THE ROLE OF RESPONSIVITY IN YOUTH REHABILITATION:
THE CASE OF MENTAL HEALTH

by

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Abstract
Mental health problems are a significant concern for justice-involved youth. Yet there is substantial variability in how mental health problems have been understood in terms of their role in offending and their significance to treatment planning and outcomes. Perspectives on mental health from a predominantly clinical literature differ from the conceptualization found in the rehabilitation-focused Risk-Need-Responsivity (RNR) literature. This dissertation consists of two papers addressing the role of mental health issues in justice system involvement, with a focus on youth. Paper 1 provides a conceptual analysis of the two literatures to elucidate points of contrast and potential for common ground. I argue that the two literatures differ in seven ways: major goals, definition of risk, predictors studied, outcomes of interest, timelines of interest, features- versus disorder- based approaches, and what is included in the category of mental health concerns. Using these identified differences as an interpretative framework, areas of concordance are then identified. Directions for research include the role of mental health in offending, especially for youth in a developmental context, and gender differences. Implications for policy and practice are reviewed. Paper 2 presents an empirical study that examined probation services and reoffending outcomes for 232 youth following comprehensive assessments of their mental health and criminogenic risk/needs. The role of mental health
functioning was examined in the context of assessed and treated criminogenic needs. Youth with identified mental health needs were no more likely than youth without such needs to reoffend, regardless of whether those needs were treated. Youth who received mental health treatment were more likely than other youth to have their criminogenic needs treated, suggesting that mental health treatment was associated with intermediate treatment targets. However, criminogenic needs treatment reduced the risk of reoffending regardless of mental health; mental health treatment did not significantly moderate the effectiveness of criminogenic needs treatment. These findings are discussed in terms of possible interpretations of responsivity, reflecting either that treatment of mental health problems facilitated engagement in criminogenic needs treatment, or that youth received higher quality or more comprehensive services due to systems-level variables. Implications for theory and practice are discussed.
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General Introduction

Addressing youth crime is a significant concern for citizens and policymakers alike. In addition to crime prevention strategies, effective intervention to reduce recidivism is an important component of efforts to reduce youth involvement in the criminal justice system. Numerous sources have identified that mental health problems are highly prevalent in the justice system, far exceeding the rates found in community samples (Chitsabesan & Bailey, 2006; Teplin, Abram, McClelland, Dulcan, & Mericle, 2002; Shufelt & Cocozza, 2006). This finding has led to numerous questions around the role of mental health in offending behaviours and implications for treatment, with significance for research, practice and policy.

Broad Approaches

While high prevalence rates have been widely acknowledged, there is considerable diversity in explanations of the high prevalence rates. To provide context for the investigation presented in this dissertation, I will first briefly review the major explanations that have attended to the question, Are mental health problems associated with increased risk for offending? There are three broad interpretations for the high co-occurrence of problems with mental health and with the justice system.

(1) Involvement in the justice system contributes to mental health dysfunction:

Classical sociological models have posited that the deprivations and hardships associated with justice system involvement (and in particular, with incarceration) are responsible, at least in part, for adjustment difficulties and mental health problems (e.g., Sykes, 1958). The stresses of incarceration, such as overcrowding, violence, lack of privacy, solitude and isolation, insecurity, lack of meaningful activity and isolation from community can contribute to the development of mental health symptoms in adults (Fraser, Gatherer &
Hayton, 2009) and in youth (Cesaroni & Peterson-Badali, 2005), and may increase the risk of suicidal behaviours in vulnerable youth (Shreeram & Malik, 2008).

(2) Mental health dysfunction contributes to justice system involvement:

Systems influences:

Some writers have argued that the high prevalence rates demonstrate that our social institutions are failing to adequately meet the needs of individuals with mental health problems. Most comprehensively, the criminalization hypothesis of mental illness suggests that individuals with mental health problems are being detained through the justice system when, in fact, they ought to be receiving support and treatment through mental health services (as reviewed by Grudzinskas, Clayfield, Roy-Bujnowski, Fisher, & Richardson, 2005; see also Skeem, Manchak, & Peterson, 2011, p. 116). North America’s move away from mental health institutions coincided with an increase in incarceration, although a causal link has not been demonstrated (Fraser et al., 2009). There are now three times as many seriously mentally ill individuals in jails and prisons as there are in mental hospitals (Torrey, Kennard, Enslinger, Lamb, & Pavle, 2010). Grudzinskas et al. (2005) argued that, “This change in the nature of social control mechanisms and institutions has led to changes in the function of the courts as the overseers and brokers of social control and in some cases initiators of treatment” (p. 279). Reflecting on the availability and accessibility of services, Grisso (2008) raised concern that parents may surrender their youth to the justice system because they are otherwise unable to secure mental health services to address emotional and behavioural challenges.

Writers representing this view have also addressed how the justice system manages offenders whose needs range in severity, from those whose illness may mitigate their level of criminal responsibility in legal terms, to those who may be candidates for mental health diversion programs, including specialized mental health courts (see discussion in Grudzinskas
et al., 2005). Within the standard system, there is concern that individuals with mental illness penetrate further into the justice system (as reviewed by Skeem et al., 2011). They may be re-apprehended sooner or recorded as recidivists because of greater monitoring of offenders who have mental health disorders, especially dual diagnoses (defined as co-occurring psychiatric and substance use disorders; Wood, 2011).

**Direct effects:**

Other authors have identified, explicitly or implicitly, the possibility that mental health problems increase the likelihood of offending behaviours. This literature suggests that if intervention is provided to target the mental health needs of these offenders, then recidivism should be decreased. For example, Abram et al. (2004) concluded that, “to the extent that PTSD is correlated with subsequent violent perpetration, effective treatment is also a matter of public safety (p. 408).” Similarly, Hoeve, McReynolds, and Wasserman (2013) concluded that, "The high rate of psychiatric disorder in juvenile justice youth has consequences for more than just clinical management, as psychiatric disorder is found to be linked to recidivism" (p. 1368).

**(3) Reflection of other variables:**

Finally, a set of common risk factors may be related both to mental health dysfunction and to justice system involvement, or may mediate this relationship. Risk factors such as physical and sexual abuse, troubled family environment, parental substance abuse, poverty, poor education, neighbourhood disintegration, and neglect have been studied in relation to both mental health and offending outcomes. It has also been found that many young offenders present with numerous problems that have been shown to predict mental health problems, such as (low) intellectual level, school difficulties, substance abuse, exposure to trauma, and attachment issues (Casswell, French & Rogers, 2012; Chitsabesan & Bailey, 2006). These findings suggest that young offenders may have numerous risk factors for the development of
mental health problems, which are only partly shared with the risk factors that predict offending and, more specifically, recidivism. Less directly, Teplin et al. (2002) argued that many offenders move through cycles of dysfunction marked by poor mental health and offending; they propose that improved treatment would reduce the burden of psychiatric morbidity as well as interrupt or attenuate the cycle of social dysfunction that includes judicial involvement.

Importantly, these hypothesized relationships are not necessarily understood to be mutually exclusive, either in this dissertation or by the authors of the studies sampled here. Rather, they reflect the contributions of different academic disciplines and professions, as well as different levels of analysis, from the systems and policy-level to individual-level explanations. This dissertation will focus on literature that has explicitly examined or implicitly assumed a relationship at the individual level between mental health problems and risk for involvement in the justice system. I will introduce the two literatures in turn and then address the major research questions that arise.

Individual Level Approaches

Psychopathology: The clinical literature

The first of the two literatures is primarily focused on psychopathology and clinical assessment and intervention. These studies can be grouped based on their common interest in the prevalence of mental health concerns and associations with problematic functioning, notably justice system involvement. They do not represent a single, self-identified strain of research. Rather, the variables chosen for inclusion in studies and the targets of intervention are suggestive of an implicit working model. Skeem et al. (2011) observed that many studies have focused on the contribution of variables that are known to predict success in the treatment of mental health issues, thereby importing models of clinical treatment. Unfortunately, without a
theoretical framework the results and relevance of these studies are difficult to interpret. Comparatively few papers focusing on psychopathology incorporate models from the broader literature (see Grieger & Hosser, 2011).

**Rehabilitation: the Risk-Needs-Responsivity literature**

The second literature is primarily focused on forensic rehabilitation. Meta-analyses of research have identified key factors to consider when designing rehabilitative interventions to reduce the likelihood of re-offending. Together, these have been articulated as principles in the Risk-Need-Responsivity (RNR) model (Andrews, Bonta, & Hoge, 1990; Andrews & Bonta, 2010a; Dowden & Andrews, 1999). The Risk principle states that the level of risk to reoffend can be assessed by the presence of variables that have been empirically shown to strongly and directly predict reoffending, and that high intensity services should be reserved for high risk cases. The Need principle dictates that intervention should target the subset of risk variables that are *dynamic*, or modifiable. Finally, the Responsivity principle states that interventions may also need to be responsive to other considerations that are not directly related to risk for reoffending but that may affect the success of intervention. Interventions matching these principles have shown positive, though moderate, effect sizes when predicting youths’ desistance from crime, while poorly matched services show zero to negative effect sizes (e.g., Andrews, Bonta & Wormith, 2006; Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990; Dowden & Andrews, 1999). Within this framework, mental health problems have been described as a responsivity variable (Bonta, 1995).

**Responsivity**

Good clinical practice demands that the clinicians and practitioners be cognizant of, and responsive to, the characteristics of the individual that may affect progress in treatment. This is perhaps especially true when dealing with clients who present with complex needs and
histories and who may be ambivalent about or resistant to treatment. In the context of rehabilitative treatment, Bonta (1995) described responsivity as, "personal characteristics that regulate an individual's... ability and motivation to learn."

Andrews et al. (1990) distinguished between general responsivity, which considers learning principles that are generally true across the population, and specific responsivity, which focuses on the characteristics of the individual. According to the principle of general responsivity, treatment programs are expected to be successful by using those tools and strategies that are generally suited to most learners, with support for cognitive and behavioural approaches such as role-playing, modelling, graduated practice, problem-solving, graduated reinforcement techniques and cognitive restructuring (Bourgon, Bonta, Rugge, Scott, & Yessine, 2010). Findings have also supported principles from the general clinical treatment literature in addition to considerations with offenders. Staff rated high on interpersonal sensitivity and awareness of social rules tend to demonstrate better interactions with offenders, more prosocial behaviour and more disapproval of antisocial behaviour (Bonta, 1995). Bonta (1995) reported that behavioural treatment programs have an average effect size (measured in Phi) of 0.29 in reducing recidivism, in comparison to an average effect size of only 0.07 for non-behavioural treatment approaches.

Specific responsivity has been suggested to include demographic, cognitive and interpersonal factors. Some specific responsivity variables are likely common to clinical work, while other may be particular to or more relevant for offenders. For the general population, specific responsivity characteristics to consider include ethnicity, gender, age, self-esteem, intelligence and personality (Bonta, 1995). For offenders, specific responsivity variables proposed include a history of sexual abuse, poor social skills, conceptual level and thinking
styles, including inadequate problem-solving skills, concrete-oriented thinking and poor verbal skills (Bonta, 1995; Hubbard, 2007).

In contrast to the significant literature in support of the Risk and Needs principles, there has been comparatively little research examining responsivity, especially specific responsivity (Hubbard, 2007). Much of the literature that is available has focused on adult sex offenders (e.g., Beyko & Wong, 2005; Looman, Dickie & Abracen, 2005), leaving the significance of this principle unclear for general offenders, and youth in particular. This may be due, in part, to the substantial variability in how responsivity variables have been defined and measured (Vieira, Skilling & Peterson-Badali, 2009). While research may still be at an initial descriptive stage, the lack of clarity in how responsivity should be operationalized serves to limit the comparability and generalizability of findings across studies. As a result, responsivity-type variables may not be routinely assessed and reported in practice. For example, Luong and Wormith (2011) attempted to include specific responsivity in their analyses of recidivism prediction but found that 80% of cases surveyed had not identified these variables.

**Statement of the Problem**

The current status of the literature thus presents a challenge to understanding the pervasive problem of mental health issues amongst offenders. The two major literatures introduced here have suggested quite different conclusions as to the role of mental health in offending behaviour. The psychopathology perspective speaks of mental health as a risk factor, suggesting a direct relationship to offending, while the RNR perspective explicitly rejects mental health as a risk factor (in most cases), suggesting that high rates reflect other risk factors common to both mental health and offending. These problems have been discussed extensively in the clinical literature, but without a guiding framework to facilitate interpretation of the significance of the findings, especially in relation to other variables associated with
offending (i.e., what RNR scholars would term criminogenic needs). The RNR literature, in contrast, provides a comprehensive framework for understanding offending and targets for rehabilitation with a strong empirical foundation. Within this framework, however, mental health problems have been classified as considerations under the responsivity principle, which has received relatively little empirical scrutiny, either for specific responsivity generally or for mental health specifically.

The relative dearth of research on specific responsivity may be partly reflective of previous research having been based on adherence to the RNR model at a group level (Vieira et al, 2009), whereas individual-level assessment may be better suited to studying the influence of these specific, individual-level factors. Further, it is reasonable to hypothesize that treatment success will be greater when youth receive services that are well matched to their individually-identified RNR needs. In the first study to explore this question, Vieira et al. (2009) found that better recidivism outcomes were achieved for those who had a higher proportion of criminogenic needs addressed via treatment. Further, matching needs on an individual basis yielded better outcomes than ‘general’ matching. Addressing responsivity needs in treatment was also correlated with lower recidivism. However, this effect was no longer significant once risk and criminogenic needs were included in the model.

Moreover, the literature that has examined mental health problems amongst offenders from within the RNR framework has focused on adult offenders (e.g., Bonta, Law, & Hanson, 1998). In addition to general developmental differences, the types of mental health problems most frequently discussed in the adult literature, such as schizophrenia, bipolar disorder, and psychosis (e.g., Bonta et al., 1998; Skeem, Nicholson, & Kregg, 2008), are relatively uncommon amongst youth. Finally, the RNR-based literature has primarily argued against classification of mental health as a risk factor for offending, rather than exploring what it
would mean to empirically study it as a responsivity variable. The classification of mental health problems as a responsivity consideration offers little help to research or practice on effective intervention with justice-involved youth. Key differences between the clinical- and rehabilitation-oriented literatures complicate both interpretation and research design. This dissertation, which is comprised of two journal manuscripts, will aim to address both of these challenges in turn.

**Introduction to the papers**

**Paper 1: Mental health and justice system involvement: A conceptual analysis of the literature**

The first paper presents a fuller review and analysis of the two literatures introduced here. Its objective is to explicate differences in the way associations between mental health and justice involvement have been conceptualized and studied, and to provide an interpretive framework for understanding the literature.

