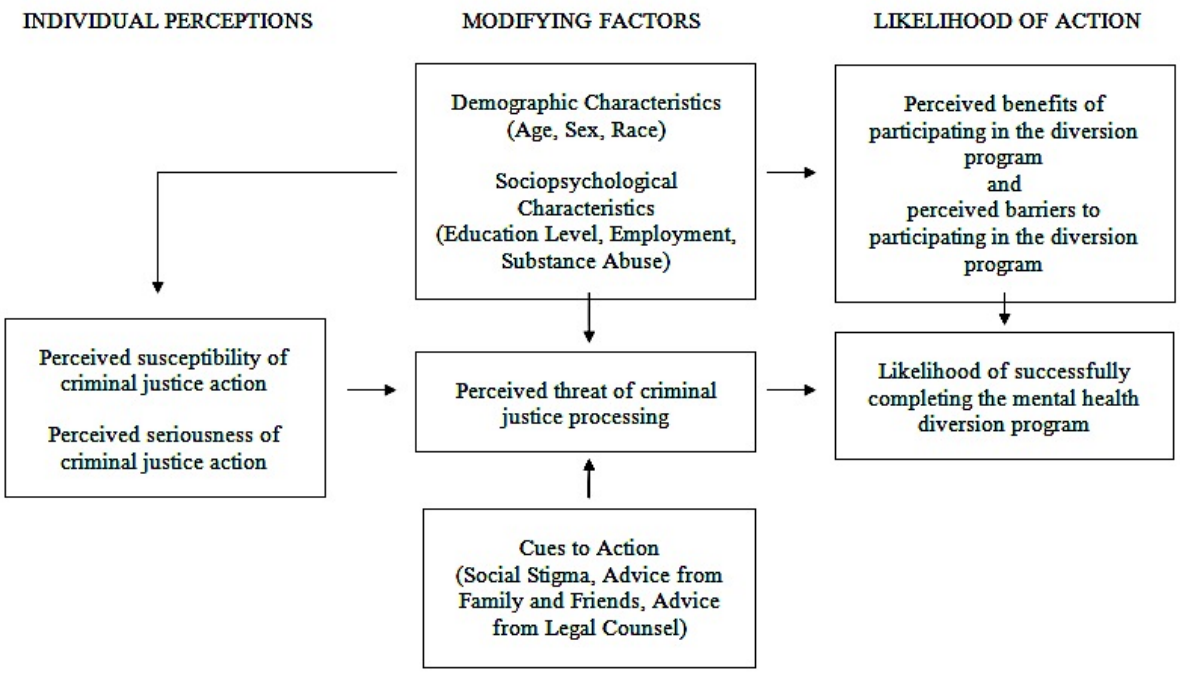

Figure 2. Conceptual model describing the use of the Health Belief Model for mental health diversion. Adapted from Stretcher, V., & Rosenstock, I. M. (1997). The Health Belief Model. In Glanz, K., Lewis, F. M., & Rimer, B. K., (Eds.). *Health behavior and health education: Theory, research and practice*. San Francisco: Jossey-Bass.

Study Hypotheses

Although some factors have been identified by the community mental health treatment literature and research examining court-mandated drug treatment programming, the explicit relationship between individual characteristics and mental health court diversion outcome remain poorly understood and understudied. Since most the existing research has examined participants of drug court, we are unsure which person-specific factors influence mental health diversion program completion explicitly and if these factors are similar to, or different than, those of substance abuse programming. Thus, based upon previous research and the theoretical framework described above, this exploratory study of mental health court diversion outcome will test the following hypotheses:

H_1: It is predicted that male participants will be more likely to successfully complete mental health court diversion than female participants.

H_2: It is predicted that a participant's age will influence their opinion of the value and practicability of mental health court diversion. As age increases the likelihood of successful mental health court diversion program completion will also increase.

H_3: It is predicted that a participant's education level will affect their perception of the value of mental health court diversion. Participants who have a secondary school education or higher will be more likely to successfully complete mental health court diversion than participants who have not obtained a secondary school education or higher.

H_4: It is predicted that unemployment will act as a perceived barrier to participation in, and completion of, mental health court diversion. Participants who are not

employed upon entry into the program will be less likely to successfully complete mental health court diversion than participants who are employed upon entry into the program.

H_5: It is predicted that residential instability will act as a perceived barrier to participation in, and completion of, mental health court diversion. Participants who are residentially unstable will be less likely to successfully complete mental health court diversion than participants who are not residentially unstable.

H_6: It is predicted that the presence of symptoms of serious mental illness will act as a perceived barrier to participation in, and completion of, mental health court diversion. Participants who report the presence of symptoms of serious mental illness will be less likely to successfully complete mental health court diversion than participants who do not report the presence of symptoms of serious mental illness.

H_7: It is predicted that the presence of a concurrent disorder will act as a perceived barrier to participation in, and completion of, mental health court diversion. Participants who report the presence of a concurrent disorder will be less likely to successfully complete mental health court diversion than participants who do not report the presence of a concurrent disorder.

Conclusion

This introductory chapter has provided a brief discussion of the historical underpinnings of mental health court diversion and reviewed the existing literature describing the relationship between client-specific characteristics and community mental health and court-mandated substance abuse treatment completion. Additionally, this

chapter has presented a comprehensive theoretical framework. The following chapter will describe the methodology employed to conduct the current research, including an explanation of the data collection and sample and a discussion of the predictor and outcome variables employed.

Chapter 2: Methodology

The current study employs quantitative analyses of program data from a post-charge mental health court diversion program to examine individual factors that may be predictive of program outcome. The data were initially collected by Durham Mental Health Services (DMHS) as part of a provincial standard for community mental health organizations reporting to the MOHLTC. A detailed description of the methodology employed for the current study, including a discussion of data collection, the sample, and the measures, is provided below.

Data Collection

This study conducted secondary data analysis of existing program records containing basic administrative, demographic, and clinical information for participants of a post-charge mental health court diversion program operated by DMHS. The original data was collected by DMHS using the Common Data Set – Mental Health (CDS-MH) form. By law, community mental health services in Ontario are required to collect the basic demographic information contained within the CDS-MH form for each client entering their support in order to provide measurement of common indicators for all mental health services across the province (MOHLTC, 2010). Demographic and administrative information such as the participant's age, sex, aboriginal status, employment status, educational background, primary diagnosis, and source of referral are captured by the organization at the time of service initiation. During the discharge assessment, data elements such as the client's exit disposition are reported.

CDS-MH data for all clients associated with the court support function were made available by DMHS for data collection. Information from the clients' records were

exported from the organizations electronic record-keeping database system into a Microsoft Excel file and made available to the researcher via a password-protected compact disc. The information from each client's CDS-MH form was coded by the principal investigator and inputted into the Statistical Package for the Social Sciences (SPSS) software for analysis. In order to ensure the confidentiality and anonymity of program participants, personal identifiers, such as the name and birth date of the client, were removed from the secondary dataset by the community organization prior to granting access to the researcher. As such, an arbitrary case number identified program participants.

Sample

The sample for this study was drawn from 1188 mentally ill offenders who exited DMHS adult court diversion program between January 1, 2005 and December 31, 2009. The program is offered to clients over the age of 18 who have committed a low-risk minor offence and whose mental illness can be safely and appropriately managed in the community. Clients who accept the program's services engage in community-based treatment programming, as outlined in their individualized diversion plan, for approximately six months. During this time, the mental health court worker will conduct regular follow-up to ensure that the client is complying with the conditions outlined in the treatment plan and that recommended services and supports continue to be appropriate. At minimum, the client's progress is assessed once a month. If at the end of the mental health diversion program the individual's treatment goals are successfully met then the charges are withdrawn or stayed. If the individual fails to meet the goals outlined in the

diversion plan then services will be terminated and the Crown Attorney will continue with traditional criminal proceedings.

Participation in this research project was voluntary. Informed consent was collected from all newly admitted clients. All participants were clients of DMHS Mental Health Court Support program. The Youth Mental Health Court Support program, for mature minors aged 16 to 18, operates separately from the adult program. Therefore, all offenders included in the sample were over the age of 18. Additionally, only participants who had exited the program at the time of data collection were included in the sample. In total, 130 (11%) clients were removed from the sample because they had not yet exited the program at the time of data collection. Further, in addition to those who did not satisfy the eligibility criteria, 639 (54%) clients who exited the program prior to 2008 were excluded from the sample. Prior to this time CDS-MH data was not recorded electronically. As a result, there were a number of concerns regarding missing records. Thus, in an attempt to improve the quality of the data, only records for clients who exited the program between January 1, 2008 and December 31, 2009 were included in the sample. Overall, 419 program participants, or 35% of the original sample, were included in the analysis.