In examining how these literatures may have reached these opposing conclusions, I found seven differences in their approach: the definition of risk, the choice of predictor variables, the choice of outcome variables, the timelines of interest, a features- versus disorders-based approach to defining mental health, what is included in the category of mental health concerns, and their major goals. They consider mental health quite differently; the psychopathology literature includes a broader range of problems, whereas the RNR approach has tended to consider a more limited set of issues as mental health problems. Even more, it became apparent that the psychopathology literature has tended to examine diagnostic categories as predictors, whereas the RNR literature has tended to examine particular features, including some potentially representative of diagnoses but considered independent of formal diagnoses, in addition to other needs. The two literatures agree in some findings, and both
share an orientation towards assessment, intervention, and a correction system oriented towards rehabilitation over punishment. Differences in the approaches and assumptions of the two literatures explain some of their differences, but ultimately they conflict in their major conclusions as to the significance of mental health for offenders, including justice-involved youth.

**Paper 2: Mental Health and Specific Responsivity: Its Role in Juvenile Justice**

**Rehabilitation**

Having explored these questions at the level of theory and research approaches, the second paper then turned to the empirical question of how mental health problems intersect with other challenges in a sample of young offenders. The first objective was to investigate the role of mental health functioning in intervention and desistance amongst justice-involved youth by contrasting two major hypotheses from the literature that mental health problems are either (1) a risk factor for offending, or (2) a "responsivity" variable.

The second objective was to contribute to a theoretical elaboration and clarification of the role of responsivity in the RNR framework by analyzing two possible interpretations of responsivity. Responsivity variables are described as facilitating or attenuating the effects of intervention without directly affecting the outcome. This description might imply that the influence of responsivity variables can be measured in terms of the success of intervention targeting criminogenic needs, which is an intermediate target expected to then affect the final targeted outcome of reduced recidivism. Alternatively, the description of responsivity variables is consistent with analysis of moderator variables (Baron & Kenny, 1986), whereby the proposed variable would function to moderate the effectiveness of treatment targeting criminogenic needs.
Accordingly, I posed three questions. First, from the clinical literature, are mental health problems a risk factor for offending? Second, is mental health treatment related to intermediate outcomes? Or, third, does mental health treatment moderate the effect of criminogenic needs treatment on reoffending?

This paper presents a study of youth who received comprehensive court-ordered assessments under s.34 of Canada’s youth justice legislation, the Youth Criminal Justice Act (YCJA). Youth were subsequently followed through their time in probation. Analysis focused on whether the interventions received by the youth, as documented by their probation histories, matched the assessment recommendations to target their criminogenic and mental health needs. As identified in the first paper, comparison and interpretation of the two major literatures has been hampered by a lack of clarity in defining what is meant by "mental health." The second paper addresses this issue by using an RNR-based definition of mental health variables and analyzing mental health both in terms of assessed needs and in terms of treatment received.

**Anticipated Contribution**

To date, the RNR research on principles for effective rehabilitation has focussed on criminogenic need areas. In practice, these principles have been associated with moderate improvements in outcomes. Research is necessary to understand whether and how attending to responsivity might improve the effectiveness of intervention targeted to criminogenic needs. While the RNR framework has become the dominant theoretical model guiding correctional rehabilitation, the responsivity principle has been sparsely researched and variously operationalized. Through an investigation of responsivity using mental health as a representative variable, the proposed research will aim to contribute at two levels, (1) to understanding the role of mental health in juvenile justice involvement, and (2) to the
conceptualization of responsivity, its role in the RNR framework and an empirical approach to studying it. Implications for research, policy and practice will be discussed.
Paper 1: Mental health and justice system involvement: A conceptual analysis of the literature

Abstract
The fact that individuals with mental health problems are significantly overrepresented in the justice system is a significant concern for public policy and practice. Psychology research examining mental health and risk for criminal offending can be broadly categorized into two approaches that have remained either independent of one another or in apparent conflict: the first based in clinical literature and focused on associations with psychopathology, and the second focused on forensic rehabilitation (e.g., represented in the Risk-Need-Responsivity literature). Although the policy and practice goals associated with these literatures are not synonymous, they overlap in critical respects. The lack of dialogue between the two approaches impoverishes both and contributes to misunderstanding that undermines effective policymaking and practice. To facilitate interpretation of these two approaches, in the current paper research examining mental health issues in justice-involved adults and youth is critically analyzed in terms of differing goals, implicit assumptions, intended scope of the literature, and key terminology (especially definitions of “mental health” problems and of “risk”). These differences are clarified to identify areas of congruence as well as outstanding conflicts. Suggestions are presented for future research at the nexus of these two approaches, which would serve the goal of developing evidence-informed policy and practice to reduce recidivism

1 A subsequent version of this paper has been published with the following reference: McCormick, S., Peterson-Badali, M., & Skilling, T. (2014, December 22). Mental health and justice system involvement: A conceptual analysis of the literature. Psychology, Public Policy, and Law. Advance online publication. http://dx.doi.org/10.1037/law0000033
and improve mental health functioning in individuals with mental health problems who are involved in the justice system.

**Background and outline of the current paper**

The prevalence of mental health concerns is much higher among individuals involved in the criminal justice system than in the general population (Teplin, 1990; Teplin, 1994), a finding that also holds true for justice-involved youth (Chitsabesan & Bailey, 2006). Previous studies report that the prevalence of mental health difficulties amongst young offenders is comparable to the rate found in youth receiving community mental health services (Atkins et al., 1999) and greatly exceeds the prevalence in the general population. Studies have found that more than 90% of justice-involved youth meet minimal diagnostic criteria for at least one disorder (Drerup, Croysdale, & Hoffmann, 2008; Unruh, Gau, & Waintrup, 2009), and rates of serious mental disorder (defined as, “serious enough to require significant and immediate treatment”) have been estimated at one in four justice-involved youth (Shufelt & Cocozza, 2006, p. 4). In a review of the literature, Vermeiren (2003) found prevalence rates of any mental disorder ranging from 50% to 100% amongst justice-involved youth in studies sampled.

These statistics raise significant concerns for research, frontline practice, and policymakers. Questions have included: Why are these rates so high? What is the nature of the relationship between offending and mental health functioning? What are appropriate responses at a systemic level? Before identifying possible targets for policy and systems change, we must consider what is meant by *responding*. Are the goals of intervention – including policy measures and day-to-day front-line practice – the reduction of suffering, reduction of recidivism, or both? And then, what does the literature say in terms of defining the parameters for consideration and the evidence base? Unfortunately, as Myers and Farrell (2008) observed, “Policymakers looking to make informed decisions…are confronted with copious, disjointed
research, limited resources, and conflicting agendas (p. 1172).” The fractured state of the current literature poses an immediate challenge to answering these foundational questions.

To begin to address this challenge, in this paper, I take a ‘step back’ to examine critical aspects of the two major psychology-based approaches to understanding mental health in the context of the justice system. I aim to address not only content (i.e., study findings) but also – and to a larger degree – meta-level questions that facilitate interpretation of the relationship between mental health issues and justice system involvement, including: how has the issue been approached in research, and by whom; how have the different conclusions been reached; and how can dialogue advance to meaningfully inform research, practice and policy? In so doing, my goal is to provide a framework that will serve as a guide to understanding and critically analyzing the existing literature, which is necessary if the literature is be used to meaningfully inform future research, policy, and practice. It should be noted that, while I pose questions of broad relevance for justice-involved populations, much of the literature focuses specifically on youth, whose mental health issues differ in some significant ways from those of adults.

**Psychopathology perspective**

Much of the literature examining the connection between mental health and judicial involvement does not represent a self-identified strain of research with an explicit theoretical model. However, what I am calling the ‘psychopathology perspective’ can be inferred from a common interest in the prevalence of mental health difficulties in justice populations, the association with offending outcomes, and calls for treatment that implicitly assume that: mental health variables are meaningfully related to offending, are therefore useful predictors of offending and should be treated *in order to* improve outcomes, including reduced recidivism. On the basis of high prevalence rates of mental health concerns within justice-involved
populations, these authors have spoken of mental health as a risk factor within a psychopathological model of vulnerability (e.g., Abrantes, Hoffmann, Anton, & Estroff, 2004). Studies within this category are heterogeneous, with contributors representing a range of disciplines including medicine (psychiatry, pediatrics), psychology, nursing, and public health. Where mental health has been construed as a major contributor to offending, intervention has focused on addressing these concerns in order to reduce recidivism. Accordingly, programs have been designed or advocated to address mental health problems in correctional settings. Offenders may be referred to mental health counseling or even processed through specialized mental health courts if they have a mental health problem that is perceived to be significant.

**RNR perspective**

The second literature that has addressed the role of mental health in offending is based on an explicit model with the stated goal of reducing re-offending. The Risk-Need-Responsivity (RNR) model is an evidence-based framework for the assessment and treatment of offenders that has been widely adopted in correctional and community settings. It is based on social learning and personality models of psychology (Andrews & Bonta, 2010a), which represent a focus on proximate, individual-level risk factors for criminal behavior (Andrews, Bonta, & Hoge, 1990; Andrews & Bonta, 2010a; Dowden & Andrews, 1999). The *risk principle* states that future offending can be predicted from the offender’s level of risk. Implicated in this principle is the need to match the intensity of services to the assessed risk level (i.e., to reserve high intensity treatments for high risk cases; Andrews & Bonta, 2010a). The *need principle* defines *criminogenic needs* as factors empirically shown to relate directly to offending behavior and differentiates static needs that cannot be changed from dynamic needs that are amenable to change, such as antisocial attitudes, peer affiliates, and parental monitoring. The need principle states that dynamic criminogenic needs should be targeted as
intermediate treatment goals (Gendreau, Little, & Goggin, 1996). The *responsivity principle* states that intervention should be matched to offenders’ learning styles and abilities and be responsive to issues that may moderate an individual’s response to treatment, such as reasoning skills (Andrews & Bonta, 2010a).

In recent years, there have been a handful of papers in which authors acknowledge the contributions of both the RNR and psychopathology-based literatures, or some aspects thereof (e.g., Grieger & Hosser, 2011). Overall, however, there is little communication between these two approaches so research has not benefitted from a sharing of results and conceptualizations. Without a framework with which to critically appraise these literatures and an understanding of their respective contributions, their use of similar-sounding terms may obscure important differences in the issues investigated and hence in what conclusions are warranted.

**Understanding differences**

In order to understand why mental health has been characterized as a risk factor for justice system involvement by the psychopathology literature and not by the RNR literature, it is necessary to review what has informed their respective conclusions. Based on my review and analysis of the literature, I will argue that the two literatures broadly differ in seven important aspects: (1) definition of risk; (2) predictors of interest; (3) outcomes of interest; (4) timelines of interest; (5) features- versus disorders- based approaches; (6) what is included in the category of “mental health” concerns; and (7) the major goals (although not all of these distinctions will be applicable to every paper, especially in the case of the more diverse psychopathology literature).

**1) The definition of risk**

In the RNR literature, risk factors are "personal attributes and circumstances that are assessable prior to service and are predictive of future criminal behavior” (Andrews et al.,
1990, p. 24); they have a direct effect on the likelihood of re-offense. The RNR framework is focused on predictive models and on unique predictors. Several meta-analyses comprehensively address the role of mental health in offending, including the question of its contribution to prediction of risk (see Bonta, Blais, & Wilson, 2014; Bonta et al., 1998; Lipsey & Derzon, 1998; Douglas, Guy, & Hart, 2009; Cottle, Lee, & Heilbrun, 2001). In the RNR lexicon, mental health is not described as a risk factor because it has not been found to significantly predict future offending (although it may share variance with other variables). Rather, it is classified as a responsivity consideration. For example, depression may interfere with a youth's engagement in a treatment program but would not be expected to directly affect the likelihood of that youth offending again in the future.

The term ‘risk’ is used more broadly in the psychopathology literature. In risk factor research, the first and most basic level involves description of simple associations between two variables (Kazdin, Kraemer, Kessler, Kupfer, & Offord, 1997; Perkins & Borden, 2003). While research in the broader field of psychopathology has progressed to more nuanced models, in the area of mental health and justice it is still common to find connections made on the basis of measures of association that reflect this initial stage of research (e.g., Goldstein et al., 2005; Mallett, 2013). Specifically, research has found evidence of high levels of psychiatric morbidity amongst incarcerated adolescents and found that these levels were significantly higher than amongst a community, non-mental health sample. On this basis, authors have inferred that psychiatric morbidity might contribute to offending and is therefore a risk factor for judicial involvement. For example, in a highly-cited study, Ulzen and Hamilton (1998) concluded that, "The overwhelming prevalence of multiple psychiatric disorders should guide policy toward optimal allocation of resources to psychiatric treatment, despite the fact that these adolescents are ostensibly held for correction of behaviors" (p. 60).
Yet, whether conducting or interpreting research, the distinction between association and causation is of critical importance. Rutter, Kreppner, and O’Connor (2001) distinguish between risk *indicators* and risk *mechanisms* in developmental psychopathology, noting that, "Many variables show a statistically significant association with psychopathology, not because they represent a risk process as such, but because they predispose individuals to other experiences that actually mediate the risk” (p. 14). From the psychopathology perspective, a variable might be described as a risk factor if it fell within a broader model of circumstances or characteristics that contributed to the likelihood of offending, *either directly or indirectly*, thus representing what Rutter et al. (2001) called a risk indicator. On the other hand, the RNR literature's definition of risk factors represents risk mechanisms. To date, results of meta-analyses have reliably yielded the same set of variables – antisocial history, antisocial attitudes, antisocial personality/behavior, antisocial peers – to the point that these have become known as the “Big Four,” describing the variables that most strongly predict recidivism which, together with another four moderate predictors – problems with family functioning, employment or education, substance abuse, or use of leisure time – together comprise the “Central Eight” (Andrews & Bonta, 2010b). Andrews and Bonta (2010b) conclude that psychopathology variables are minor risk factors because these variables add only very slightly to predictive models beyond the contribution of the central eight. The potential contribution of psychopathological variables is concluded to be of little practical significance in predicting future risk to reoffend. Thus it is possible that a mental health issue may be highly correlated with offending behavior but may not directly impact the likelihood of re-offense, which could lead to its description as a risk factor within a psychopathological framework but rejection as a risk factor by the RNR literature.
(2) The predictors studied

Following from the different conceptualizations of risk, the selection of predictors also varies in research representing the two perspectives. In the RNR literature, the same variables that have emerged as predictors of offending in the meta-analytic research are reflected in RNR-based assessment batteries and serve as organizing principles by which to plan treatment. The RNR literature is primarily interested in identifying variables that have a direct impact on the likelihood of recidivism. Variables that have an indirect effect are of interest only insofar as they affect primary variables. Variables that do not have a strong relationship to recidivism are of little interest and may even be considered by RNR-oriented researchers to be distracters from the primary goal of rehabilitation and a poor use of resources. Those variables that have shown the strongest effect in predicting recidivism have been captured in standardized assessment instruments such as the Level of Service Inventory- Revised (LSI-R, Andrews & Bonta, 1995). Many RNR-informed researchers have used this standardized set of predictors, which has led to considerable consistency across researchers in the variables studied.