Measures

Socio-demographic variables. Socio-demographic characteristics available for analysis included the participant's sex, age, educational attainment, employment status, and residential instability. Each of these elements must be reported by diversion and court support services operating across the province. It is important to note that race and marital status data are not collected by the CDS-MH and, therefore, could not be included

as socio-demographic measures. Additionally, while the CDS-MH does collect data on the participant's living arrangement and primary income source, these measures were not included in the analysis due to a lack of theoretical support and concerns regarding multicollinearity.

The biological sex of the client was measured dichotomously. This variable compares female clients, coded as 0, to male clients, coded as 1. The age of the participant was measured continuously. This variable measured the age of the participant in years at the time of service initiation. The highest level of education attained by the service recipient was recorded at time of entry into the program. The original CDS-MH variable was used to dichotomize participants according to whether or not they had completed secondary school. Specifically, educational attainment was measured by comparing participants who had not completed secondary school (coded as 0) with participants who had a secondary school education or higher (coded as 1). "Less than a secondary school education" consisted of individuals who had no formal schooling, some elementary school education, an elementary school education, or who had some secondary school education. "Secondary school education or higher" included those participants who had a secondary school education, some college or university education, or who had completed college or university.

The employment status measure compared participants based on whether or not they were meaningfully employed. Those who were employed upon entry into the program were coded as 0, while those who were not employed upon entry into the program were coded as 1. The "unemployment" category consisted of individuals who were not employed, not employed but participating in other activities, or those who had

casual or sporadic work. In contrast, “employment” included participants who had independent work, assisted or supportive employment, an alternative business, placement employment, or regular volunteer work. It should be noted that due to broad categorization, persons attending formal schooling could not be separated from individuals who were engaged in other full-time activities such as retirement or parenting, and as a result, these individuals could not be included under the “employment” category. In addition, since the client’s employment status was collected prior to admission into the program, we were not able to include individuals who obtained employment while receiving services.

The final socio-demographic variable measured residential instability. Again, this variable was measured dichotomously. Participants who had permanent and stable housing at the time of service initiation were defined as “residentially stable” and were coded as 0. Specifically, individuals were considered to be “residentially stable” if they resided in special care homes, room and boarding houses, long-term care facilities, municipal and private non-profit housing, private housing (either owned or rented), supportive housing, or a retirement residence. In comparison, individuals residing in transient or temporary housing, or individuals who were homeless, were defined as “residentially unstable” and coded as 1. This category included participants residing in correctional and probation facilities, general hospitals, in-patient psychiatric facilities, other specialty hospitals, hostels and shelters, and those who had no fixed address or were homeless.

Clinical variables. Additional variables were available to capture some of the client’s clinical characteristics. Clinical variables included the presence of symptoms of

serious mental illness and the presence of a concurrent disorder. Severe mental illnesses are those that are the most clinically complex and persistent (McAlpine & Mechanic, 2000). As McAlpine and Mechanic (2000) stated, "Although the specific diagnoses and illnesses that meet these criteria are debatable, there is consensus that schizophrenia and bipolar disorders are among the most severe mental illnesses" (p. 278). The variable "presence of symptom of serious mental illness" was measured dichotomously. Participants who were not experiencing any serious symptoms of mental illness were coded as 0. In contrast, participants who reported major depression, hallucinations, or delusions were defined as experiencing symptoms consistent with serious mental illness and were coded as 1.

Finally, the presence of a concurrent disorder was measured dichotomously. Individuals who did not report the presence of a concurrent disorder were coded as 0, while participants who did report the presence of a concurrent disorder were coded as 1. A "concurrent disorder" is defined by the MOHLTC as the presence of a co-occurring mental illness and substance abuse issue. It is important to note that this definition is not consistent with the *Diagnostic and Statistical Manual of Mental Disorders* [*DSM-IV-TR*], which defines a concurrent disorder, or a co-occurring diagnosis, as the co-occurrence of any two or more mental, emotional, or psychiatric disorders. According to the *DSM-IV-TR* (2000), "a substance related diagnosis like Amphetamine Dependence accompanied by a non-substance-related diagnosis like Schizophrenia" is referred to as a "dual diagnosis" (American Psychiatric Association, 2000, p. 3). However, for the purposes of this research project, the term "concurrent disorder" will refer to a comorbid mental

health and substance abuse issue, as this is how the reporting instrument has defined the term.

Outcome Measures

This research seeks to investigate which client characteristics are predictive of success, partial success, and non-success within a mental health diversion program. As Schneider et al. (2007) have stated, "Success is a subjective quality based on the perceived purpose of the program in question" (p. 195). As such, there is little consensus among researchers as to how "success" or "successful completion" should be defined (Schneider et al., 2007). In some instances, success is achieved upon completion of the program, regardless of how long it may take to satisfy the treatment conditions. Other diversion programs may require that clients complete treatment within a particular length of time. Some mental health diversion programs discharge the accused once short-term stability has been achieved (Schneider et al., 2007). Even still, success may be defined as long-term symptom stabilization, improvements in mental health functioning, or lack of subsequent criminal justice involvement. For the purpose of this research project, "success" is defined quite simply as program completion.

The client's discharge disposition was collected and recorded using the CDS-MH reporting form. Clients were categorized as "successful" if they completed the program and did not require further referral to additional treatment services. If a client completed the planned services but required an additional referral to further treatment programming they were categorized as "partially successful." Lastly, clients were categorized as "unsuccessful" if they failed to complete the program. Failure to complete the program included participant suicide or death, client relocation outside of the service area, or

withdrawal from services. “Withdrawal from services” consisted of recipients who refused treatment; however, instances where the agency terminated service provisions due to a lack of compliance were also included as a withdrawal.

Four separate dichotomous outcome measures were examined in this study (see Figure 3). First, the “successful program completion” variable compared participants who fully completed the program (coded as 1) to clients who partially completed the program and those who did not complete (coded as 0). Two separate measures addressed partial program completion. The first partial program completion variable compared participants who partially completed the program (coded as 1) to participants who fully completed the program (coded as 0). In contrast, the second partial program completion variable compared participants who partially completed the program (coded as 1) to participants who did not complete the program (coded as 0). Finally, the “non-completion” variable compared clients who did not complete the program (coded as 1) to participants who fully or partially completed the program (coded as 0).

Conclusion

This section has provided a discussion of the methodology used in this study as well as a description of the predictor and outcome variables to be examined in the statistical analysis. The following chapter will present the results of the current research. First, findings from the preliminary analyses including the descriptive statistics, bivariate investigations, and tests for multicollinearity will be presented. Lastly, the results of the multivariate binary logistic regression analyses will be provided for each outcome variable.