In contrast, in the psychopathology-based literature the selected variables reflect the clinical focus of this field. Accordingly, research has measured whether a range of mental health diagnoses can be used to predict outcomes for offenders (Vermeiren, Schwab-Stone, Ruchkin, De Clippele & Deboutte, 2002; Plattner et al., 2009). Examples of other clinical variables that have been used as predictors include history of repeated victimization (Chang, Chen & Brownson, 2003), involvement in a specialized mental health diversion program (Cuellar, McReynolds, & Wasserman, 2006), receipt of community-based mental health services (Foster, Qaseem & Connor, 2004), abuse history (Vermeiren et al., 2002), or measures of emotion regulation or cognitive flexibility (Pihet, Combremont, Suter & Stephan, 2012).
(3) The outcomes of interest

The vast majority of RNR literature is focused on recidivism as the major outcome variable in relation to which risk factors are defined. Literature modeled on the RNR perspective may include specific variants of recidivism such as risk for violent recidivism, time to first re-offense, or severity of re-offenses. The RNR literature also tends to use official reports of offending and judicial involvement (e.g., Andrews & Dowden, 2006), while the psychopathology literature is more likely to include self-report measures. Other goals, such as participation in employment, may be intermediate targets because they are associated with lower rates of recidivism.

Those studies grouped under the psychopathology perspective include a more heterogeneous set of outcomes: self-reported delinquency (e.g., Boots, Wareham, & Weir, 2011; Pihet et al., 2012), rates of violence (e.g., Walters, 2011), rates of aggressive behavior (Fanning, Berman, Mohn, & McCloskey, 2011; Hodgins & Riaz, 2011), conduct symptoms, days in detention, or history of aggression (e.g., Crowley, Mikulich, MacDonald, Young, & Zerbe, 1998). Studies also examine predictors of first-time involvement in the justice system, which is not typically captured in the RNR focus on re-offending. Researchers may also be concerned with predicting a number of other negative outcomes. For youth in particular, the lens of developmental psychopathology may investigate how normal developmental trajectories are interrupted. For instance, Vermeiren (2003) argued that, "because psychiatric conditions interfere with academic, social, and familial functioning, the long-term effects of psychopathology in [adolescent-limited] offenders must be considered from a broader perspective than antisocial involvement alone" (p. 307). Thus, the two literatures may draw different conclusions about intervention targets and policy implications based on these differences in outcomes of interest.
It is important to note that many of these outcomes are conceptually similar and yet differ in crucial ways, particularly in the areas of delinquency, judicial involvement, and antisocial behavior. Risk factors are defined relationally (Kazdin et al., 1997), such that a group is defined as being at risk relative to a particular reference group. In predictions of risk, the reference group at hand should first be compared to the reference group used in previous research. Delinquency and recidivism consider different reference samples (see Grieger & Hosser, 2012). In particular, delinquency is typically considered across a community sample, assessing differences between those who engage in delinquency and those who do not: a between-subjects comparison. Recidivism, however, concerns a population that shares the common characteristic of having offended at least once: a within-subjects comparison. In this way, predictors of interest may differ according to the designated outcomes of interest, with some characteristics useful in distinguishing between groups who do and do not engage in delinquency, whereas those same characteristics may not be useful in distinguishing recidivists from non-recidivists. This would be expected, for example, if most delinquent youth possessed a quality that most non-delinquent youth did not; this characteristic may reliably distinguish between youth who are and are not delinquent but may not be useful in predicting which youth will recidivate if it is true for most youth in a group of offenders. In the case of psychopathology, recall that studies of prevalence rates have typically found that a large majority of offenders present with some level of symptomatology. The ubiquity of mental health problems in the general offender population may make this variable poorly suited to discriminating between likely recidivists and non-recidivists.

(4) The timelines of interest

Research from the two perspectives differs in the timelines of interest, both in terms of individuals' histories of offending and their mental health concerns. While the RNR literature
declares a narrow interest in predicting and reducing re-offenses, the psychopathology literature includes a broad range of timelines: prospective studies of youth who have never been involved in the justice system, youth who may reoffend, and youth who have been involved with the justice system at any point, including historically. Mental health issues may be relevant at any of these stages, reflecting pre-existing issues or emergent responses to the stresses of involvement in the justice system. As acknowledged in the broader developmental psychopathology literature, the factors associated with the first incidence of a negative outcome may differ from those factors that precipitate subsequent occurrences (Rutter & Sroufe, 2000).

(5) The definition of mental health: Features versus disorders

The two literatures differ in several respects in terms of how they label mental health-type concepts. The psychopathology literature has framed its discussion in terms of formal diagnostic labels, whereas the RNR literature speaks of formal diagnoses relatively infrequently and has instead spoken of particular features. Hence, psychopathology researchers may investigate Major Depressive Disorder or Dysthymia, Attention Deficit Hyperactivity Disorder (ADHD), and Substance Use Disorder, while RNR researchers use more general terms such as depression or personal emotional distress (Andrews & Bonta, 2010b), impulsivity, or problematic patterns of substance use. These distinctions may seem trivial, yet they affect practice, theory, and dialogue.

In practice, the assessment demands differ for features- versus disorders-based approaches. The use of formal diagnoses offers the advantage of facilitating communication amongst professionals and informs mental health treatment planning. However, the assessment of disorders is restricted to professions with specialized mental health training and comprehensive mental health assessments can be time consuming (e.g., Abram, Paskar,
The use of features, in contrast, offers certain practical advantages for use in a justice setting. The RNR approach, “is designed for use not only by sophisticated clinicians with formal graduate training but by the many correctional officers and probation officers who have face-to-face contact with their clients on a daily basis and who are in the best position to effect prosocial behavior change among their clients” (Wormith, Gendreau, & Bonta, 2012, pp. 112-113). Accordingly, the observation of the presence or absence of a particular set of features can be accomplished by a much broader range of staff in the justice system and allows the use of the same set of predictors for all offenders when assessing risk, regardless of their mental health status (Bonta et al., 1998). The two approaches reflect different purposes for assessment, with a disorders-based approach best suited to mental health treatment planning and a features-based approach for the purposes of forensic risk prediction and case management. Because the RNR literature does not discuss mental health in terms of disorders, but rather in terms of features, it is not clear whether features contribute to risk for re-offense differentially when those features occur in the context of a mental health disorder than when they occur independently of mental health condition.

(6) What is included in the category of mental health concerns

Comparison of the major conclusions of these two literatures is vulnerable to reductionist generalizations about the role of ‘mental health’ in offending. As Douglas et al. (2009) observed, “In past research, mental illness was often considered a unitary, static construct... [whereas] finer gradations of conceptualization, to the symptom level if possible, are likely to provide more meaningful data ...” (p. 682). Hence we must consider what has been included under the umbrella of mental health before evaluating the comparability of their conclusions.
The psychopathology literature has included a much broader range of concerns than the RNR literature in its definition of mental health, generally including any disorder from the *Diagnostic and Statistical Manual of Mental Disorders* (currently in its fifth edition, DSM-5, American Psychiatric Association, 2013). In contrast, in the RNR approach features associated with offending outcomes are classified as risk factors and *are not included* in discussions of mental health (and consequently the range of disorders considered is narrower). Crucially, in the RNR discussion, salient features do not necessarily occur in the context of a symptom cluster meriting diagnosis; that is, they may or may not be associated with an underlying mental health condition. Thus, mental health may be related to risky *features* that are associated with recidivism, thereby explaining the association between mental health and offending outside of diagnostic categories. As a result, the psychopathology literature might identify some offenders as having mental health diagnoses where RNR sees risk variables.

In particular, the two literatures have taken different approaches to the major behavior, substance use, and impulse control disorders, such as Conduct Disorder (CD), Oppositional Defiant Disorder (ODD), and the Substance Use Disorders (SUDs). The psychopathology literature has tended to include all of these diagnoses within the broad category of mental health problems. In contrast, the RNR literature has examined significant *features* of these disorders. For example, a youth might present with a history of stealing, threatening others, physical aggression, and defiance of rules and authority figures. These features could be captured using the formal diagnostic label of conduct disorder, but in the RNR framework they are instead described as criminogenic needs.

With this narrower definition of mental health and for the purposes of the risk prediction framework of the RNR model, mental health conditions are categorized as *responsivity* considerations rather than risk factors based on the results of meta-analytic studies. For
example, Bonta et al. (1998) found that mood disorders had no impact on odds of recidivism and that psychosis was negatively related. Hence, depression and anxiety have often been referenced as possible responsivity considerations alongside possibly ‘severe’ forms of mental illness (Bonta, 1995; Kennedy & Serin, 1997). Andrews and Bonta (2010a) describe these as personal emotional distress/psychopathology variables, avoiding diagnostic labels. In sum, while comparison of the features and disorders-based approaches bridges some of the divide, these definitional differences limit comparison of findings from the two literatures.

(7) The major goals

These literatures also differ in their broad goals, from a primary emphasis on treatment and management of mental health on the part of the psychopathology-oriented authors to the RNR authors’ interest in prediction and intervention for the justice system. This distinction is based on a comparison of the explicit frame of the RNR literature and the implicit goals of the psychopathology literature as inferred from dominant themes discussed by representative authors. The authors of the RNR model have clearly identified reduced recidivism as the major organizing goal, from which indications for assessment, management, and correctional policy flow. The broad focus on treatment and management of mental health issues characteristic of the psychopathology-based literature is observed in the following diverse goals:

- **Raising awareness of mental health issues** in justice-involved populations by documenting prevalence rates and the extent of the challenge (e.g., Abram et al., 2004; Abram et al., 2008; Abrantes, Hoffmann, & Anton, 2005; Drerup et al., 2008; Kenny, Lennings, & Nelson, 2007; Teplin et al., 2002).

- **Reducing justice system involvement of individuals with mental illness**, especially through advocacy for systems change, diversion, and specialized intervention for offenders with
mental illness (e.g., Erickson, 2012; see also reviews in Hartford, Carey, & Mendonca, 2006; Grudzinskas et al., 2005).

- **Accounting for the role of mental health problems in sentencing** through legal consideration that may include a sentence of lower severity or that includes mandated therapeutic intervention, possibly through diversion to specialized courts (e.g., Grudzinskas et al., 2005); a related literature has explored how the justice system might be organized to improve outcomes for individuals with mental health problems (e.g., Winick & Wexler, 2003; see also literature on therapeutic jurisprudence).

- **Improving screening, service availability, and service delivery** due to concern that individuals with mental health concerns do not receive needed services (e.g., Kenny et al., 2007; Teplin, Abram, McClelland, Washburn, & Pikus, 2005), and that screening is important to identify problems and to inform referrals, treatment planning, and service availability (Drerup et al., 2008).

- **Improving correctional environment** by targeting the organization and set-up of facilities, staff characteristics, and offender management issues, especially in custodial settings (e.g., Cesaroni & Peterson-Badali, 2013; Liebling & Maruna, 2005).

**Areas of Disagreement**

These goals help to contextualize how authors may have conceptualized the mandate of their research and accordingly the scope of the conclusions drawn. However, the specific goal of reduced recidivism has been associated with significant conflict between the psychopathology and RNR-informed literatures. This difference in conceptualization emerges at multiple points: in the underlying models of the relationship, choice of predictors, empirical findings, dialogue between these literatures, and conclusions and implications drawn.
In essence, the apparent disagreement between the two approaches lies in the implicit perspective of the psychopathology literature that seems to posit a direct relationship between mental health needs and offending, contrasted against the RNR framework, which states that mental health, as defined within the framework, is not a direct risk factor for offending. The very implicitness of the psychopathology perspective is itself problematic because it is open to varying interpretations. For example, it is entirely possible that a significant number of psychopathology-oriented researchers who have discussed mental health as a risk for judicial involvement in general and recidivism in particular would not agree with the possible implications that individuals with mental illness are more dangerous or should be given more restrictive sentences. Rather, the intention seems often to advocate for more services for those with mental health problems. Researchers may also intend to draw attention to the higher number of disadvantageous social and contextual risk indicators amongst those with mental health problems rather than positing a direct, causal relationship. However, we cannot be sure of this set of assumptions unless they are clearly stated.

The next area of disagreement between the two literatures is more evident, and concerns the types and combinations of predictors chosen. In the psychopathology literature, the selection of clinical variables as predictors suggests that researchers expect that they in some way might reliably contribute to and therefore be predictive of offending behavior. However, many RNR-oriented researchers have raised concerns about the conclusions reached by studies that include exclusively clinical predictors of recidivism and correspondingly treat mental disorders as a risk factor for reoffending (e.g., Grieger & Hosser, 2011). In a recent review of the literature on programs developed for use with mentally-disordered adult offenders, Skeem et al. (2011) observed that these programs extended techniques that have been shown to positively affect clinical outcomes, such as levels of symptomatology, rather
than *criminal* outcomes. There is little research written from the psychopathology perspective that has examined the predictive validity of these clinical variables *alongside other criminological predictors*.

Walters (2011) observed that the paucity of studies using both clinical and criminal predictors limits our ability to understand the relative contribution of these different types of variables and their possible roles in causal pathways to offending, re-offending, and other problematic outcomes, and whether clinical variables contribute over and above the predictive power of other risk variables. He concluded that further research was needed, "using a range of both psychiatric and criminologic mediators" (p.195). Indeed, this is the major criticism leveled by the RNR literature, which has found that clinical variables cease to contribute to the prediction of risk when examined in a model that includes other, more potent predictors. For example, Bonta et al. (1998) found that clinical variables associated with mental health status and treatment were not strong predictors of new offenses in general, or of new violent offenses. Rather, these were best predicted by non-clinical variables now known as criminogenic needs. Despite these arguments having been made for many years, many studies have been published that include only clinical predictors without a rationale offered in response to these criticisms.

These differences in the underlying models, approach to research, and, consequently, reported findings, have contributed to conflicting perceptions of the problem. On the one hand, the high prevalence rate of mental health concerns in justice-involved populations has created a sense of urgency, particularly on the part of frontline workers and policymakers, around finding a solution for better management of these problems. Cuellar et al. (2006, p. 198) state, "The expansion of mental health diversion programs reflects an increasingly popular view that there is a causal relationship between youth mental disorders and crime. Consequently, for youth whose criminality reflects an underlying mental disorder, it also may be treatable.” At
the very least, it has been commented that, "the exact contribution of psychopathology on reoffending is not clear, with few studies available and controversial results" (Plattner et al., 2009, p.400).

On the other hand, in the RNR literature, the issue is presented as having been largely settled; mental health disorders (within the definition discussed above) are not risk factors for offending but responsivity variables. Unfortunately, responsivity variables have received little empirical attention in the RNR literature in comparison to risk and need variables, and so this classification of mental health variables contributes little clarification as to their role, either in terms of risk prediction or rehabilitative programming\(^2\); this is especially unfortunate given the current level of popular interest. There is a growing number of RNR-based researchers who are examining issues around model implementation in order to improve rehabilitative programming in real-world settings (e.g., Bonta, Rugge, Scott, Bourgon, & Yessine, 2008; Bourgon et al., 2010; Eno Louden, Skeem, Camp, Vidal, & Peterson, 2012; Peterson-Badali, Skilling, & Haqanee, 2014; Luong & Wormith, 2011), which may provide a useful context for investigations into management of mental health problems amongst offenders.

**Areas of Concordance**

There are also areas of substantial agreement between the two literatures once they are interpreted through the lens of their respective terminology, methodology, and goals. Both literatures stand in opposition to the view that "nothing works" to rehabilitate offenders. As Latessa, Cullen, & Gendreau (2002) noted, programs focused on punishment over effective intervention have little basis in evidence. Although there are differences in the proposed targets for intervention, there is a shared interest in providing treatment to the individual offender in order to ameliorate his or her outcomes. Similarly, both literatures have an interest in increasing screening and assessment and both advocate caution about the possibly iatrogenic
effects of custodial settings. Finally, both literatures generally suggest that low severity offenders should be minimally processed by the justice system. In the psychopathology literature, this is seen in the promotion of diversion, while the risk principle in the RNR literature suggests that high intensity intervention and incarceration be reserved for high risk offenders (Andrews & Bonta, 2010b).

There is also substantive agreement in the findings and conceptualization of a number of problem areas when the broad label of "mental health" is deconstructed to examine specific disorders. The psychopathology literature has consistently found CD (or ODD) to be associated with offending (e.g., Vermeiren et al., 2002) and the RNR literature captures many of the diagnostic criteria for these disorders as risk variables (e.g., within the Personality/Behavior and Attitudes criminogenic need domains). Much of the psychopathology literature has also associated SUDs with offending and the RNR literature likewise identifies problematic substance use behaviors as risk variables (e.g., Dowden & Brown, 2002). Results concerning ADHD in the psychopathology literature are mixed, with both support for an association with offending (Gordon, Diehl, & Anderson, 2012), and no association (Crowley et al., 1998; Grieger & Hosser, 2012). Vermeiren et al. (2002) noted that ADHD was so often comorbid with CD that it was difficult to discern whether ADHD explained any unique variance. The RNR literature instead focuses specifically on short attention span and poor frustration tolerance as risk variables.

Family variables have also been identified in both literatures as risky for offending, including family dysfunction, low parental warmth, low supervision, and family criminality (e.g., Andrews & Bonta, 2010a; Cottle et al., 2001; Mulder, Brand, Bullens, & Van Marle, 2010; Gorman-Smith, Tolan, Loeber, & Henry, 1998). Both literatures also identify measures of criminal history as risk factors. In the RNR literature, this is defined in terms of prior and
current offenses, including history of detention or parole/probation. In the psychopathology literature this is captured as number of days in detention, prior offenses, age at first incarceration (e.g., Plattner et al., 2009), peak aggressive incident, etc.; findings vary according to the exact variable used but it is evident that they share a common attempt to quantify the severity of previous offending in order to predict future outcomes.

**Concluding Thoughts Regarding Divergent Goals and General Prescriptions for Research**

I have suggested that the apparent conflict between the psychopathology and RNR literatures reflects different fundamental goals. The RNR model was designed to promote rehabilitation and reduce reoffending. It is thus heavily focused on actuarial prediction of risk for recidivism, treatment planning and service provision to reduce offending, and evidence-based guidelines on interventions and correctional practices. The psychopathology literature is an extension of the clinical literature to a specialized population – offenders – and thus retains its primary focus on provision of appropriate clinical services for mental health problems. This overarching goal includes describing prevalence in order to provide sufficient services, describing the clinical presentation of disorders and comorbidities for these individuals, informing formulation, and clinical service planning and service provision.

Interpretation of any literature should be made within the parameters of its stated goals. Goals direct research design and selection of outcome measures, and concepts of risk are defined in relation to specific outcomes (Kazdin et al., 1997). The RNR framework explicitly aimed to address recidivism from its first formulation. It is less clear, however, how the investigation of recidivism aligns with the goals and focus of the psychopathology literature. Research that is expressly interested in how the mental health needs of offenders might interact with their risk of reoffending should be attentive to the existing research in the area by incorporating established criminogenic predictors; it is not clear why this has not been done.
Studies examining psychopathology predictors alone are poorly suited to a stated goal of reduced recidivism. Given their influence on study scope and design, goals ought to be more carefully defined in research reports. The rationale for the choice of outcome measures should be clearly provided and conclusions should be offered with circumspection, in line with study design. The critical consumer of research must consider under what circumstances the literature is applicable.

The literature would also benefit from clearer labeling of the population of interest, with particular attention paid to defining the seriousness of offending history and of mental health concerns. As an example, Cuellar et al. (2006, p. 198) state that "(a)ll too often, people are misdiagnosed or not diagnosed with the root problem of mental illnesses. It is important to keep adults and youth with serious mental illnesses who are not criminals out of the criminal justice system…” This argument is related primarily to individuals who have committed offenses of low severity but whose mental health needs are of high severity. In the RNR literature, the risk principle states that intervention should be reserved for ‘high risk offenders’: those who have many criminogenic risk factors and, usually, a considerable history of offending. The RNR literature also tends to discuss mental health in terms that suggest authors are focused on mental health issues of low severity (i.e., “vague emotional/personal problems,” Dowden & Andrews, 1999; “personal emotional distress,” Andrews & Bonta, 2010b).” Where there is this mismatch in the primary mental health problems of the population of interest, it is predictably associated with different conclusions as to the importance of clinical or criminal needs.

**Directions for Research**

In addition to calls for greater general clarity in the research on mental health and offending, there is a need for a more integrated approach in which the findings of both the
RNR and psychopathology literatures meaningfully inform ongoing research, practice, and policy. Ultimately, the goal ought to be effective, practicable, defensible evidence-based practice. While the apparent conflicts and theoretical and methodological differences in understanding of mental health amongst offenders have been noted for some time, there have been few attempts to explain these differences and suggest ways to move ahead in a more productive collaboration. The impoverished dialogue between these literatures hinders the contributions they can make to one another and, perhaps more importantly, to policy and practice. Authors in the psychopathology literature often seem unaware of the strong research base for models of rehabilitation that could vitally inform their investigations. The RNR literature appears to dismiss the work of psychopathology-oriented researchers because of this oversight, and perhaps the general lack of focus on outcomes related to offending, while little has been written from the RNR perspective to explain why rates of mental health problems (from a clinical definition) are so high or what might be done to manage this challenge facing the justice system. I propose four key areas with outstanding questions that might benefit from research that is informed by and integrates findings from these two approaches.

(1) Mental Health as Responsivity

In the psychopathology literature, the relationship between mental health and offending has typically been modeled in terms of direct effects, though – as noted – there is little support for this model in the general offender population. This relationship can be examined in terms of two related but distinct aspects of mental health: (1) symptoms and/or diagnoses and (2) the effects of treatment designed to ameliorate mental health problems. With respect to the former, symptoms and diagnoses are not more predictive of recidivism than established criminogenic predictors, although individuals with mental health problems may have more of these criminogenic needs than do individuals without mental health problems (Girard & Wormith,
Skeem et al. (2011) concluded that the relationship between mental illness and criminal behavior is one of moderated mediation wherein there is a direct relationship between mental health status and criminal behavior for a small group of mentally ill offenders but for others the association is fully mediated by criminogenic needs. This study is an important first step in this area of research and there remains much work to be done, especially with youthful offenders.

It also remains unclear whether treatment of mental health problems alongside treatment of criminogenic risk is more effective than treating criminogenic risk alone. Research examining the effects of mental health on offending must distinguish between the effects of mental health symptoms or the effects of mental health treatment on outcomes. Most research has examined either the effect of mental health treatment (especially psychopathology researchers) or the effect of criminogenic needs treatment (especially RNR) in isolation. Meta-analyses have shown that interventions based on clinical outcomes do not necessarily improve criminal outcomes (e.g., Lipsey, 1999; Skeem et al., 2011). The RNR literature has thus argued that intervention should address criminogenic needs regardless of mental health symptoms, although mental health may be targeted as a responsivity variable (Bonta, 1995). It is therefore important to ask the question: Does treatment of mental health problems moderate the response to intermediate outcomes (treatment success)? If so, does it then exert some indirect effect on recidivism? Such research would help clarify whether mental health functions as a responsivity variable by affecting the likelihood of success of treatment designed to reduce offending – in other words, by acting as a moderator variable. This research would expand the RNR literature and provide a platform for inclusion of psychopathology-informed research, by: (1) clarifying the contribution of responsivity variables and (2) demonstrating how mental health can be understood and integrated with criminally-focused interventions, and (3) demonstrating how responsivity variables more generally can be included in empirical work.
(2) Unpacking Mental Health

It is also important to continue research that unpacks the ‘mental health’ construct to examine with greater specificity the role played by different disorders or clusters of disorders. For example, the role played by internalizing disorders is unclear. Depression severity has not been shown to predict conduct problems or criminal outcomes at follow-up (Crowley et al., 1998, Vermeiren et al., 2002; but see Van Voorhis, Wright, Salisbury, & Bauman, 2010). Anxiety has been associated with shorter time to recidivism, but depression and dysthymia may protect against further offending when comorbid with anxiety (specifically, GAD; Plattner et al., 2009). Elsewhere, however, offenders described as anxious and amenable to treatment have been found to benefit significantly more from treatment in terms of lower rates of recidivism (Andrews et al., 1990). It is unclear if differences such as these are accounted for by differing definitions, by an effect of treatment, or by differing attitudes around help-seeking, a known criminogenic need as documented in the RNR literature. If internalizing disorders are protective, is that mediated by improved treatment compliance, for example? Understanding the effects of different disorders is important for understanding prognosis and elucidating the possible treatment implications for both mental health treatment and for rehabilitative programming.

That being said, high rates of comorbidity make it difficult to determine the contributions of individual disorders. For example, since justice-involved youth with depression often also present with comorbid CD and SUDs, it is unclear whether depression contributes any incremental risk, is protective, or is in fact unrelated to offending for these youth. Thus, in addition to consideration of the role of individual symptoms or disorders, future research should examine frequently-occurring clusters of comorbid disorders.
In recent years increasing attention has also been paid to trauma and PTSD amongst offenders (i.e., Abram et al., 2004). The prevalence of trauma and its impact on functioning are potentially significant in part because the impulsivity and reactivity that are frequent behavioral problems amongst offenders may be sequelae of trauma (Ford, Chapman, Mack, & Pearson, 2006; Greenwald, 2002). In addition to the need for greater specificity in future research, this example illustrates the need for research that addresses whether ‘feature’- or disorder-based approaches to understanding offenders' needs differ in terms of their prediction of criminal outcomes. Questions include: How do implications for risk assessment and treatment planning differ if the features identified as criminogenic in the RNR framework occur in the context of a mental health disorder rather than on their own (i.e., unconnected with an underlying mental health problem)? Are interventions targeted to these criminogenic needs less effective when they occur in the context of a mental health diagnosis, suggesting a specific responsivity consideration for mental health treatment? Is a different intervention ‘dosage’ necessary to improve outcomes when these features exist on their own versus as part of a mental health diagnosis? Given that many offenders present with mental health needs as well as criminogenic needs, it would be helpful to establish ways in which treatment of these two areas could be complementary.

(3) Mental Health in a Developmental Context

The role of mental health issues is perhaps especially unclear for youth. Whereas much of the literature has examined adults with serious mental health problems, young offenders are less likely to have well-documented, major mental illness by virtue of developmental course. Youth may show signs of emergent illness that are not yet clear in terms of etiology. The types of disorders, their prevalence, and the clarity of diagnoses would be expected to differ for young offenders relative to adult offenders, and therefore dominant themes from the adult
literature do not necessarily extend to understanding youth. Accordingly, research focused specifically on youth will benefit from clarity in defining the population, disorders and/or features of interest, amongst other parameters, and examination of specific constructs within mental health that may be more relevant for the youth population, with the goal of elucidating both the relationship to offending and the implications for intervention. Research to track longer term criminal and clinical outcomes for youth may help to clarify characteristics of different subgroups, i.e., those with persistent versus limited offending, and persistent versus limited mental health issues.

In addition, research is needed on the ways in which mental health issues interact with systems influences for young offenders, such as the level of supervision and monitoring for youth with mental health issues versus those without, compliance with treatment and conditions of probation, and the selection of intervention targets in treatment planning for young offenders with mental health issues (e.g., do probation officers target mental health over criminogenic needs? What are the effects of service availability?).

(4) Gender and Mental Health

Considerable research also remains to be done on the interaction between gender and mental health. A vigorous debate as to whether mental health needs contribute differentially for girls and women is underway (see Hubbard & Matthews, 2008, for an excellent summary). Some scholars have argued that assessment and treatment need to be ‘gender-specific’, particularly because girls and women have different risks, needs, and experiences of the justice system (e.g., Hannah-Moffat, 2004). RNR researchers have countered that the framework should be considered to be ‘gender-neutral’, working equally well for females as for males (e.g., Dowden & Andrews, 1999), with gender treated as a responsivity variable (e.g., Rettinger & Andrews, 2010). A major point of contention has been the role played by mental health,
which some scholars have argued is a gender-specific risk factor (both proximal and distal) for girls’ and women’s offending. Extensive discussion of gender-based differences is beyond the scope of this paper, but in recent years there has been a significant argument made that mental health, and related issues such as trauma history, as well as criminogenic needs and offending trajectories, may be quite different for women than for men (e.g., adult women, Van Voorhis, 2012; adolescent girls, Cauffman, 2008). Research on both youth and adults in the justice system must continue to investigate these important issues at the intersection of gender, mental health, and offending and rehabilitation. Further research is needed on female offenders, and general research should include reporting of possible differences in direct effects or moderating variables between male and female offenders.

**Implications for Policy and Practice**

Policymakers must consider the question of how best to respond to individuals with serious mental health issues who come into contact with the justice system but they must also consider how to respond to mental health problems in offenders more generally. Given the widespread prevalence of mental health problems in offending populations, it has been suggested that consideration of these needs should be standard practice in the justice system. For example, Fraser et al. (2009) suggest that mental health policy ought to acknowledge that prisons are a major, albeit less traditional, guardian of individuals with mental health needs and should provide services and a therapeutic milieu. Further, independent of their impact on reoffending, symptoms of untreated mental health problems can lead to difficulty in managing offenders (Drerup et al., 2008) and "may contribute to longer incarcerations if the individual is unable to qualify for earlier release through good behavior" (p. 127). Policymakers may also have a legal and ethical obligation to provide adequate care for those classed as vulnerable persons (e.g., youth) when the state has assumed some duty of care.
Many frontline workers identify mental health as one of their major challenges in practice (Haqanee et al., 2014; Mead & Moseley, 2004; Penn, Esposito, Stein, Lacher-Katz, & Spirito, 2005). Prevalence rates are high and problems are perceived to have a significant impact on individuals’ functioning and responsiveness to services. Of equal import is that intervention programs target criminogenic factors. Intervention that does not address known predictors of offending threatens a return to the conclusion that “nothing works” to rehabilitate offenders. The choice of intervention must be guided by the available evidence and by the goals of the setting. It is crucial that policymakers be informed by the findings of both the psychopathology- and RNR-based literatures and that they critically consider the types of factors enumerated in the present paper when determining the applicability of those findings to their goals and mandate.