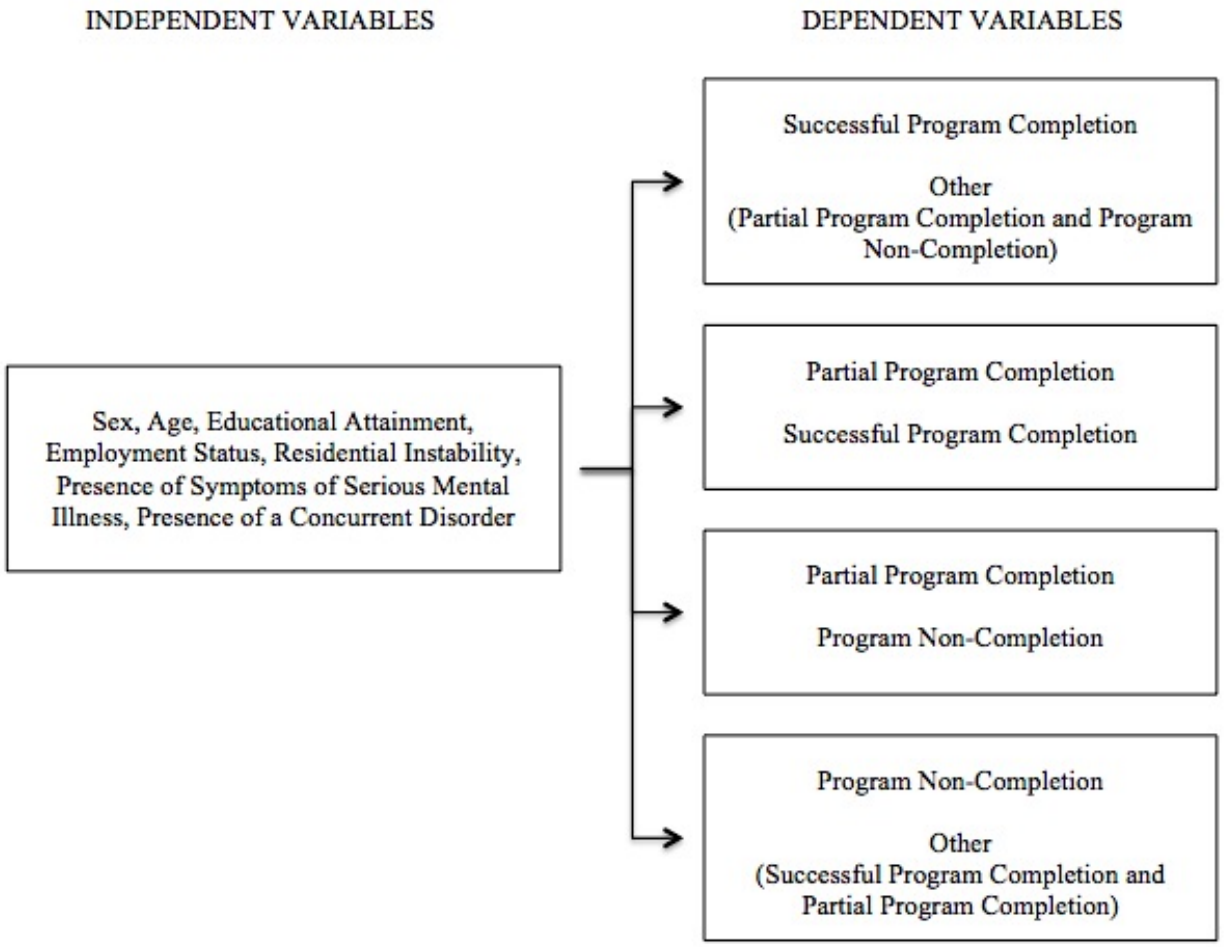

Figure 3. Causal models predicting level of program completion.

Chapter 3: Results

This chapter will discuss the results of the quantitative analyses. First, it will provide a description of the participants included in the sample. Next, this chapter will describe the statistical analyses employed and the findings from both the bivariate and multivariate analyses will be presented.

Characteristics of the Participants in the Sample

Descriptive statistics were used to describe the characteristics of the participants in the sample (see Table 1). The 419 program participants included in the sample ranged from 18 to 79 years of age. Mean age (with standard deviation in parentheses) at admission was 35.4 (13.4) years. Additionally, slightly over half (n = 251 or 60%) of the sample was male. Participant's education levels ranged from the completion of some elementary school education to the completion of college or university. Overall, 56% (n = 187) of program participants had completed a secondary school education. More than two-thirds (n = 300 or 74%) of clients included in the sample were unemployed upon entry into the program and 18% (n = 76) reported residential instability.

Furthermore, as displayed in Table 1, 59% (n = 197) of clients in the sample were diagnosed as having a mood disorder, 12% (n = 39) had a diagnosis of anxiety disorder, 10% (n = 34) were diagnosed with schizophrenia or a psychotic disorder, and the remaining 20% (n = 67) of the sample were diagnosed with various other psychiatric disorders. Forty-two percent (n = 179) of the sample reported the presence of acute symptoms associated with serious mental illness, such as hallucinations and delusions. Further, approximately half of the sample (n = 206 or 50%) reported the presence of a co-occurring mental health and substance abuse issue.

Table 1

Demographic and Clinical Characteristics of Participants

Characteristic	*N*	%
Sex		
Female	168	40
Male	251	60
Age		
18-24	112	27
25-34	111	27
35-44	81	19
45-54	77	18
55-64	29	7
65+	9	2
Educational Attainment		
Less than a Secondary School Education	150	45
Secondary School Education or Higher	187	56
Employment Status		
Employed	104	26
Not Employed	300	74
Residential Instability		
No Residential Instability	328	81
Residential Instability	76	19
Presence of Symptom of Serious Mental Illness[a]		
No Symptoms	240	57
Symptoms	179	43
Presence of a Concurrent Disorder		
No Concurrent Disorder	213	51
Concurrent Disorder	206	49
Primary Diagnosis		
Anxiety Disorder	39	12
Mood Disorder	197	59
Schizophrenia and Psychotic Disorders	34	10
Other Disorders	67	20
Level of Program Completion		
Successful Completion	104	25
Partial Completion	253	60
Non-Completion	62	15

Note. Totals of percentages are not equal to 100 for every characteristic due to rounding. In some cases *N* may not equal 419 due to missing responses.

[a] Program participants were described as experiencing symptoms of serious mental illness if they reported the presence of major depression, hallucinations, or delusions.

[b] "Concurrent disorder" refers to the presence of a co-occurring mental health and substance abuse issue.

Finally, of the 419 participants, 25% (n = 104) successfully completed programming, 60% (n = 253) of participants completed the program but required referral to additional treatment, and a mere 15% (n = 62) of participants failed to complete programming. Program non-completion was uncommon. Treatment non-compliance was often visited with further support. Therefore, failure to complete the program was only likely to occur in circumstances where the client showed a lack of therapeutic engagement and all supportive options had been exhausted. As a result, the majority of participants fully or partially completed the program.

Bivariate Analyses

Prior to the completion of multivariate analyses, bivariate associations were investigated. Unlike multivariate analysis, bivariate analysis explores the relationship between two variables. Specifically, chi-square tests were conducted for categorical variables and *t*-tests were conducted for continuous variables in order to identify if any significant associations or existed between each of the client pre-treatment characteristics and mental health court diversion outcome. Since this study is exploratory in nature, bivariate analyses were initially conducted in order to identify patterns and relationships in the data and to suggest potentially significant relationships. Specifically, these analyses were intended to identify statistically significant independent variables appropriate for inclusion in the subsequent multivariate models. Findings were considered to be statistically significant at $p < .05$ (95% confidence level). The results of theses analyses are described below.

Of the 419 participants included in the sample, 25% (n = 104) fully completed diversion programming and 75% (n = 315) did not. Table 2 and Table 3 show the results

Table 2

Prevalence of Socio-Demographic and Clinical Characteristics in Participants with Successful Program Completion and Other Program Participants

	Successful Program Completion		Other[a]			
Characteristic	*N*	%	*N*	%	X^2	*p*
Sex					.388	.533
Female	39	23	129	77		
Male	65	26	186	74		
Educational Attainment					.605	.437
Less than a Secondary School	40	27	110	73		
Education						
Secondary School Education or Higher	43	23	144	77		
Employment Status					3.161	.075
Employed	19	18	85	82		
Not Employed	81	27	219	73		
Residential Instability					2.015	.156
No Residential Instability	86	26	242	74		
Residential Instability	14	18	62	82		
Presence of Symptom of Serious Mental Illness					.309	.579
No Symptoms	62	26	178	74		
Symptoms	42	24	137	77		
Presence of Concurrent Disorder					3.384	.066
No Concurrent Disorder	61	29	152	71		
Concurrent Disorder	43	21	163	79		

Note. Totals of percentages are not equal to 100 for every characteristic due to rounding. In some cases *N* may not equal 419 due to missing responses.

[a] For this model, "Other" refers to participants who partially completed the program and participants who did not complete the program.

Table 3

Age Differences Between Participants who Successfully Completed the Program and Other Program Participants

	Successful Program Completion		Other[a]				
Variable	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*
Age	34.9	13.7	35.7	13.3	417	.462	.644

[a] For this model, "Other" refers to participants who partially completed the program and participants who did not complete the program.

of the bivariate analysis examining the relationship between socio-demographic and clinical variables and successful program completion. None of the independent variables investigated were significantly associated with successful program completion at the bivariate level. However, two variables – employment status and the presence of a concurrent disorder – were approaching statistical significance.

Moreover, Table 4 and Table 5 show the results of the bivariate analysis comparing client-specific characteristics by partial program completion and successful program completion. Of the 419 participants included in the sample, 60% (n = 253) partially completed diversion programming and 25% (n = 104) fully completed programming. No significant associations were noted in sex, age, educational attainment, residential stability, or the presence of a concurrent disorder. Participant's employment status was significantly associated with partial program completion. Additionally, the presence of symptoms of serious mental illness was approaching statistical significance. Partial program completion (as compared to successful program completion) varied significantly by the participant's employment status (X^2 = 4.483, p = .034). Participants who were employed partially completed programming (n = 75 or 80%) significantly more

often than participants who were unemployed (n = 174 or 68%). Thus, participants who were employed were more likely to partially complete programming than successfully complete programming.

Table 4

Prevalence of Socio-Demographic and Clinical Characteristics in Participants with Partial Program Completion and Successful Program Completion

	Partial Program Completion		Successful Program Completion			
Characteristic	*N*	%	*N*	%	X^2	*p*
Sex					.519	.442
Female	106	73	39	27		
Male	147	69	65	31		
Educational Attainment					.507	.476
Less than a Secondary School Education	92	70	40	30		
Secondary School Education or Higher	119	74	43	27		
Employment Status					4.483	.034
Employed	75	80	19	20		
Not Employed	174	68	81	31		
Residential Instability					.176	.675
No Residential Instability	208	71	86	29		
Residential Instability	39	74	14	26		
Presence of Symptom of Serious Mental Illness					1.317	.251
No Symptoms	134	68	62	32		
Symptoms	119	74	42	26		
Presence of Concurrent Disorder					2.744	.098
No Concurrent Disorder	124	67	61	33		
Concurrent Disorder	129	75	43	25		

Note. Totals of percentages are not equal to 100 for every characteristic due to rounding. In some cases *N* may not equal 419 due to missing responses.