Conclusion

In conclusion, I urge a consistent effort amongst researchers to explicitly define their assumptions, goals and intended application in order to facilitate dialogue between these approaches and ultimately align policy and practice with the evidence base. Most importantly, I urge researchers and policymakers to remember that these differing approaches share a common goal to improve treatment for individual offenders and to improve the functioning of the system in order to improve outcomes for both individuals and society. The challenges of mental health problems in offending populations are complex but improved inter-professional dialogue and greater clarity in evaluating and reporting research will further our capacity to meet these challenges with humane and effective services.
Abstract
Understanding the role of mental health issues in justice-involved youth poses challenges for research, policy and practice. While mental health problems are generally not risk factors for criminal behavior according to the Risk-Needs-Responsivity (RNR) model, prevalence rates are very high and RNR principles suggest that mental health as a responsivity variable may moderate the success of interventions targeted to criminogenic needs. This study investigated the relationships amongst mental health status, criminogenic needs treatment, and recidivism in a sample of 232 youth referred for court-ordered assessments and followed during community supervision (probation). Youth with mental health needs were no more likely than youth without these needs to reoffend, regardless of whether those needs were treated. Youth who received mental health treatment were also more likely to have their criminogenic needs matched across several domains, suggesting an association between mental health treatment and intermediate treatment targets. However, mental health did not moderate the effect of criminogenic needs treatment: youth who had a greater proportion of criminogenic needs targeted met through appropriate services were less likely to reoffend, regardless of mental health status. Implications for theory and practice are discussed.
Introduction

The Problem of Mental Health amongst Offenders

Mental health problems amongst offenders have become a considerable concern due to the exceedingly high rates of prevalence (Teplin et al., 2002; Chitsabesan & Bailey, 2006; Drerup et al., 2008; Unruh et al., 2009), with rates of any disorder reported to range from 50 - 100% amongst justice-involved youth (Vermeiren, 2003). Problems include serious mental disorder (Shufelt & Cocozza, 2006), high rates of comorbidity (Abrantes et al., 2005), and high rates of other clinical concerns such as suicidality (Abram et al., 2008), self-harm, or experiences of abuse or neglect (Kenny et al., 2007). While studies of offenders serving community supervision orders have found lower rates of comorbidity than in incarcerated samples, levels of psychopathology still exceed rates found in community samples (Kenny et al., 2007). Despite a higher likelihood of having mental health problems, individuals in the justice system are less likely than non-offending youth to have had these problems identified previously or to have received services (Kenny et al., 2007).

The burden of mental health problems amongst young offenders pose considerable challenges to frontline staff as well, and may be perceived as a barrier to youths' engagement with rehabilitative programming. In a study reporting interviews with probation officers, mental health difficulties were cited as one of the greatest challenges to officers in their work with youth clients (Haqanee et al., 2014). Poor mental health was perceived to interfere with youths’ capacity to engage with other programming, and probation officers thought that mental health needs often took precedence over other needs.

The widespread challenge of mental health problems in the justice system has attracted considerable research attention focused on psychopathology: describing the nature and scope of the problem, the clinical issues, and the context for service delivery, including advocacy for
service. In particular, high rates of prevalence have raised the question of the role of mental health in justice involvement and offending behavior. Indeed, in the clinical psychopathology literature mental health problems have been described as an important risk factor for delinquent behavior and for offending amongst youth (e.g., Abrantes et al., 2005; Vermeiren, 2002, 2006; Plattner et al., 2009; Ulzen & Hamilton, 1998).

**Risk and Rehabilitation Perspectives on Mental Health**

This focus on mental health as a risk factor for justice involvement has been challenged by the literature on forensic risk prediction and rehabilitation, which firmly asserts that mental health is not a risk factor for recidivism when examined in a broader context of risk factors and key targets for intervention. The consistent finding in the adult literature has been that mental health symptomatology is at best a weak predictor of offending outcomes (Skeem, Winter, Kennealy, Louden, & Tatar, 2014) – both for offenders in general but also for most offenders with mental illness – and that the strongest predictors of offending are shared by those with and without mental disorder (Bonta et al., 2014; Bonta et al., 1998; Phillips et al., 2005). Furthermore, it has been argued that intervention must be focused on the strongest predictors of offending in order to reduce the likelihood of subsequent offending (Gendreau et al., 1996).

The "what works" literature has articulated these principles in the Risk-Need-Responsivity (RNR) framework (Andrews et al., 1990; Andrews & Bonta, 2003; Dowden & Andrews, 1999). The risk principle states that the risk of future offending can be predicted by the assessment of specific risk factors, and that high intensity interventions should be reserved for high risk offenders (Andrews & Bonta, 2010a). The need principle asserts that intervention should be targeted to variables – termed ‘criminogenic needs’ – that empirically relate strongly and directly to offending behavior. Since it was first articulated by Andrews et al. (1990) and by Andrews, Zinger et al. (1990), the RNR framework has amassed an impressive body of
meta-analytic evidence demonstrating the utility of these principles for guiding assessment, treatment planning and intervention. Treatment programs that align with RNR principles have shown the greatest effect sizes in terms of reduced recidivism (Andrews, Zinger et al., 1990); programs matching these principles have shown positive, though moderate, effect sizes when predicting desistance from crime, while poorly matched services show zero to negative effect sizes (Andrews & Bonta, 2010a; Dowden & Andrews, 1999). The RNR framework was originally developed with adult samples but has been shown to be effective in predicting offending and guiding intervention in youth as well (Andrews & Bonta, 2010a; Vieira et al, 2009; Vitopoulos, Peterson-Badali, & Skilling, 2012).

Within the RNR model, mental health is not considered to be a risk factor because it does not contribute significantly to the prediction of recidivism when more powerful variables (such as antisocial attitudes and delinquent peers) are included in predictive models. Rather, mental health variables – psychopathology, clinical diagnoses, mental illness – fall largely into the category of responsivity factors.

Responsivity and Mental Health

Responsivity has been described along two dimensions: general and specific. General responsivity has been defined in terms of learning principles that are most likely to maximize program effectiveness in offenders generally, with a focus on cognitive-behavioral and social learning strategies (Andrews et al., 1990; Andrews & Bonta, 2010a). Factors that may be significant for particular individuals’ responsiveness to treatment have been described as specific responsivity: "personal characteristics that regulate an individual's... ability and motivation to learn (Bonta, 1995, p. 2; e.g., learning style, social skills, motivation and mental health)."
From the conceptual definition, specific responsivity variables may be expected to function empirically as moderators of intervention effectiveness; successfully addressing responsivity variables (including mental health factors) may improve the effectiveness of intervention targeting criminogenic needs, while failing to address responsivity may compromise the effectiveness of criminogenic needs treatment. Indeed, it has been found that responsivity variables predicted the completion of treatment programming among adult sex offenders, suggesting that intervention outcomes could be improved by attending to responsivity during treatment planning (Beyko & Wong, 2005).

In contrast to the extensive literature on risk and criminogenic need, research on responsivity has been limited (Hubbard, 2007), perhaps in part due to the substantial variability in how specific responsivity variables have been defined and measured (Vieira et al., 2009). The question of how treatment outcomes might be further improved by attending to specific responsivity has been largely unexplored. In particular, there is little research explicating the role of mental health in assessment and intervention within the context of a risk and needs-based framework. With some exceptions (Grieger & Hosser, 2012; Schubert, Mulvey & Glasheen, 2011; Skeem et al., 2014), few papers focused on the role of mental health have also considered criminogenic needs, so it remains unclear whether mental health status influences the success of rehabilitative programming.

The Present Study

The current study investigated the role of mental health needs and mental health treatment amongst youth in the context of criminogenic needs treatment. I also sought to differentiate between mental health symptomatology as an initial status variable – the presence or absence of mental health needs - and mental health treatment as a dynamic variable – whether or not youth received treatment for their mental health needs. Mental health treatment
has rarely been found to reduce recidivism (Skeem et al., 2011). However, it remains unclear whether the treatment of mental health problems, in addition to treatment targeting criminogenic needs, may improve reoffending outcomes. In order to investigate these questions within the context of the literature, an RNR-based definition of mental health was used. Andrews and Bonta (2010a) argue that criminogenic needs criteria are sufficient for prediction apart from formal diagnoses "invoking notions of pathology (p. 81)." Conduct Disorder, Oppositional Defiant Disorder, ADHD and Substance Use disorders, while diagnostic categories, were not classified as mental health needs because the salient risk features of these disorders are captured within criminogenic need domains in the RNR framework (e.g., problems with impulsivity and/or anger would be discussed in the context of the personality/behavior domain of the YLS/CMI)^2.

I examined four broad questions: (1) Is mental health directly related to recidivism (i.e., are mental health needs related to outcome, and what is the impact of mental health treatment on recidivism)? It was predicted that the presence of mental health needs would not contribute to reoffending over and above criminogenic needs. (2) Is mental health treatment associated with improved intermediate outcomes? Specifically, are criminogenic needs more likely to be successfully addressed when mental health needs have also been addressed? It was expected that youth whose mental health needs were treated would have more of their criminogenic needs addressed than youth whose mental health needs remained untreated. (3) Is mental health treatment a moderator of criminogenic needs treatment? It was expected that mental health treatment would moderate the relationship between treatment of criminogenic needs and reoffending such that youth whose mental health needs were treated alongside their

^2 Note that within this approach, the externalizing disorders are effectively excluded from the broad category of "mental health."
criminogenic needs would be less likely to reoffend when compared to youth whose mental health needs were not addressed.

To explore these questions I examined the individually-identified criminogenic and mental health needs of a sample of community-sentenced youth, assessed which of their needs were addressed during their probation sentence, and documented reoffending. In this way, I aimed to examine the function of mental health as a responsivity variable, and to clarify whether, and how, mental health treatment may interact with intervention targeting criminogenic needs.

**Method**

**Participants**

The sample consisted of youth referred for court-ordered assessments at a mental health agency in a large urban centre in Canada for the purpose of informing or reviewing a disposition. Between January 2002 and January 2010 there were 611 consecutive admissions, of which 82.4% (n=519) provided explicit research consent. The final sample consisted of 232 youth for whom probation records could be obtained. The sample was predominantly male (n = 187; 80.6%) and was ethnically diverse: 35.6% Black, 34.8% White, 9.8% Asian, and 19.7% other ethnicities. Youth ranged in age from 12 to 20 years, (\(M = 16.12, SD = 1.63\)). The youths’ most serious charges precipitating referral for assessment included violent offenses (i.e., assault, robbery; 59.1% of youth), sexual offenses (i.e., sexual assault, invitation to touching; 16.8% of youth) and non-violent, non-sexual offenses (i.e., failure to comply with probation, theft, drug-related offenses; 19.4% of youth).³

³ Index offence information was not available for 4.7% of the sample.
Procedure

Data were coded from existing file information collected from several sources: comprehensive clinical assessments (including assessment of risk to reoffend), probation case notes, and criminal records.

Clinical assessments had been conducted just prior to youths’ sentencing hearings by a psychiatrist or psychologist on a speciality forensic assessment team within a child and adolescent mental health program; staff were trained in the use and interpretation of the standardized measures. Assessments included evaluation of risk factors and offending history, criminogenic needs, psychoeducational needs, and mental health needs, and all concluded with a clinical and forensic summary and formulation and recommendations for intervention to address identified needs. Clinicians used the YLS/CMI (see below) domain scores to guide report recommendations concerning criminogenic needs.

Following assessment, reports were provided to the court and subsequently shared with youths’ probation officers, who provided case management and coordinated intervention programming to address youths’ identified needs. Officers recorded supervision and case management information using a standardized computer system. These "case notes" included entries on all reporting incidents, telephone calls with or about the youth, exchanges with collaterals such as parents, schools, or treatment centres, as well as system information such as time spent in remand or custodial settings. Case notes were coded (see below) for a period of three years following assessment, or until the date of youths’ first reconviction, with a particular focus on whether the intervention services received matched the services recommended.

For the purposes of data extraction, several graduate level assistants were trained to code information from the assessment reports and case notes into a standardized summary
document. The coding assistants all had familiarity with the RNR framework and were provided with a training document. Initial training and ongoing supervision was provided by the study author and a senior colleague. The coding assistants initially were asked to review the assessments and the casenotes and to copy all pertinent information into the appropriate categories of the summary document for each youth participant. Using double-coded training cases, supervisors then reviewed the coding and continued training until information was reliably extracted and categorized. Supervisors continued to review the summary documents and quantitative coding scores assigned (see below). Ongoing training was provided as needed. Tricky issues were resolved by group discussion and consensus coding.

Offense history was obtained from a national criminal records database. Recidivism data were also coded, including information on whether the youth was convicted of a subsequent offense and, if so, the date when the youth was found guilty and the nature of the re-offense.

**Measures**

**Risk to offend and criminogenic needs.**

The court-ordered assessments included information gathered from semi-structured clinical interviews with multiple informants, collateral contacts (e.g., teachers), standardized questionnaires and psychological tests to evaluate risk factors and offending history, criminogenic needs, psychoeducational needs, and mental health needs. Using this information, clinicians assessed level of risk and criminogenic needs using the Youth Level of Service/Case Management Inventory (YLS/CMI; Hoge & Andrews, 2002, 2011). This standardized risk-needs tool for youth reports risk scores in eight domains including criminal history/current charges and seven dynamic (modifiable) criminogenic need domains: education/employment, family, antisocial attitudes, personality and behavior, substance abuse, peers, and use of leisure
time. Each of the 42 items is scored by the clinician as present or absent and items are summed within each criminogenic need domain, yielding a domain risk score of low, moderate, or high. A total score provides an estimate of overall risk for recidivism that may be categorized as low, moderate, high, or very high. The YLS/CMI has been validated for the prediction of recidivism amongst youth, and it has been found to be predictive of general and specific types of offending, including amongst youth referred for court-ordered mental health assessments (Schmidt, Hoge, & Gomes, 2005; Vieira et al., 2009) and receiving mental health services (Olver, Stockdale, & Wong, 2012), and in meta-analyses (Olver, Stockdale & Wormith, 2009, 2014).

**Clinician Recommendations and Matching Service to Recommendations:**

(1) **Recommendations**

Youths’ reports contained a number of clinician recommendations based on assessment findings. These were categorized into one of the seven dynamic criminogenic need domains or a ‘mental health’ need category. For each of these categories, the clinician recommendation variable was coded as absent (no mention of the need in the report) or present (need mentioned in the clinical summary or recommendations section).

(2) **Matched Services**

This stage of coding considered the extent to which the services received by youth while on probation (either directly from their probation officers or from community treatment providers) ‘matched’ the clinician recommendations (Peterson-Badali et al., 2014; Vieira et al., 2009; Vitopoulos et al. 2012) noted above. In each category where a recommendation was present, probation case notes were reviewed to determine whether the youth received treatment and, if so, the quantity and quality of the treatment received was assessed. While it was not possible to ascertain detailed information about quality of services (e.g., treatment integrity)
through case notes, there was sufficient information to permit judgments about the extent to which services were evidence-informed (e.g., use of recognized, manualized programs, cognitive-behavioral techniques) and delivered by appropriate service providers (e.g., trained professionals versus community volunteers). In terms of quantity, the length of a program (in terms of number of hours of service that constitute the program) as well as the extent to which the youth attended the program (completed, attended majority of sessions, attended rarely or not at all) were extracted from case notes and informed match coding.

For each of the seven dynamic criminogenic need domains and the ‘mental health’ need domain where a clinician made a recommendation, a score of 0 (no treatment match) was assigned if no treatment was received, if some case management was attempted but did not result in significant service, or if the youth infrequently attended a service (i.e., less than 25% of sessions). A score of 0 was also assigned if the youth attended a service that only partially met the recommended quantity and quality. For example, if a youth was identified as having serious antisocial attitudes requiring intervention but then attended only a few sessions (partial quantity) with a minimally-trained community volunteer (partial quality), then this was coded as ‘no match’ for the Attitudes need domain. A score of 1 (treatment match) was assigned if the youth received interventions that were coded as adequate in terms of quantity (i.e., youth attended the majority of sessions of a program of the recommended intensity) and/or quality (i.e., evidence-informed at a minimum and delivered by trained personnel). An Overall Match score was also calculated for each youth, representing the proportion of domains for which that youth received services matching their needs out of the total number of criminogenic need recommendations for that youth. For example, if a youth had three domains for which treatment was recommended and then received treatment in two of those areas, the Overall Match score would be 0.67. Two raters independently reviewed the assessment
recommendations and case notes for 20% of the files to code for match; reliability was excellent, with Cohen’s Kappas ranging from .89 to 1.0 across domains.

I analyzed whether youth who entered the study at different points in time had differential rates of matching. Using a One-Way ANOVA, no relationship was found between year of assessment and mean Overall Match score (F(7, 220)=1.21, p=.30). Data are summarized in Table 1.

**Recidivism:**

Recidivism data were received from a national police database that maintains a record of all youth and adult charges, youth findings of guilt, adult convictions, and corresponding sentences. Recidivism was defined as whether or not a youth committed one or more new offenses following the index offense that precipitated the assessment referral, within a follow-up period of approximately three years following assessment. To ensure that only convictions for new offenses were captured, the criminal history record (including dates and types of offenses) was reviewed against the offense history summary in the clinical reports and against probation case notes to exclude any offenses committed before assessment but delayed in processing until after the assessment. Further, to allow time for probation-coordinated intervention services to be initiated, new convictions were not counted as recidivism if they occurred within three months of the assessment.
TABLE 1: **Overall Match score by Year of Assessment and Study Entry**

<table>
<thead>
<tr>
<th>Year of Assessment and Study Entry</th>
<th>n =</th>
<th>Mean Overall Match (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>2</td>
<td>.46 (.29)</td>
</tr>
<tr>
<td>2004</td>
<td>10</td>
<td>.32 (.23)</td>
</tr>
<tr>
<td>2005</td>
<td>29</td>
<td>.25 (.31)</td>
</tr>
<tr>
<td>2006</td>
<td>37</td>
<td>.33 (.38)</td>
</tr>
<tr>
<td>2007</td>
<td>51</td>
<td>.41 (.35)</td>
</tr>
<tr>
<td>2008</td>
<td>40</td>
<td>.32 (.31)</td>
</tr>
<tr>
<td>2009</td>
<td>54</td>
<td>.25 (.27)</td>
</tr>
<tr>
<td>2010</td>
<td>5</td>
<td>.32 (.22)</td>
</tr>
</tbody>
</table>
Results

Preliminary Analyses

Prior to addressing the main study questions, it was important to describe the sample in terms of demographic, offense, criminogenic need, and mental health characteristics. Table 2 presents this information broken down by whether or not participants had mental health needs identified in their assessments and, within the ‘identified mental health needs’ group, whether those needs were treated. Overall, few characteristics distinguished the three groups. Youth identified as having mental health needs did not differ from other youth in terms of age, race/ethnicity, or nature of the offense that precipitated the assessment referral. Female youth were less commonly represented in the No mental health needs group, and were more likely to have treated than untreated mental health needs.

Over the time followed, 57.8% (134) of participants were subsequently convicted of a new offense. Amongst recidivists, the mean number of days to first reconviction was 509.60 (SD = 311.50; range 78 to 1461 days). Ten youth were reconvicted within 6 months of their assessment and sentencing (7.3%; range 78 to 175 days). There were no group differences in the proportion of youth in each group who reoffended, or in the number of days elapsed to first recidivism event. In terms of mental health variables, just over half of the sample (57.2%) was diagnosed with at least one psychiatric disorder at assessment, excluding Conduct Disorder and Oppositional Defiant Disorder; 59.8% of youth had mental health needs identified by clinicians for which some type of recommendation was made and 40.2% had no such needs.

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4 Conduct disorder and Oppositional Defiant Disorder are not reported or included in subsequent analyses. In the forensic service that completed the assessments CD and ODD were not consistently diagnosed, as clinicians did not perceive the label to add meaningful information given that diagnostic criteria overlap significantly with criminogenic assessment. Given this variability, the reported frequency of CD and ODD would not accurately reflect the number of youth who met official diagnostic criteria.
TABLE 2: Demographic, Mental Health, and Criminal History Characteristics by Identified Mental Health Need

<table>
<thead>
<tr>
<th>Variable</th>
<th>No Identified Mental Health Needs</th>
<th>Untreated Mental Health Needs</th>
<th>Treated Mental Health Needs</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=</td>
<td>97</td>
<td>82</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Average Age</td>
<td>16.06 (SD=1.68)</td>
<td>16.11 (SD=1.61)</td>
<td>16.18 (SD=1.55)</td>
<td>$F(2, 230) = .084, \quad p = .92; \eta^2 = .001$</td>
</tr>
<tr>
<td>Sex Representation (% of mental health needs group) (n in parentheses)</td>
<td></td>
<td></td>
<td></td>
<td>$\chi^2 (2) = 12.38, \quad p = .002; \varphi = .28$</td>
</tr>
<tr>
<td>Male</td>
<td>88.7 (86)</td>
<td>80.5 (66)</td>
<td>66.1 (37)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>11.3 (11)</td>
<td>19.5 (16)</td>
<td>33.9 (19)</td>
<td></td>
</tr>
<tr>
<td>Percent Race/Ethnicity (% of mental health needs group) (n in parentheses)</td>
<td></td>
<td></td>
<td></td>
<td>$\chi^2 (6) = 8.00, \quad p = .24; \text{Cramer's } \text{V} = .20$</td>
</tr>
<tr>
<td>Caucasian</td>
<td>23.4 (11)</td>
<td>39.6 (21)</td>
<td>45.7 (16)</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>44.7 (21)</td>
<td>30.2 (16)</td>
<td>28.6 (10)</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>8.5 (4)</td>
<td>7.5 (4.9)</td>
<td>11.4 (4)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>23.4 (11)</td>
<td>22.6 (12)</td>
<td>14.3 (5)</td>
<td></td>
</tr>
<tr>
<td>Index Offense (% of mental health needs group) (n in parentheses)</td>
<td></td>
<td></td>
<td></td>
<td>$\chi^2 (6) = 9.74, \quad p = .14; \text{Cramer's } \text{V} = .16$</td>
</tr>
<tr>
<td>Violent</td>
<td>64.1 (59)</td>
<td>53.1 (43)</td>
<td>67.9 (36)</td>
<td></td>
</tr>
<tr>
<td>Sexual</td>
<td>17.4 (16)</td>
<td>19.8 (16)</td>
<td>13.2 (7)</td>
<td></td>
</tr>
<tr>
<td>Non-Violent</td>
<td>18.5 (17)</td>
<td>23.5 (19)</td>
<td>18.9 (10)</td>
<td></td>
</tr>
</tbody>
</table>

5 Valid percentages are reported where data was unavailable

6 In the Untreated Mental Health Needs group, percentages do not total 100% as three youths were assessed following charges but not had not been found guilty at the time of assessment
<table>
<thead>
<tr>
<th>Variable</th>
<th>No Identified Mental Health Needs</th>
<th>Untreated Mental Health Needs</th>
<th>Treated Mental Health Needs</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent with DSM diagnoses (n in parentheses)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADHD</td>
<td>11.4 (10)</td>
<td>49.3 (37)</td>
<td>49.0 (25)</td>
<td>$\chi^2 (2) = 33.24, p &lt; .001; Cramer's V = .39$</td>
</tr>
<tr>
<td>LD</td>
<td>6.8 (6)</td>
<td>12.0 (9)</td>
<td>11.8 (6)</td>
<td>$\chi^2 (2) = 1.52, p = .47; Cramer's V = .08$</td>
</tr>
<tr>
<td>Mood</td>
<td>1.1 (1)</td>
<td>8.0 (6)</td>
<td>37.3 (19)</td>
<td>$\chi^2 (2) = 41.33, p &lt; .001; Cramer's V = .44$</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.1 (1)</td>
<td>12.0 (9)</td>
<td>17.6 (9)</td>
<td>$\chi^2 (2) = 12.27, p = .002; Cramer's V = .24$</td>
</tr>
<tr>
<td>Substance</td>
<td>10.2 (9)</td>
<td>21.3 (16)</td>
<td>33.3 (17)</td>
<td>$\chi^2 (2) = 11.14, p = .04; Cramer's V = .23$</td>
</tr>
<tr>
<td>YLS Total Score</td>
<td>17.82 (SD=9.58)</td>
<td>22.96 (SD=8.93)</td>
<td>20.69 (SD=8.78)</td>
<td>$F(2, 217) = 6.53, p = .002; $\eta^2 = .057$</td>
</tr>
<tr>
<td>YLS Criminal History Domain Score</td>
<td>1.69 (SD=1.81)</td>
<td>2.14 (SD=1.89)</td>
<td>1.73 (SD=1.88)</td>
<td>$F(2, 198) = 1.19, p = .305; $\eta^2 = .012$</td>
</tr>
<tr>
<td>Recidivism- yes (n in parentheses)</td>
<td>53.1% (52)</td>
<td>64.7% (55)</td>
<td>52.5% (31)</td>
<td>$\chi^2 (2) = 3.16, p = .206; Cramer's V = .11$</td>
</tr>
<tr>
<td>Days to Recidivism</td>
<td>473.17 (SD=271.96)</td>
<td>486.51 (SD=314.90)</td>
<td>600.79 (SD=329.67)</td>
<td>$F (2, 133) = 1.84, p = .163; $\eta^2 = .027$</td>
</tr>
</tbody>
</table>
identified. I report both rates of formal diagnosis and 'clinician-identified mental health needs’ because in some instances clinicians identified mental health needs that were at subthreshold levels and did not result in a formal diagnosis but were judged relevant to the formulation and recommended treatment of the youths’ mental health (see Hoeve et al., 2013, on the significance of subthreshold mental health issues). Clinician-identified mental health needs were often associated with formal diagnoses of more than one disorder (i.e., comorbidity). The most common DSM diagnosis was ADHD, followed by Substance Use Disorders and Mood Disorders. In this context it is important to recall that in order to differentiate criminogenic needs that may also appear as features or symptoms of mental health diagnoses (e.g., anger, impulsivity, substance abuse), ADHD, Substance Abuse, CD and ODD diagnoses were not categorized as 'mental health' needs. All diagnoses were more often made for youth who were also coded as having identified mental health needs, with the exception of Learning Disabilities (LD), which were not related to other mental health identifications. In terms of group differences, youth diagnosed with a mood disorder, an anxiety disorder, or a substance use disorder were more commonly represented in the Treated mental health group than in the No mental health needs group (see Table 2). Youth diagnosed with ADHD were more commonly represented in the Untreated mental health needs group than in the No mental health needs group.

Finally, youth with untreated mental health needs had significantly higher total risk scores on the YLS/CMI than did youth with no identified mental health needs. Given the separation between criminogenic-type needs and criteria for 'mental health', described above, higher risk scores on the YLS/CMI in the sample groups with identified mental health needs
did not occur because of ‘double counting’ of characteristics as contributing to YLS/CMI scores and mental health needs group membership.

For each of the seven dynamic criminogenic need domains, I then examined the YLS/CMI scores and clinician recommendations in ‘identified mental health needs’ and ‘no mental health needs’ groups. As Table 3 shows, youth identified as having mental health needs had higher YLS/CMI scores in the domains of education, substance use, personality, and leisure than those with no identified mental health needs. However, clinician practice did not vary by group in terms of the proportion of youth for whom recommendations were made, although youth with identified mental health needs showed a trend toward having a higher number of recommendations targeting criminogenic needs overall \((M = 5.32, SD = 1.52)\) compared to youth without mental health needs \((M = 4.90, SD = 1.79; t(182.2) = -1.93, \rho = .056, \text{Cohen's } d = 0.25)\). Unfortunately, for youth without identified mental health needs, higher YLS/CMI total scores (indicating higher levels of risk/need) were related to less likelihood of having their needs matched \((r = -.389, \rho < .001)\). Correlations between YLS/CMI total scores and proportion of needs matched for youth with untreated mental health needs \((r = -.18, \rho = .13)\) and youth with treated needs \((r = -.18, \rho = .21)\) were not significant. I also examined whether having mental health needs was associated with the overall proportion of criminogenic needs addressed during probation. Although youth with mental health needs had a similar number of criminogenic needs identified as youth without mental health needs, above, the proportion of criminogenic needs addressed for youth with mental health needs \((M = 36.44\%, SD = 34.65)\) was comparable to the proportion for youth without mental health needs \((M = 28.21\%, SD = 32.86; t(238) = -1.84, \rho = .068; \text{Cohen's } d = 0.24)\).
**TABLE 3: YLS/CMI Scores and Clinician Recommendations Across Criminogenic Need Domains**

<table>
<thead>
<tr>
<th>Criminogenic Need Domain</th>
<th>No Identified Mental Health Needs (n = 98)</th>
<th>Identified Mental Health Needs (n = 146)</th>
<th>Comparison YLS Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YLS Scores</td>
<td>% w/ Clinician Recommendations</td>
<td>YLS Scores</td>
</tr>
<tr>
<td>Education</td>
<td>3.76 (2.14)</td>
<td>87.8</td>
<td>4.46 (1.96)</td>
</tr>
<tr>
<td>Family</td>
<td>3.08 (1.80)</td>
<td>76.5</td>
<td>3.46 (1.68)</td>
</tr>
<tr>
<td>Substance Use</td>
<td>1.34 (1.53)</td>
<td>44.3</td>
<td>2.02 (1.72)</td>
</tr>
<tr>
<td>Personality/Behavior</td>
<td>2.85 (2.08)</td>
<td>74.5</td>
<td>3.96 (2.04)</td>
</tr>
<tr>
<td>Attitude</td>
<td>1.71 (1.72)</td>
<td>51.0</td>
<td>1.95 (1.69)</td>
</tr>
<tr>
<td>Leisure</td>
<td>1.41 (0.99)</td>
<td>77.6</td>
<td>1.75 (0.89)</td>
</tr>
<tr>
<td>Peers</td>
<td>2.14 (1.33)</td>
<td>77.6</td>
<td>2.27 (1.25)</td>
</tr>
</tbody>
</table>
Is mental health directly related to recidivism?