Table 5

Age Differences Between Participants who Partially Completed the Program and Participants who Successfully Completed the Program

	Partial Program Completion		Successful Program Completion				
Variable	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*
Age	36.0	13.8	35.0	13.7	355	-.627	.531

Table 6 and Table 7 provide the results for the bivariate analysis of socio-demographic and clinical variables by partial program completion and program non-completion. No significant associations or differences were noted in sex, age, educational attainment, or the presence of a concurrent disorder. Two variables – residential instability and the presence of symptoms of serious mental illness – were significantly associated with partial program completion when compared to program non-completion. Additionally, employment status was approaching statistical significance.

Partial program completion (as compared to program non-completion) varied significantly by the participant's residential instability ($X^2 = 17.209$, $p < .001$). Participants who were residentially unstable were less likely to partially complete diversion programming than participants who were residentially stable. Specifically, of the 247 participants who partially completed programming, 63% ($n = 39$) reported residential instability compared to 86% ($n = 208$) who reported residential stability. Further, partial program completion (as compared to program non-completion) also varied significantly by the presence of symptoms of serious mental illness ($X^2 = 6.567$, $p = .010$). Participants who reported experiencing symptoms of serious mental illness partially completed mental health court diversion programming ($n = 119$ or 87%)

significantly more often than participants who did not report experiencing symptoms of serious mental illness (n = 134 or 75%).

Table 6

Prevalence of Socio-Demographic and Clinical Characteristics in Participants with Partial Program Completion and Program Non-Completion

	Partial Program Completion		Program Non-Completion			
Characteristic	*N*	%	*N*	%	X^2	*p*
Sex					.475	.491
Female	106	82	23	18		
Male	147	79	39	21		
Educational Attainment					.044	.834
Less than a Secondary School	92	84	18	16		
Education						
Secondary School Education or Higher	119	83	25	17		
Employment Status					3.188	.074
Employed	75	88	10	12		
Not Employed	174	80	45	21		
Residential Instability					17.209	.000
No Residential Instability	208	86	34	14		
Residential Instability	39	63	23	37		
Presence of Symptom of Serious Mental Illness					6.567	.010
No Symptoms	134	75	44	25		
Symptoms	119	87	18	13		
Presence of Concurrent Disorder					.296	.587
No Concurrent Disorder	124	82	28	18		
Concurrent Disorder	129	79	34	21		

Note. Totals of percentages are not equal to 100 for every characteristic due to rounding. In some cases *N* may not equal 419 due to missing responses.

Table 7

Age Differences Between Participants who Partially Completed the Program and Participants who did not Complete the Program

	Partial Program Completion		Program Non-Completion				
Variable	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*
Age	36.0	13.8	34.4	10.9	313	-.942	.348

Lastly, of the 419 participants included in the sample, 15% ($n = 62$) failed to complete diversion programming and 85% ($n = 357$) fully or partially completed programming. The results of the bivariate analysis exploring the relationship between person-specific characteristics and program non-completion are displayed in Table 8 and Table 9. No significant associations were noted in sex, age, educational attainment, employment status, or presence of a concurrent disorder. Two variables – residential instability and the presence of symptoms of serious mental illness – were significantly associated with program non-completion.

Program non-completion varied significantly by the participant's residential instability ($X^2 = 20.158$, $p < .001$). Participants who were residentially unstable failed to complete mental health court diversion programming ($n = 23$ or 30%) significantly more often than participants who were residentially stable ($n = 34$ or 10%). Further, program non-completion also varied significantly by the presence of symptoms of serious mental illness ($X^2 = 5.572$, $p = .018$). Participants who did not report experiencing symptoms of serious mental illness failed to complete programming significantly more often than participants who did report experiencing symptoms of serious mental illness. Specifically, of the 62 clients who failed to complete programming, 18% ($n = 44$) did not

report symptoms of serious mental illness as compared to 10% (n = 18) of clients who did.

Table 8

Prevalence of Socio-Demographic and Clinical Characteristics in Participants with Program Non-Completion and Other Program Participants

	Program Non-Completion		Other[a]			
Characteristic	*N*	%	*N*	%	X^2	*p*
Sex					.272	.602
Female	23	14	145	86		
Male	39	16	212	85		
Educational Attainment					.140	.708
Less than a Secondary School	18	12	132	88		
Education Secondary School Education or Higher	25	13	162	87		
Employment Status					1.904	.168
Employed	10	10	94	90		
Not Employed	45	15	255	85		
Residential Instability					20.158	.000
No Residential Instability	34	10	294	90		
Residential Instability	23	30	53	70		
Presence of Symptom of Serious Mental Illness					5.572	.018
No Symptoms	44	18	196	82		
Symptoms	18	10	161	90		
Presence of Concurrent Disorder					.937	.333
No Concurrent Disorder	28	13	185	87		
Concurrent Disorder	34	17	172	84		

Note. Totals of percentages are not equal to 100 for every characteristic due to rounding. In some cases *N* may not equal 419 due to missing responses.
[a] For this model, "Other" refers to participants who fully and partially completed the program.

Table 9

Age Differences Between Participants who did not Complete the Program and Other Program Participants

	Program Non-Completion		Other[a]				
Variable	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*
Age	34.4	10.9	35.7	13.7	417	.682	.496

[a] For this model, "Other" refers to participants who fully and partially completed the program.

Multivariate Analyses

Prior to running multivariate analyses the independent measures were examined for multicollinearity. Tests for multicollinearity did not reveal any statistical dependency between predictor variables. Tolerance and the Variance Inflation Factor (VIF) are common measures of collinearity. Tolerance represents the proportion of variance in a particular independent variable that is not being explained by its linear relationship with other independent measures (Mertler & Vannatta, 2005). These values range from 0, indicating multicollinearity, to 1, indicating independence among the predictor variables. Similarly, a VIF measures how much the variance of an estimated regression coefficient is increased because of collinearity among the variables (Mertler & Vannatta, 2005). Under common recommendations, tolerance values should be no less than .20 and VIF values should be no larger than 10 (Field, 2005; Menard, 1995). According to these guidelines, none of the independent variables employed in this study are highly correlated. In fact, all the tolerance values were larger than .90 and no VIF was larger than 1.2 for the variables in the models. Thus, there are no instances of multicollinearity among the independent variables.

Four binary logistic regression analyses were conducted in order to examine the ability of socio-demographic and clinical variables to provide an explanatory framework for level of diversion program completion.[3] Originally, the researcher intended to include only the independent variables deemed statistically significant through bivariate analyses in the final multivariate models. However, since this study is exploratory in nature, all independent variables were included in the final analysis despite the results of the preliminary bivariate investigation. As Pandey & Elliot (2010) have suggested, eliminating theoretically relevant variables from the final analysis based on results at the bivariate level may underestimate the parameters of the model. Thus, all theoretically relevant independent variables were retained (Pandey & Elliot, 2010).

Logistic regression allows for the prediction of the probability of an occurrence or event based upon the contribution of a set of predictor measures (Haan, 2009). This technique was deemed most appropriate for use with this data for a variety of reasons. First and foremost, this method can be employed to examine the relationship between categorical or continuous variables and a dichotomous outcome variable. The measures employed in this study, including the outcome measures, were primarily dichotomous categorical variables, making logistic regression an appropriate statistical technique for use with this data. Additionally, unlike a linear regression model, which examines a change in the dependent variable on the basis of change in the independent variables, logistic regression calculates changes in the natural logarithm of odds in the dependent

[3] Initially, the researcher intended on using a proportional odds model of ordinal logistic regression to analyze the original ordinal response variable of level of program completion. However, preliminary analysis indicated that the data did not satisfy the assumptions necessary to use this statistical analysis. Thus, the response variable was dichotomized to make it appropriate for use with binary logistic regression. As Bender and Grouven (1998) have contended, the use of separate binary logistic regressions is a simple and adequate method for analyzing ordinal data with non-proportional odds.

measure, allowing us to estimate the probability that one of two program outcomes will occur (Mertler & Vannatta, 2005). Lastly, logistic regression does not assume that measures are linearly related and the data need not be normally distributed (Haan, 2009). As a result, this statistical technique is often employed when dealing with a data set that is irregularly distributed. Other techniques, such as linear regression, require the data to satisfy more stringent requirements. As such, logistic regression was appropriate for use with this data. The results of these analyses are discussed below.

Predicting successful program completion. Direct multivariate logistic regression was performed to assess the impact of client socio-demographic and clinical factors on the likelihood that participants would successfully complete the mental health court diversion program. Table 10 presents the findings of the logistic regression model predicting successful program completion. All independent variables – age, sex, educational attainment, employment status, residential instability, presence of symptoms of serious mental illness, and presence of a concurrent disorder – were included in the model. The model did not significantly predict successful program completion (-2 Log Likelihood = 354.798, $X^2 = 9.595$, $p = .213$). The model correctly classified 75.0% of cases; however, this was no improvement over the constant-only model, which also correctly classified 75.0% of cases. This suggests that the addition of our independent variables did not significantly improve the predictive ability of our model. Further, the addition of the independent variables reduced prediction error by a mere 3.1% to 4.6%.

Despite the fact that our model did not improve our ability to predict successful program completion, one independent variable made a unique statistically significant contribution to the model. Employment status was significantly related to successful

program completion. Participants who were not employed were more likely than program participants who were employed to successfully complete (*Wald* = 4.837, *p* = .028). When controlling for the other independent variables, the odds of successfully completing mental health court diversion were 114.2% higher for unemployed participants than for employed participants.

Table 10

Logistic Regression Model Predicting the Likelihood of Successful Program Completion

Variable	*B*	SE	*p*	OR	95% CI
Sex	.150	.274	.593	1.157	[.677,1.979]
Age	-.004	.010	.732	.996	[.976, 1.017]
Educational Attainment	-.087	.275	.750	.916	[.535, 1.570]
Employment Status	.762	.346	.028	2.142	[1.086, 4.224]
Residential Instability	-.332	.379	.381	.717	[.341, 1.509]
Presence of Symptoms of Serious Mental Illness	-.364	.274	.185	.695	[.406, 1.190]
Presence of a Concurrent Disorder	-.403	.265	.128	.668	[.397, 1.123]
Constant	-1.20				
-2 Log Likelihood	354.798				
X^2	9.595				
df	7				
Cox and Snell R^2	.029				

Note. CI = Confidence interval for odds ratio (OR).

Predicting partial program completion as compared to successful program completion. A second multivariate logistic regression was performed to examine the impact of client socio-demographic and clinical factors on the likelihood that participants would partially complete diversion programming rather than successfully complete diversion programming. Table 11 provides the findings of the logistic regression analysis. Again, all independent variables were included in the model. The model did not

significantly predict partial program completion (-2 Log Likelihood = 329.727, X^2 = 11.165, p = .132). The model correctly classified 71.7% of cases; however, this was no improvement over the constant-only model, which also correctly classified 71.7% of cases. This suggests that the addition of our independent variables did not significantly improve the predictive ability of our model. Further, the addition of the independent variables reduced prediction error by a mere 3.8% to 5.5%.

Table 11

Logistic Regression Model Predicting the Likelihood of Partial Program Completion as Compared to Successful Program Completion

Variable	*B*	SE	*p*	OR	95% CI
Sex	-.240	.281	.392	.786	[.453, 1.364]
Age	.004	.010	.707	1.004	[.984,1.024]
Educational Attainment	-.011	.286	.969	.989	[.565, 1.731]
Employment Status	-.878	.352	.013	.416	[.209, .829]
Residential Instability	.102	.398	.798	1.107	[.508, 2.413]
Presence of Symptoms of Serious Mental Illness	.492	.281	.080	1.636	[.943, 2.840]
Presence of a Concurrent Disorder	.282	.275	.305	1.326	[.774, 2.272]
Constant	1.238				
-2 Log Likelihood	329.727				
X^2	11.165				
df	7				
Cox and Snell R^2	.038				

Note. CI = Confidence interval for odds ratio (OR).

Despite the fact that our model did not improve our ability to predict partial program completion versus successful program completion, one independent variable made a unique statistically significant contribution to the model. Employment status was significantly related to partial program completion. Participants who were employed were

more likely than program participants who were not employed to partially complete programming rather than successfully complete (*Wald* = 6.222, $p = .013$). When controlling for the other independent variables, the odds of partially completing, rather than successfully completing mental health court diversion, were 58.4% lower for unemployed participants than for employed participants.

Predicting partial program completion as compared to program non-completion. A third multivariate logistic regression was performed to examine the impact of client socio-demographic and clinical factors on the likelihood that participants would partially complete diversion programming as compared to program non-completion. Table 12 provides the findings of the logistic regression analysis. The model significantly predicted partial program completion (-2 Log Likelihood = 184.644, $X^2 = 26.094$, $p < .001$). The model correctly classified 84.9% of the cases, a very minor improvement over the constant-only model, which correctly classified 84.4% of cases. This suggests that the independent variables slightly improved the predictive ability of the model. Further, the addition of the independent variables reduced prediction error by 10.2% to 17.6%. This was the largest reduction in prediction error among all four models.

Two independent variables reached statistical significance. Specifically, the presence of symptoms of serious mental illness and the presence of a concurrent disorder were associated with partial program completion when compared to program non-completion. Program participants were 166.1% more likely to partially complete, rather than fail to complete, programming when they presented with symptoms of serious mental illness (*Wald* = 5.541, $p = .019$). In addition, when compared to participants who did not report the presence of a concurrent disorder, participants who did present with a

concurrent disorder were less likely to partially complete programming (*Wald* = 4.021, *p* = .045). Specifically, when controlling for the other predictor variables, the odds of partially completing mental health court diversion were 54.8% lower for clients who reported the presence of a concurrent disorder than for clients who did not report the presence of a concurrent disorder.

Table 12

Logistic Regression Model Predicting the Likelihood of Partial Program Completion as Compared to Program Non-Completion

Variable	*B*	SE	*p*	OR	95% CI
Sex	-.643	.420	.126	.526	[.231, 1.197]
Age	.007	.015	.637	1.007	[.977, 1.038]
Educational Attainment	-.348	.388	.370	.706	[.330, 1.511]
Employment Status	-.895	.508	.078	.409	[.151, 1.106]
Residential Instability	.831	.441	.060	.436	[.184, 1.034]
Presence of Symptoms of Serious Mental Illness	.979	.416	.019	2.661	[1.178, 6.013]
Presence of a Concurrent Disorder	-.793	.396	.045	.452	[.208, .982]
Constant	2.998				
-2 Log Likelihood	184.644				
X^2	26.094				
df	7				
Cox and Snell R^2	.102				

Note. CI = Confidence interval for odds ratio (OR).

Predicting program non-completion. A final multivariate logistic regression was performed to assess the impact of client socio-demographic and clinical factors on the likelihood that participants did not complete the diversion program. The findings of the analysis are presented in Table 13. All independent variables were included in the analysis. The model significantly predicted program non-completion (-2 Log Likelihood

= 209.489, X^2 = 24.749, p = .001). The model correctly classified 88.3% of cases; however, this was no improvement from the constant-only model, which also correctly classified 88.3% of the cases. Further, the addition of the independent variables reduced prediction error by 7.4% to 14.3%.

Table 13

Logistic Regression Model Predicting the Likelihood of Program Non-Completion

Variable	*B*	SE	*p*	OR	95% CI
Sex	.582	.403	.149	1.790	[.812, 3.943]
Age	-.005	.015	.738	.995	[.966, 1.025]
Educational Attainment	.564	.381	.138	1.758	[.834, 3.706]
Employment Status	.704	.494	.155	2.021	[.767, 5.325]
Residential Instability	.902	.413	.029	2.466	[1.097, 5.543]
Presence of Symptoms of Serious Mental Illness	-.787	.404	.052	.455	[.206, 1.005]
Presence of a Concurrent Disorder	.846	.383	.027	2.331	[1.101, 4.936]
Constant	-3.496				
-2 Log Likelihood	209.489				
X^2	24.749				
df	7				
Cox and Snell R^2	.074				

Note. CI = Confidence interval for odds ratio (OR).

Two independent variables reached statistical significance. Specifically, residential instability and the presence of a concurrent disorder were significantly associated with program non-completion. Program participants who reported residential instability were 146.6% more likely to not complete the program than participants who were residentially stable (*Wald* = 4.769, p = .029). Additionally, clients reporting the presence of a concurrent disorder were more likely to fail to complete programming (*Wald* = 4.886, p = .027). The odds of failing to complete mental health diversion were

133.1% higher for clients with a concurrent disorder than for clients who did not have a concurrent disorder.

Conclusion

This chapter has presented the results of the quantitative analysis. Although limited in their explanatory ability, the results of the logistic regression analyses have suggested that certain client characteristics can predict success, partial success, and non-success in a mental health court diversion program. The significance of these findings will be discussed in the following chapter. Additionally, the subsequent chapter will provide a discussion of the limitations of the study, recommendations for the granting organization, and concluding remarks.