The first main research question was whether mental health could be described as a risk factor for recidivism for this community-based sample, even without the inclusion of other variables known to be potent predictors of reoffending (i.e., criminogenic needs). Youth with mental health needs were no more likely to re-offend (59.3%, n = 86) than youth who had no identified mental health needs (53.1%, 52; \( \chi^2 \) (1) = 0.93, \( p = .335, \varphi = .06 \)). Using Cox regression, no group difference was found in the number of days elapsed from assessment to recidivism between recidivists identified as having mental health needs (\( M = 522.65, SD = 318.64 \)) and those without (\( M = 473.17, SD = 271.96; \chi^2 \) (1, \( N = 230 \)) = 1.05, \( p = .305 \)). Refer to Table 4 for a summary of the Cox regression analysis.

I next examined whether mental health treatment was associated with recidivism in the sub-sample of youth who had identified mental health needs. Of 144 youth with identified needs, 59.0% (85) youth did not receive the recommended mental health treatment, while 41.0% (59) youth did receive treatment. Youth who received treatment were no less likely to reoffend (52.5%) than were youth who did not receive treatment (64.4%; \( \chi^2 \) (1) = 2.04, \( p = .153, \varphi = -.12 \)). Using Cox regression, there was a trend by which youth with treated mental health problems reoffended somewhat later (\( M = 587.68, SD = 325.16 \)), in terms of days to re-offence, than did untreated recidivists (\( M = 490.04, SD = 310.52; \chi^2 \) (1, \( N = 136 \)) = 3.03, \( p = .087 \)). Refer to Table 5 for a summary of the Cox regression analysis.
TABLE 4: *Summary of Cox Regression Analysis Predicting Time to Re-Offense by Identified Mental Health Need*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$Exp(B)$</th>
<th>C.I.</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identified Mental Health Need</td>
<td>-.181</td>
<td>.83</td>
<td>.59 - 1.18</td>
<td>.308</td>
</tr>
</tbody>
</table>
TABLE 5: *Summary of Cox Regression Analysis Predicting Time to Re-Offense by Treatment of Mental Health Need*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$Exp(B)$</th>
<th>C.I.</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated Mental Health Need</td>
<td>0.396</td>
<td>1.49</td>
<td>.94 - 2.34</td>
<td>.087</td>
</tr>
</tbody>
</table>
Is mental health treatment associated with improved intermediate outcomes?

The next question focused on mental health as a responsivity factor in terms of its relationship to intermediate treatment outcomes (i.e., the receipt of appropriately-matched services for youths' identified criminogenic needs). Thus, for the subsample of youth with identified mental health needs, I examined whether criminogenic needs were more likely to be successfully addressed when mental health needs were also addressed. First I examined the relative sizes of the groups: of the youth identified as having a mental health need and a given criminogenic need, what proportion had both, only one, or neither need addressed through services? In the areas of Education/ Employment, Family, and Personality/Behavior, most youth had both their criminogenic need and their mental health needs matched, or else had neither need matched; it was much less common for youth to have either their mental health or criminogenic need (but not both) matched (see Table 6). In the areas of Substance Abuse, Attitudes, Leisure, and Peers, youth were more likely to have their mental health needs alone matched than to have both mental health and criminogenic needs matched. Unfortunately, the most common outcome across all need areas except Education/Employment was that around half of youth had neither their criminogenic nor their mental health needs met.

In order to explore this finding further, for each criminogenic need domain, I examined whether this ‘neither needs met’ group differed from the ‘both needs met’ group in terms of demographic and offense characteristics, mental health diagnoses, and number of assessment recommendations. Youth who had either their criminogenic or mental health needs met but not both were excluded from analysis, in part because these groups were very small (see Table 6). Overall, few characteristics distinguished the groups; they did not differ in age, ethnicity, type of index offense, or gender (except youth with Substance Abuse needs, where girls more likely
TABLE 6: Likelihood of Treatment of Criminogenic Need Domains by Treatment of Identified Mental Health Need(s)

<table>
<thead>
<tr>
<th>Criminogenic Need Area</th>
<th>n¹</th>
<th>Neither Need Treated</th>
<th>Both Needs Treated</th>
<th>Criminogenic Need Only Treated</th>
<th>Mental Health Only Treated</th>
<th>$\chi^2$(1)</th>
<th>$\Phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education/Employment</td>
<td>138</td>
<td>39.1% (n=54)</td>
<td>32.6% (n=45)</td>
<td>18.1% (n=25)</td>
<td>10.1% (n=14)</td>
<td>26.91</td>
<td>.44</td>
</tr>
<tr>
<td>Family</td>
<td>134</td>
<td>43.3% (n=58)</td>
<td>27.6% (n=37)</td>
<td>14.9% (n=20)</td>
<td>14.2% (n=19)</td>
<td>21.80</td>
<td>.40</td>
</tr>
<tr>
<td>Substance use</td>
<td>89</td>
<td>47.2% (n=42)</td>
<td>16.9% (n=15)</td>
<td>10.1% (n=9)</td>
<td>25.8% (n=23)</td>
<td>5.27</td>
<td>.24</td>
</tr>
<tr>
<td>Personality/Behavior</td>
<td>128</td>
<td>48.4% (n=62)</td>
<td>28.9% (n=37)</td>
<td>13.3% (n=17)</td>
<td>9.4% (n=12)</td>
<td>36.15</td>
<td>.53</td>
</tr>
<tr>
<td>Attitude</td>
<td>82</td>
<td>50.0% (n=41)</td>
<td>18.3% (n=15)</td>
<td>7.3% (n=6)</td>
<td>24.4% (n=20)</td>
<td>9.54</td>
<td>.34</td>
</tr>
<tr>
<td>Leisure</td>
<td>105</td>
<td>49.5% (n=52)</td>
<td>18.1% (n=19)</td>
<td>6.7% (n=7)</td>
<td>25.7% (n=27)</td>
<td>12.03</td>
<td>.34</td>
</tr>
<tr>
<td>Peers</td>
<td>115</td>
<td>53.9% (n=62)</td>
<td>13.9% (n=16)</td>
<td>4.3% (n=5)</td>
<td>27.8% (n=32)</td>
<td>12.54</td>
<td>.33</td>
</tr>
</tbody>
</table>

¹Note that each of the rows above represents analysis of a subsample of youth: those who had clinician-identified mental health needs and a clinician-identified criminogenic need in the given area. Youth who had mental health needs but not a given criminogenic need were excluded from the sample for each analysis represented, as were youth who had a given criminogenic need but no identified mental health needs.
than boys to have both needs matched, $\chi^2(1) = 8.77, p = .003$. For two criminogenic need domains, youth in the 'neither need met' group had higher total YLS/CMI scores: Education/Employment ($t(87) = 2.69, p = .008$) and Family ($t(73) = 2.23, p = .029$). In terms of diagnoses, the only significant finding was that youth with a diagnosis of a mood disorder were more likely to have both their mental health and criminogenic needs matched across all seven criminogenic need areas (Education/Employment, $\chi^2(1) = 8.18, p = .004$; Family, $\chi^2(1) = 9.53, p = .002$; Substance Use, $\chi^2(1) = 8.73, p = .003$; Personality/ Behavior, $\chi^2(1) = 7.17, p = .007$; Attitude, $\chi^2(1) = 12.41, p = .000$; Leisure, $\chi^2(1) = 6.82, p = .009$; Peers, $\chi^2(1) = 9.02, p = .003$).

Finally, when overall treatment matching was assessed (i.e., calculated across the criminogenic need domains) a point biserial correlation indicated that mental health treatment matching was strongly correlated with the overall percentage of criminogenic needs matched, $r(145) = .57, p < .01$. Youth whose mental health needs were treated had a significantly higher proportion of their criminogenic needs addressed ($M=0.55, SD=.29$) compared to youth whose mental health needs were not treated ($M=0.20, SD=.24$) ($t(133)=-7.84, p<.001$; Cohen's $d = 1.31$).

Is mental health treatment a moderator of criminogenic needs treatment?

Prior to addressing the moderation question, I first examined whether treatment of criminogenic needs had the expected effect on recidivism outcomes. Across almost all criminogenic need areas for the total sample, youth whose needs were matched were less likely to reoffend overall (see Table 7). Exceptions included Family and Substance Abuse, in which matching of that criminogenic need alone was not associated with a decreased proportion of reoffending.
TABLE 7: Percentage of Youth Who Reoffended by Treatment of Criminogenic Need Domain

<table>
<thead>
<tr>
<th>Criminogenic Need Area</th>
<th>n =</th>
<th>Need Not Treated</th>
<th>Need Treated</th>
<th>$\chi^2$(1)</th>
<th>$\Phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education/Employment</td>
<td>222</td>
<td>72.0 (n=85)</td>
<td>43.3 (n=45)</td>
<td>18.85, $p&lt;.001$</td>
<td>-.29</td>
</tr>
<tr>
<td>Family</td>
<td>204</td>
<td>62.6 (n=82)</td>
<td>50.7 (n=37)</td>
<td>2.74, $p=.10$</td>
<td>-.12</td>
</tr>
<tr>
<td>Substance use</td>
<td>131</td>
<td>66.0 (n=66)</td>
<td>58.1 (n=18)</td>
<td>0.65, $p=.42$</td>
<td>-.07</td>
</tr>
<tr>
<td>Personality/Behavior</td>
<td>198</td>
<td>77.6 (n=97)</td>
<td>39.7 (n=29)</td>
<td>28.57, $p&lt;.001$</td>
<td>-.38</td>
</tr>
<tr>
<td>Attitude</td>
<td>130</td>
<td>72.4 (n=76)</td>
<td>44.0 (n=11)</td>
<td>7.35, $p=.01$</td>
<td>-.24</td>
</tr>
<tr>
<td>Leisure</td>
<td>178</td>
<td>68.1 (n=92)</td>
<td>39.5 (n=17)</td>
<td>11.25, $p=.001$</td>
<td>-.25</td>
</tr>
<tr>
<td>Peers</td>
<td>191</td>
<td>67.7 (n=105)</td>
<td>38.9 (n=14)</td>
<td>10.36, $p=.001$</td>
<td>-.23</td>
</tr>
</tbody>
</table>
I then examined reoffending outcomes more specifically in the subsample of youth who had identified mental health needs. For each criminogenic need domain, I investigated whether youth who had both their mental health and criminogenic needs met were less likely to reoffend compared to those youth who had neither need met. Across four criminogenic need areas, youth who had criminogenic and mental health needs matched were less likely to offend overall (see Table 8). Exceptions included Substance Abuse, Leisure and Peers, in which matching of both needs was not associated with a decreased proportion of reoffending; this finding should be interpreted with caution given small cell sizes.

I also examined the subset of youth with mental health needs who reoffended to examine whether youth reoffended later if both of their needs were met than if neither of their needs were met. Compared to youth with neither need matched, youth with both needs matched had significantly longer time to reoffence (in days) in the domains of Education/Employment ($M=452.89$ vs. $622.37$, respectively; $t(55)=-2.05$, $p=.045$), Attitudes ($M=491.83$ vs. $876.60$, respectively; $t(33)=-2.56$, $p=.015$), Peers ($M=463.50$ vs. $827.75$, respectively; $t(46)=-3.35$, $p=.002$), and Leisure ($M=416.63$ vs. $734.44$, respectively; $t(39)=-3.23$, $p=.002$), with a trend in Family domain ($M=479.64$ vs. $644.88$, respectively; $t(50)=-1.70$, $p=.10$).