Chapter 5: Discussion and Conclusion

The findings of this study seek to add to the limited body of research exploring the relationship between client factors and mental health diversion program success. More specifically, this study sought to examine two research questions. First, can a client's socio-demographic and clinical characteristics help us to predict mental health diversion outcome? Second, which client characteristics are most predictive of level of program completion? This chapter will discuss the results of the quantitative analysis. The results of each outcome variable will be explored separately. Next, the limitations of the study will be considered. Following discussion of the limitations, recommendations for policy and practice will be proposed. Finally, a summary of the research findings and concluding thoughts will be offered.

Factors Associated with Successful Program Completion

The results of this research suggest that employment status is predictive of successful program completion. In contrast to what was predicted, the current study found that successful program completion is more likely to occur when the client is not employed prior to program admission. Thus, our original hypothesis (H_4) that participants who are unemployed upon program entry are less likely to successfully complete mental health court diversion than participants who are employed upon program entry is not supported by the findings.

Employment status is commonly used as a stake-in-conformity variable in an attempt to measure the degree of attachment an individual feels towards society and their willingness to engage in normative behaviours (Bennett, Stoops, Call, & Flett, 2007). As a result, it is commonly theorized that individuals who are employed have a higher stake

in conformity than individuals who are unemployed and, as such, are more likely to successfully complete treatment programming (Berghofer et al., 2002; Brown, 2010; Butzin et al., 2002; McKean & Warren-Gordon, 2011). However, a lack of meaningful employment opportunity may in fact act as a deterrent against treatment withdrawal (Sung and Richter, 2007).

Although this study was unable to directly measure client perceptions, this finding suggests support for the use of the HBM in explaining diversion program completion. As the HBM argues, an individual's opinion of the value and practicability of an available treatment or preventative behaviour will affect the likelihood of participation. Engagement in health-related behaviours is more likely to occur when the individual perceives the new behaviour to be both useful and feasible. In particular, the prospect of vocational training and employment services may be perceived as a benefit to participating in treatment. Unemployed program clients may positively associate treatment compliance with increased employability, encouraging them to successfully complete programming.

Factors Associated with Partial Program Completion as Compared to Successful Program Completion

The results of the bivariate analyses and the multivariate logistic regression analysis also revealed employment status to be a statistically significant predictor of partial program completion. Specifically, clients who were employed were more likely to partially complete diversion programming than to successfully complete diversion programming. Undoubtedly, practical factors may account for this finding. Participants who are employed upon entry into the program may struggle to balance employment

responsibilities and treatment conditions. Employed participants may focus their energy primarily on the attainment of fundamental needs, such as employment security and financial stability, and as such, may be less concerned with the achievement of long-term goals such as program completion. According to the HBM, practical obstacles are likely to be perceived by clients as barriers to success and may prevent individuals from participating in health-related actions.

Therefore, where unemployment may be acting as a perceived benefit to treatment completion, employment may be acting as a perceived barrier to success. Unemployed individuals likely require program resources in order to satisfy fundamental needs and may have more convenient access to such services. In contrast, individuals who are meaningfully employed may associate treatment participation with practical barriers such as financial expense and lack of accessibility. Consequently, positive treatment motivation and enhanced program accessibility are likely associated with higher program completion among unemployed participants. Together, these findings suggest that employment status, as a modifying factor, may have an important impact on the perceived benefits and barriers to participating in mental health court diversion.

Factors Associated with Partial Program Completion as Compared to Program Non-Completion

The results of the multivariate logistic regression analysis examining the factors associated with partial program completion as compared to program non-completion revealed two statistically significant predictors. Clients who reported symptoms of serious mental illness were more likely to partially complete programming than to fail to complete programming. Further, participants who presented with a concurrent disorder

were less likely to partially complete programming and more likely to fail to complete programming.

Contrary to our predicted hypothesis (H_6), the results of this research suggest that clients who reported experiencing symptoms of serious mental illness were more likely to partially complete mental health diversion than clients who did not report experiencing symptoms of serious mental illness. While this finding was not expected, upon further examination a plausible explanation emerged. Due to a lack of research examining correlates of mental health diversion success, the original hypothesis was theoretically grounded primarily in the literature exploring court-mandated drug treatment programming (Evans et al., 2009; Hickert et al., 2009; Lang & Belenko, 2000). Undoubtedly, research exploring successful drug court completion is likely to be derived from a sample of individuals with a substance abuse issue. As a result, while the literature reveals frequency and severity of psychological illness to be a correlate of program completion, due to the characteristics of the participants in the sample, the studies reviewed are actually reporting on the presence of a co-occurring mental health and substance abuse disorder (Evans et al., 2009; Gray & Saum, 2005; Hickert et al., 2009; Lang & Belenko, 2009; McKean & Warren-Gordon, 2011). In contrast, the current study intended to examine the unique explanatory ability of both symptom severity and a diagnosis of concurrent disorder. Thus, while the presence of symptoms of serious mental illness would likely be predictive of non-success among a sample of drug court participants, it may not be predictive of negative outcome in a sample of mental health diversion participants.

This finding could also be the result of improved access to mental health services due to illness severity. While diagnosis alone does not define the need for care, persons experiencing a severe deterioration in psychological functioning require more frequent and intensive mental health treatment in order to achieve symptom stabilization (Mechanic, 2001). Thus, the intensity of treatment services received in the community is commonly a direct reflection of the severity of the client's illness (Ries & Comtois, 1997). Research has suggested that severely mentally ill individuals often receive more frequent, intensive, and individualized care (Berghofer et al., 2002; Ries & Comtois, 1997; Rossi et al., 2002). In fact, in a similar study of community mental health treatment completion, Berghofer and colleagues (2002) observed that clients with a diagnosis of schizophrenia were more likely to complete treatment programming than participants with other, less severe primary diagnoses. As the authors suggested, clients with schizophrenia received more consistent and thorough care due to the severity of their illness (Berghofer et al., 2002). Therefore, it is plausible that participants experiencing symptoms of severe mental illness received more thorough case management, increasing the likelihood of program completion and drawing attention to the need for further aftercare.

Further, while the current study has not explicitly investigated client perceptions using the HBM framework, this finding may provide support for the theoretical construct of perceived seriousness. According to the HBM, beliefs about illness severity come from concerns about the difficulties the health issue may create in the individual's life. Participants experiencing symptoms of serious mental illness likely perceive their symptoms to be both difficult and severe, which may have in turn increased the

probability of the individual engaging in behaviours and interventions aimed at symptom stabilization, such as mental health diversion (Henshaw & Freedman-Doan, 2009) Perceived severity and susceptibility may have also influenced the participant's decision to engage in further treatment services following the completion of diversion programming.

The model predicting partial program completion also found that participants who presented with a concurrent disorder were less likely to partially complete programming than to fail to complete programming. The importance of this finding will be discussed in the following section examining the factors associated with program non-completion.

Factors Associated with Program Non-Completion

The current research revealed two client characteristics to be significantly associated with program non-completion. As anticipated, both residential instability and the presence of a concurrent disorder were related to negative program outcome. At the bivariate level, mental health diversion non-completion also varied by the presence of symptoms of serious mental illness. However, this relationship did not maintain statistical significance in the multivariate analyses.

Diversion program non-completion was more likely to occur in cases where the client reported residential instability. These results are consistent with the findings of a previous study, which found that housing insecurity was predictive of failure to complete a mental health court program (Broner et al., 2009). Additionally, this finding offers support for our original hypothesis (H_5). As with our employment finding, residential instability may be acting as a practical barrier to participation in mental health court diversion programming. Clients may have been forced to withdrawal from treatment

services due to failure to secure permanent housing or the opportunity to obtain stable residency outside of the service area. Further, clients may have chosen to withdraw from programming and continue with criminal processing as an alternative to homelessness. Certainly, more research exploring the relationship between residential stability and mental health court diversion outcome is needed.

Further, in accordance with existing research, participants who reported the presence of a concurrent disorder were less likely to complete mental health diversion than participants who did not report a co-occurring mental health and substance abuse issue (Ball et al., 2006; Evans et al., 2009). Specifically, the findings of this study suggest that clients diagnosed with a concurrent disorder were more than twice as likely to withdraw from programming. These results were consistent with our original hypothesis (H_7). Interestingly, however, the presence of a concurrent disorder was not significantly correlated with the outcome variable in the bivariate analysis but did provide a unique contribution to the final multivariate model. These results suggest that this predictor may be acting as a suppressor variable, curbing error in one or more of the other predictors and improving the overall power of the logistic regression model (Pandey & Elliot, 2010).

Based on findings from the extant literature, the relationship between dual diagnosis and poor treatment outcome was not unexpected. Services for persons with co-occurring disorders are frequently disjointed and fragmented. Often programming remains focused on the treatment of a single disorder and does not effectively address the recovery of both diagnoses (Drake et al., 2004). Additionally, because this unique population requires an integrated treatment approach, the provision of services for

persons with a concurrent disorder is often difficult and costly (Drake et al., 2004; Ziedonis & Brady, 1997). Not surprisingly, then, research has indicated that satisfaction of care is lowest among individuals with a co-occurring mental health and substance use disorder (Urbanoski, Rush, Wild, Bassani, & Castel, 2007).

Moreover, as Hartwell (2004) suggested, individuals diagnosed with a concurrent disorder endure a double stigma, which presents a barrier to receiving treatment services in the community. These persons are often perceived as resistant to treatment and, as such, community agencies may be reluctant to serve them (Lamb, Weinberger, & Gross, 1999). This stigma may be further exacerbated by involvement with the criminal justice system. Dually diagnosed individuals continue to be the "misfits" of the mental health system (Hartwell, 2004). Undoubtedly, lack of appropriate care, treatment dissatisfaction, and the presence of stigma are all plausible explanations to account for diversion program non-completion among clients diagnosed with a concurrent disorder. As Janz and Becker (1984) have stated, of all of the theoretical constructs of the HBM, perceived barriers are often said to be the most significant in determining whether or not there is behavioural change.

Lastly, the bivariate analysis revealed that failure to complete treatment programming was related to the presence of symptoms commonly associated with serious mental illness. More specifically, individuals with symptoms of serious mental illness were less likely to not complete programming than individuals who did not report symptoms of serious mental illness. This relationship was found to be marginally significant in the multivariate analysis. As previously mentioned, individuals experiencing symptoms of serious mental illness may be monitored more closely in the

community. More rigorous treatment programming and consistent case management may explain why these individuals are less likely to withdrawal from mental health diversion. This finding provides support for the importance of client-treatment matching and suggests that program participants benefit from increased contact with mental health court workers when residing in the community.

In summary, the results of this research study revealed some interesting patterns in mental health diversion program completion. Together, the findings of the bivariate and multivariate analyses suggest that individuals who are employed are more likely to not complete or partially complete programming than to finish mental health diversion successfully. In contrast, individuals who are unemployed are more likely to successfully complete mental health diversion programming than to partially complete or not complete. Employment status was an important predictive factor of both partial and full success. Symptoms of serious mental illness appear to be associated primarily with partial program completion and the presence of co-occurring mental health and substance abuse issues and residential instability were only significant in the final model exploring program non-completion.

Factors Not Associated with Level of Program Completion

Contrary to both the predicted hypotheses and the existing research examining community mental health and court-mandated drug treatment programming, the current study did not find age, sex, or educational attainment to be significantly associated with completion or non-completion of mental health court diversion. Previous research has suggested that women are more likely than men to withdraw from court-mandated drug treatment programming (Olfson et al., 2009; Rempel & Destefano, 2002). The current

study did not find support for our original gender hypothesis (H_1), which predicted that male participants would be more likely to successfully complete mental health court diversion than female participants. Failure to replicate these findings in the current study could be the result of sample variation. The sample employed for this study had a slight gender bias, which may be contributing to the lack of effect.

Furthermore, research from the court-mandated drug treatment programming literature has suggested that age and treatment completion are positively related (Hickert et al., 2009; Mateyoke-Scrivner et al., 2004; Miller & Shutt, 2001; Rempel & Destefano, 2002; Saum et al., 2001). This study failed to find a significant relationship between age and mental health diversion program completion. Thus, our hypothesis (H_2) that as the participant's age increases the likelihood of successful program completion will also increase was not supported by the research results. Our failure to find a significant relationship between age and mental health diversion program completion may suggest that the correlates of successful mental health diversion are unique from those of court-mandated substance abuse programming. Unlike research exploring drug court completion, which has suggested that younger clients may present with more severe substance abuse behaviours and experience pressures from deviant peer groups (Butzin et al., 2002; Rempel & Destefano, 2002), age may not be as relevant in explaining mental health diversion program completion.

Moreover, this study did not find a relationship between educational attainment and level of program completion, as was originally predicted (H_3). This finding is not consistent with the drug court literature, which overwhelmingly suggests that educational attainment is positively associated with program success (Brown, 2010; Butzin et al.,

2002; Hartley & Phillips, 2001; Mateyoke-Scrivner et al., 2004; Schiff & Terry, 1997; Sechrest & Shicor, 2001). A lack of variation in the sample may account for this non-finding, given that a vast majority (92%) of the sample had completed some secondary school education or higher.

Lastly, non-findings and failures to replicate may also be attributed to the fact that drug courts and mental health diversion are administered in fundamentally different ways. In the drug court model, treatment conditions are judicially sanctioned and are commonly administered by a judge. Ongoing judicial interaction is employed to monitor and evaluate the achievement of program goals and gauge the efficacy of treatment. In contrast, a mental health diversion plan is often developed with a trained mental health court worker and individuals may have little or no involvement with the judiciary or the court system (Schneider et al., 2007). In fact, a mentally ill individual may be diverted prior to contact with the court (Schneider et al., 2007). Thus, differences in program models may be accounting for some of the variation in findings.

Limitations

Undoubtedly, this study is not without limitations. First, the study relied on the use of existing data. While the use of secondary data is time efficient and cost effective, it can present a number of concerns. For example, since the data had already been collected, the researcher had no input regarding the data collection process. Additionally, because the participants' information was originally collected primarily for administrative purposes, there is incongruity between the original purpose of data collection and those of the research study. Lastly, because the data was coded by a single researcher, intercoder reliability analysis was not possible.

Moreover, because the researcher was not involved in data collection, it must be assumed that all data was collected and reported accurately. Due to the fact that the study data was pre-existing the researcher is unable to identify any misreporting or inaccuracies that may have occurred during the data collection process. In an attempt to address this limitation the researcher engaged in regular contact with the granting organization. Consistent communication with the community partner allowed the researcher to clarify the methodological techniques employed, as well as, variable conceptualization and operationalization. This communication was invaluable and allowed the researcher to offset many of the challenges of utilizing secondary data. In addition, in an attempt to improve the quality of the data and reduce the possibility of erroneous information, data collected during the first two years of the program's operation was removed from the analysis. During this time period data was not recorded electronically and there appeared to be staff compliance issues concerning reporting and record keeping.

The original variables collected using the CDS-MH reporting tool are broadly defined and categorized. More precise and refined measures would have allowed for a more robust statistical analysis. For example, due to a lack of well-defined measures, we were required to employ a measure of housing type (private housing, hostels and shelter, in-patient psychiatric facility, etc.) in order to conceptualize residential stability. Certainly, residential stability would have been more appropriately defined and measured as the number of housing placements or transitions a client experienced prior to, or during, service engagement. Furthermore, the original employment variable was broadly conceptualized as "employed," "unemployed," and "unemployed but engaged in other activity," making it difficult to determine the clients' primary daytime tasks. A more

refined measure would have allowed for the inclusion of employment training and other conventional behaviours.

A number of important measures are not collected by the granting organization. For example, there are no variables in the CDS-MH tool used to report the client's race or ethnicity. Some researchers have argued that examining race in health data promotes the misconception that race is a biological construction (Bagley, 1995) or that "racial categorizations perpetuate and encourage racial fragmentation" (Randall, 2005, "Disaggregation of Data," para. 2). However, as Randall (2005) suggests, both health and legal status are impacted by race and racial discrimination and, as a result, failing to collect such data ignores the presence of social and legal disparity. Other measures such as marital status and explicit variables pertaining to substance use and criminal behaviour may have also improved the analysis.

Similarly, because the secondary data employed was primarily concerned with collecting demographic and administrative information few outcome measures were available for analysis. The granting organization does not collect data on long-term outcomes such as re-contact with the criminal justice system or subsequent psychiatric hospitalizations. Further, due to time constraints, privacy restrictions, and ethical concerns, we could not access criminal justice or health data in an attempt to supplement existing client information. Therefore, while the researcher would have liked to examine the long-term outcomes associated with mental health court diversion completion and non-completion this was simply not feasible. As such, this study is limited in how it can measure and discuss "success."

Further, there were a limited number of participants who did not complete the post-charge court diversion program. As mentioned in the previous chapter, the program under study provided continuous support to clients to ensure that their treatment conditions were appropriate and that they received the services necessary to fully or partially complete the program. Given this weakness, the significance of these findings is limited.

Lastly, this was a single-site study conducted using client data from DMHS post-charge court diversion program. As such, the results of this study may not be generalizable to other settings or populations. Further, since the findings may be the consequence of the unique characteristics of the program under study, we must be cautious about suggesting broad public policy recommendations from research conducted using a single-site (Weisburd & Taxman, 2000).

Recommendations

While we cannot recommend widespread policy reform from the results of a study examining a sole mental health diversion program, community-based research nevertheless provides the investigator with an invaluable opportunity to inform change (Wallerstein & Duran, 2003). As Flicker (2008) wrote, "Working with community members as co-researchers renders results more accessible, accountable, and relevant to people's lives, with the added promise of a greater effect on program policy" (p. 71). As such, this section will provide recommendations for program policy and practice.

First, it is essential that the community organization in question work to develop and collect more robust information, particularly in the case of client outcome. Program completion is one small measure of success. Conceivably, what is most important is how

clients perform once they are no longer under the watchful eye of the criminal justice system. An effective mental health court diversion program should link clients with appropriate referrals and supports, reduce involvement with the criminal justice system, and improve overall quality of life (MOHLTC, 2006). Therefore, in order to adequately evaluate the efficacy of the program it is essential that staff engage in follow-up with clients who have exited their services. Efforts should be made to encourage the collection of long-term outcome measures.

Further, the results of this study suggest that individuals diagnosed with a concurrent disorder and persons who are residentially unstable had the most difficulty completing mental health diversion program services. Efforts should be made to collect more detailed data concerning these clients in order to learn more about these relationships. Further data and analysis could be used to lobby for additional services, such as added supportive housing locations, in order to address the unique needs of client sub-populations who are at higher risk for program non-completion.

Moreover, sharing information within and across systems is critical to the improvement of programming. Currently, there are a number of barriers that prevent organizations from accessing relevant client data across institutions. To properly coordinate services and resources for mentally ill persons who have found themselves in contact with the law there needs to be collaboration between all relevant sectors of the criminal justice and healthcare systems (Sinha, 2009). Accordingly, in order to enhance the ease of research and the development of accountable and effective programming, data must be made more accessible to researchers and policy makers. As such, efforts should

be made to encourage information sharing, so long as it does not contravene privacy legislation or the client's rights (Sinha, 2009).

In general, further research could support DMHS in making informed decisions regarding program development, assist in the measurement of workload and performance outcomes, improve public awareness of program services, examine service delivery, and evaluate program efficacy. However, in order to improve research efforts, greater resources are likely required. Currently the program operates with minimal staff and due to an over-reliance on the use of post-charge diversion, many of the mental health court workers experience a high caseload. As Flicker (2008) suggested, in order to ensure that service providers are not overburdened or redirecting their attention from other important duties, staff should be encouraged to strive for an appropriate level of research involvement. In an attempt to alleviate the double-responsibility of research and service provision the community organization might consider hiring a trained analyst to address these needs.

Conclusion

Research has suggested that the use of mental health court diversion is associated with improved mental health functioning, reduced recidivism and hospitalization, reduced pressure on the criminal justice system, increased access to mental health services for clients, and both healthcare and criminal justice cost savings. However, to date, virtually no research has examined which factors are associated with successful completion of such programs. As mentioned in the introduction, although some factors have been identified by the community mental health treatment literature and research examining court-mandated drug treatment programming, little is known about the explicit

relationship between individual characteristics and mental health court diversion outcome. Thus, the purpose of the current study was to improve our limited understanding of how client-specific characteristics impact the completion of diversion programming for individuals with mental illness.

This study is unique in that it is amongst the first to examine the relationship between individual factors and mental health diversion program completion. While limited in their explanatory ability, the results of this study suggest that socio-demographic and clinical characteristics can be used to predict level of program completion. Specifically, participant's employment status was found to be predictive of both successful program completion and partial program completion. Individuals experiencing symptoms of serious mental illness were more likely to achieve partial success and clients who reported residential instability or the presence of a concurrent disorder were more likely to fail to complete programming. Additionally, these findings suggest that correlates of mental health court diversion may present some dissimilarity from those discussed in the court-mandated substance abuse programming literature. Lastly, although this study was not able to measure the perceptual components of the HBM, the results of this research suggest that this model may have applicability for understanding criminal justice outcomes, such as diversion program completion.

Undoubtedly, methodological and practical limitations prevented the testing of a more comprehensive model of level of program completion. Nevertheless, this study has raised a number of interesting and important questions for further examination. Future research should explore whether individual characteristics are related to subsequent client outcomes, such as criminal recidivism, symptom stabilization, and improvements in

quality of life. Additionally, future studies should build upon the current research by exploring the explanatory ability of program characteristics and both client and program characteristics combined. Lastly, in order to fully examine the applicability of the HBM in explaining mental health diversion program completion, future research should also measure participant perceptions.

Given previous findings that treatment completion and adherence can reduce recidivism and improve participants overall quality of life (Broner et al., 2004, 2005; Cosden, et al., 2003, 2005; Frisman et al., 2006; Hoff et al, 1999; Lamberti et al., 2001; Lamb et al., 1996; Naples & Steadman, 2003), exploring predictors of success continues to be of critical importance. Knowledge of the correlates of diversion program outcome can be used in efforts to determine possible treatment challenges and effectively direct participants to the appropriate community resources.

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Appendix A: Description of Durham Mental Health Services Court Support Program

Durham Mental Health Services is a non-profit organization providing mental health support to individuals residing in Durham Region. Services offered by the agency include six mental health supportive housing locations, a case management program, crisis services, a family support program, and court support services. Specifically, the court support program at DMHS provides assistance to persons with mental illness who have found themselves in conflict with the law. While the primary focus of the program is to redirect mentally ill offenders from the criminal justice system into community mental health programming, clients who do not wish to pursue, or are ineligible for, court diversion may work alongside a court support worker to receive referral to the appropriate services. Consultation, education, and linkage to community supports are also available for family members of the accused.

As previously mentioned, the primary goal of the DMHS court support program is to redirect individuals with mental health concerns from the criminal justice system into the appropriate community mental health services and supports. The program began in 1998 as a pilot program. The organization committed one provisional full-time staff member to work alongside the Crown Attorney's office to assist with diversion and provide support to offenders with mental health issues. The program was intended to act as a bridge between the criminal justice system and mental health services within the community. On April 1, 1998, the program received initial funding to permanently employ one full-time mental health court worker. Then, in February of 2005, as part of the provincial *Service Enhancement Strategy*, DMHS received expansion funding to

improve court support and diversion services. Today, the program employs five full-time mental health court workers, four of whom are dedicated to providing services and supports to adults and one who works solely with youth referrals.

Clients who have committed a low-risk minor offence and whose mental illness can be safely and appropriately managed in the community are eligible for diversion. Specifically, admission criteria for the DMHS post-charge diversion program include the presence of an Axis I mental illness,[4] commission of a minor criminal offense as a result of such illness,[5] and the ability to provide informed and voluntary consent. Referrals are received from a variety of sources including self-referral, family and friends, or a community service provider. However, the majority of referrals for mental health diversion are received from the Crown Attorney or through the client's defence counsel.

Clients who accept the program's services receive an initial assessment conducted by a mental health court worker. The initial assessment helps to determine the client's mental health status, available supports, and pre-existing connections to psychiatric and community services. Once the needs of the client have been identified, a diversion plan is developed and recommendations regarding appropriate treatment conditions are put forth. A diversion plan can include conditions such as referral to psychiatric assessment and adherence to psychotropic medications. The diversion plan must be developed in

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[4] Clients are eligible for mental health diversion if they present with an Axis I disorder. Axis I disorders are clinical disorders, including childhood disorders, organic mental disorders, psychoactive substance abuse disorders, psychosis, mood disorders, anxiety disorders, somatoform disorders, dissociative disorders, sexual disorders, and sleep disorders. Development disorders, personality disorders, and physical illness do not meet the criteria (American Psychiatric Association, 2000).

[5] According to the Ministry of the Attorney General's Practice Memorandum (2005) on diversion for mentally ill offenders, Class I offences, such as mischief and causing a disturbance, are "presumptively eligible" for consideration. Class II offences, such as minor assaults, are also eligible for diversion but are at the discretion of the Crown counsel based upon the circumstances of the offence, the status of the accused, and the needs of the community. Class III offences, such as murder, criminal organization offences, and spouse and partner offences, are serious offences and are not eligible for diversion.

collaboration with the Crown Attorney, defence counsel, the mental health court worker, and the accused.

Upon completion of the diversion plan, clients are granted a three-month adjournment of their court date. The mental health court worker will conducts regular follow-ups to ensure that the mentally ill accused complies with the conditions outlined in the treatment plan and that recommended services and supports continue to be appropriate. At minimum, the client's progress is assessed once a month. If all of the participating parties are satisfied with the effort of the accused, then the matter is adjourned for an additional three months to provide the participant with sufficient time to meet their treatment needs. A typical mental health diversion at DMHS is six months in length. If at the end of the mental health diversion program the accused's treatment goals are successfully met then the charges are withdrawn or stayed. If the offender fails to complete the program then diversion services are terminated and the Crown Attorney continues with the traditional criminal proceedings.