Next, hierarchical logistic regression was used to examine whether treatment of mental health needs functioned as a responsivity factor (i.e., as moderator of the effect of criminogenic needs treatment on whether or not youth reoffended) (see Table 9). To control for risk, the Criminal History score from the YLS/CMI was included as a predictor in the first step of the model. This score was chosen as a substitute for the YLS/CMI total score because of the
TABLE 8: Percentage of Youth Who Reoffended by Treatment of Both Mental Health and Criminogenic Need Domain

<table>
<thead>
<tr>
<th>Treated Mental Health and Criminogenic Need Area</th>
<th>n = Neither Need Treated</th>
<th>Both Needs Treated</th>
<th>$\chi^2(1)$</th>
<th>$\Phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education/Employment</td>
<td>92 (n=39)</td>
<td>76.5 (n=19)</td>
<td>46.3</td>
<td>8.86, $\rho=.003$, -.31</td>
</tr>
<tr>
<td>Family</td>
<td>87 (n=37)</td>
<td>68.5 (n=16)</td>
<td>48.5</td>
<td>3.45, $\rho=.063$, -.20</td>
</tr>
<tr>
<td>Substance use</td>
<td>53 (n=30)</td>
<td>75.0 (n=9)</td>
<td>69.2</td>
<td>0.17, $\rho=.68$, -.056</td>
</tr>
<tr>
<td>Personality/Behavior</td>
<td>93 (n=48)</td>
<td>80.0 (n=15)</td>
<td>45.5</td>
<td>11.63, $\rho=.001$, -.35</td>
</tr>
<tr>
<td>Attitude</td>
<td>51 (n=30)</td>
<td>76.9 (n=5)</td>
<td>41.7</td>
<td>5.30, $\rho=.021$, -.32</td>
</tr>
<tr>
<td>Leisure</td>
<td>65 (n=33)</td>
<td>70.2 (n=9)</td>
<td>50.0</td>
<td>2.33, $\rho=.13$, -.19</td>
</tr>
<tr>
<td>Peers</td>
<td>73 (n=41)</td>
<td>70.7 (n=8)</td>
<td>53.3</td>
<td>1.63, $\rho=.202$, -.15</td>
</tr>
</tbody>
</table>
TABLE 9: Overall Criminogenic Needs Match, Mental Health Match, and Criminogenic Needs x Mental Health Match Interaction as Predictors of Recidivism, Controlling for Static Risk

<table>
<thead>
<tr>
<th>Model Variables</th>
<th>B</th>
<th>SEβ</th>
<th>Wald's χ²</th>
<th>df</th>
<th>ρ</th>
<th>exp(B)</th>
<th>CI (95%)</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model (Step) 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criminal History</td>
<td>0.54</td>
<td>0.13</td>
<td>17.32</td>
<td>1</td>
<td>.00</td>
<td>1.72</td>
<td>1.33</td>
<td>2.21</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.40</td>
<td>0.28</td>
<td>2.00</td>
<td>1</td>
<td>.16</td>
<td>0.67</td>
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<td></td>
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<tr>
<td>Overall model at Step 1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>.00</td>
<td></td>
<td>21.70</td>
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</tr>
<tr>
<td><strong>Model (Step 2)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criminal History</td>
<td>0.48</td>
<td>0.13</td>
<td>12.68</td>
<td>1</td>
<td>.00</td>
<td>1.61</td>
<td>1.24</td>
<td>2.09</td>
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</tr>
<tr>
<td>Overall Match</td>
<td>-2.52</td>
<td>0.91</td>
<td>7.72</td>
<td>1</td>
<td>.01</td>
<td>0.08</td>
<td>0.01</td>
<td>0.48</td>
<td></td>
</tr>
<tr>
<td>Mental Health Match</td>
<td>-0.68</td>
<td>0.57</td>
<td>1.42</td>
<td>1</td>
<td>.23</td>
<td>0.50</td>
<td>0.16</td>
<td>1.55</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.08</td>
<td>0.69</td>
<td>2.46</td>
<td>1</td>
<td>.12</td>
<td>2.94</td>
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<tr>
<td>Step 2</td>
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<td></td>
<td></td>
<td>2</td>
<td>.01</td>
<td></td>
<td>8.99</td>
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<td>Overall model at Step 2</td>
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<td>.00</td>
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<td>30.68</td>
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<td><strong>Model (Step 3)</strong></td>
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</tr>
<tr>
<td>Criminal History</td>
<td>0.48</td>
<td>0.14</td>
<td>12.71</td>
<td>1</td>
<td>.00</td>
<td>1.62</td>
<td>1.24</td>
<td>2.141</td>
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<td>Overall Match</td>
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<td>1.41</td>
<td>4.99</td>
<td>1</td>
<td>.03</td>
<td>0.04</td>
<td>0.003</td>
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<td>1.34</td>
<td>1</td>
<td>.25</td>
<td>0.30</td>
<td>0.04</td>
<td>2.31</td>
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<tr>
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<td>0.37</td>
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<td>.54</td>
<td>3.12</td>
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<td>.54</td>
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<td>4</td>
<td>.00</td>
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Another analysis was performed that included Sex as a predictor. It was not significant and so is not presented here in favour of the more parsimonious model.
significant overlap between the YLS/CMI domain scores used to inform clinician recommendations and the subsequent criminogenic needs match score for each youth. Criminal History was strongly correlated with YLS/CMI total scores, $r(209) = .66, p < .01$, suggesting that it was a robust proxy for the total risk score that did not overlap with the other variables in the analysis.

The effect of matching treatment to youths’ identified criminogenic needs (youths’ Overall Match score), as well as whether their mental health needs were matched or not, were entered as predictors in Step 2. Moderation was tested by including the Overall Match x Mental Health Match interaction term at Step 3. As seen in Table 8, Criminal History was a significant predictor of reoffending at each step of the analysis. Overall matching to criminogenic needs also significantly predicted reoffending, such that each increase in Overall Match was associated with decreased odds of reoffending. However, whether or not youths’ mental health needs were treated did not predict recidivism, nor did it moderate the effect of treating criminogenic needs on the outcome.

**Discussion**

Mental health concerns are highly prevalent amongst justice-involved youth, yet previous literature has been unclear or conflicting with respect to its role in risk prediction and treatment outcomes, leaving implications for treatment planning unclear. Mental health problems have been described as responsivity variables in the RNR literature (e.g., Bonta, 1995) but have also received significant attention from outside the RNR literature (McCormick et al., 2014). In this study, I compared the major hypotheses regarding the role of mental health as either a risk factor for recidivism or as a responsivity variable that influences the
effectiveness of intervention. It is important to note that there has been some conflation in the previous literature between discussions of mental health in terms of needs (i.e., mental health diagnoses or problems) versus in terms of treatment. In order to speak to this, I examined both dimensions explicitly. There were three major findings. First, mental health status was not predictive of recidivism, either in terms of having identified needs or in terms of having needs that were not addressed through treatment. Second, mental health treatment was associated with improved intermediate outcomes, in that there was an association across several areas between having both mental health and criminogenic needs met through treatment. Finally, while the proportion of criminogenic needs met through treatment was highly predictive of youths' recidivism outcomes, mental health treatment did not moderate the effect of criminogenic needs treatment. These findings provide further support that mental health status is not directly associated with recidivism. At the same time, the finding that mental health treatment is associated with intermediate outcomes warrants further consideration.

**Frequency of Mental Health and Criminogenic Needs**

Consistent with the findings of several previous studies the proportion of youth identified as having mental health needs was high (e.g., youth serving community orders, Kenny et al., 2007; youth in detention, Teplin et al., 2002; and serious offenders, Schubert et al., 2011), especially in comparison to rates found in general community (non-justice) samples. There was a trend towards female youth being more likely to be identified as having mental health needs (e.g., Cauffman, Lexcen, Goldweber, Shulman, & Grisso, 2007) and female youth were more likely to have treated than untreated mental health needs (Lopez-Williams, Stoep, Kuo & Stewart, 2006).

Youth identified as having mental health needs also had higher overall scores on measures of criminogenic needs, which is consistent with findings from the adult literature
(Skeem et al., 2008). This suggests that, while a common set of risk factors may be sufficient for prediction, individuals with mental illness may present with more of these risk factors (Skeem et al., 2011). When examined in terms of specific criminogenic need domains, youth identified as having mental health needs were comparable to other youth in the areas of Criminal History, Family, Peers, and Attitudes, but they had higher risk/needs scores in the areas of Education/Employment, Substance Abuse, Leisure Time and Personality/Behavior. It is unclear what may be contributing to higher needs in these areas. It is possible that youth whose functioning is impaired by mental health needs demonstrate this same impairment in the areas of education (e.g., poor school attendance) and leisure time (e.g., lack of engagement in structured prosocial activities). Higher scores on the Substance Use domain are predictable given the high rates of comorbidity between mental health needs and substance abuse (Armstrong & Costello, 2002; Chan, Dennis, & Funk, 2008; Kessler et al., 1997; Rohde, Lewinsohn, & Seeley, 1996). Finally, several features assessed by the Personality/Behavior domain may also be features of clinical diagnoses such as ADHD (e.g., poor frustration tolerance, impulsivity), which were not classified as mental health problems in the present study but which are frequently comorbid with mental health problems such as anxiety and depression (Biederman, Newcorn, & Sprich, 1991; Jarrett & Ollendick, 2008; Meinzer, Pettit, & Viswesvaran, 2014); thus, youth with these features may be more likely than chance to also have mental health problems. 

Youth with or without mental health needs did not differ in levels of clinician recommendation associated with having high YLS/CMI domain scores. However, in

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8 Indeed, it is crucial to note that this study used a RNR-informed definition of criminogenic and mental health needs. Clinical literature outside this contextual framework has included both criminogenic diagnoses, such as substance use disorders, and non-criminogenic diagnoses, such as depression, together in discussions of mental health problems. For a fuller discussion of these differences, see McCormick et al.(2014).

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contravention of the Risk and Need Principles, the overall proportion of criminogenic needs matched was negatively correlated with YLS/CMI scores for youth without mental health needs but not for youth with mental health needs. Given that clinician practice (in terms of assessment recommendations) did not differ by group, this suggests that youth whose mental health needs were met had more criminogenic needs met – in effect, a better level of service – as a function of other variables downstream from the assessment and recommendation stage. This might include such variables as more comprehensive case management by their probation officers or having multiple sources of care including both probation officers and clinical treatment providers.

**Mental Health as ‘Risk’ vs. ‘Responsivity’**

Previous literature has often used the language of ‘risk’ in discussing the high rates of mental health problems amongst offenders and the association between mental health needs and judicial involvement. Yet within a more forensic definition of risk as a relationship between an identified variable and recidivism amongst youth who have *already* offended at least once, mental health needs were not associated with reoffending, even within a simple model that did not include other, well-established, criminogenic needs. Similarly, amongst youth identified as having mental health needs, treatment of mental health problems was not significantly associated with reoffending\(^9\). The present results do not suggest that treatment of mental health needs alone will lead to reduced risk of recidivism within the RNR-based classification used here.

If mental health is best conceptualized as a specific responsivity variable for justice-involved youth – that is, not a direct risk factor for re-offending but of relevance to treatment

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\(^9\) Recall again that mental health needs as discussed in this paper *exclude* SUDs, CD, ODD, and ADHD.
engagement and success – then its influence may be at the intermediate stage of completion of criminogenic needs treatment. Indeed, I found an association between mental health treatment and intermediate treatment outcomes: youth who received appropriate mental health intervention were also more likely to have their criminogenic needs addressed in several domains compared to youth whose mental health needs were not treated, and there was a significant relationship between mental health treatment matching and the overall proportion of youths’ criminogenic needs that were met through service. The alternative conceptualization of responsivity – that of mental health treatment as a moderator of the success of intervention targeted to criminogenic needs – was not supported; youth who had a greater proportion of their criminogenic needs addressed through intervention were less likely to reoffend regardless of mental health functioning.

At this time it is unclear why there is an association between completion of intervention targeting mental health and criminogenic needs. Two possibilities seem apparent. First, this association may reflect systems and implementation considerations as opposed to a particular ‘specific responsivity’ effect. For example, it may be that youth who receive mental health services are also connected to higher quality, more effective services targeting criminogenic needs. Another possibility is that their needs are being met through more comprehensive services. For example, youth identified as having mental health issues may be paired with more experienced probation officers who are more able to effectively connect youth with services. Or, youth referred for mental health services may be directed to agencies that provide more wraparound services. This type of effect would reinforce the need for general best practice approaches and high quality services to improve outcomes for all justice-involved youth, not only those with mental health needs.
Alternatively, the association between receiving mental health and criminogenic needs interventions may actually reflect the way that specific responsivity is conceptualized: mental health treatment may remove a barrier that would otherwise interfere with rehabilitative programming. For example, mental health treatment may stabilize affected youths and thereby facilitate youths’ engagement in criminogenic needs intervention. In this case, mental health treatment would be indicated for affected youth in order to bolster engagement in criminogenic needs treatment. Future research is indicated to directly examine these two possibilities.

**Addressing Youths’ Mental Health and Criminogenic Needs**

Together, the results suggest that intervention matching youths’ criminogenic and mental health needs is associated with more positive reoffending outcomes in terms of both decreased rates of reoffending and longer time before first re-offense. Unfortunately, the most common intermediate outcome was that youth had *neither* their mental health nor their criminogenic needs matched, with 40-54% of youth across the various criminogenic need domains having neither need addressed. As observed by Haqanee et al. (2014), “this constitutes a huge gap in the ‘theory to practice’ pathway (p. 12).” The search for characteristics that might differentiate youth who had both their mental health and criminogenic needs met versus neither type of need met yielded few group differences. Youth with higher overall risk scores were more likely to fall into the ‘neither need matched’ group in the domains of Education/Employment and Family. It is possible that these youth may have more needs that are left untreated as probation officers attempt to address the perceived most urgent or most treatable needs first (Haqanee et al., 2014) or because these youth may be more challenging to engage in service (Andrews & Bonta, 2010a). On the other hand, youth with a diagnosis of a mood disorder were more likely to have both their mental health and criminogenic needs matched than to have neither type of need addressed in treatment, suggesting that youth with mood
disorders may be more likely to be referred for comprehensive services than youth with other types of disorders.

Together, these findings suggest a number of implications for service. First is the need for services to be provided in a manner consistent with the Risk principle: high risk/needs youth should have a greater proportion of their needs matched, not a smaller proportion (Andrews & Bonta, 2010a), regardless of mental health status. Further, the present results do not support treatment of mental health needs as an effective way to reduce reoffending; service providers must also attend to criminogenic needs in order to meet the goal of reduced involvement in the justice system. The present study found evidence that youth with treated mental health needs had more of their criminogenic needs treated, suggesting a better standard of care. It may be that youth have better outcomes with wraparound services than with referral to several siloed programs. Alternatively, youth receiving mental health treatment may have had an additional source of intervention targeting domains such as education, family functioning, and behavior, which may be targets for improved functioning from both mental health and criminogenic needs perspectives, and which correspond to the domains in which I found that more youth had both needs met. Further research is needed to understand this finding, but these initial results suggest that youth who received mental health services benefitted from more comprehensive services.

Considerations for interpretation: Strengths and limitations

The use of data from comprehensive, systematic, and individualized assessments of youths’ psychological functioning, risk, and criminogenic needs as the basis for analyses is a significant methodological strength of the current study. Several previous studies on the mental health needs of youth in the justice system have relied on identification through self-report or screening measures (e.g., Foster et al., 2004; Hartinger-Saunders et al., 2011) or have relied on
referrals to document the types of services youth were thought to have received (e.g., Hoeve et al., 2013). The use of comprehensive professional assessments arguably provides a more stringent test of hypotheses as to the role of mental health. In addition, information from the individualized assessment, treatment and offending histories was particularly suited to the analysis of specific responsivity, which has been described in terms of variables that may have important treatment considerations for particular individuals but not for offenders in general. This is important because, while the principle of specific responsivity has significant implications for efficacy of treatments designed to address criminogenic needs, it has been neglected – from a research perspective – relative to the other RNR principles. Finally, in contrast to many studies examining the relationship between mental health variables and (re)offending, I examined not only the role of mental health needs or diagnoses, but the role of those needs at the outset of intervention and the effect of treatment in the context of criminogenic needs, assessed using a strong evidence-based framework.

In addition to these important strengths, several limitations must be acknowledged. Due to sample size constraints, it was not possible to assess the moderating effect of mental health treatment on treatment of individual criminogenic need domains, but only on the overall proportion of needs addressed. Similarly, due to small cell sizes I was largely unable to examine relationships within specific diagnoses. Future research should examine specific diagnoses as well as clusters of disorders (given high rates of comorbid disorders) to better understand the relationship between mental health problems and service referral in a justice context at the systems level, as well as responsiveness to service in terms of individual offenders. Finally, the sample described here included many more male than female youth. While this imbalance is representative of the justice system generally, the relationship between
mental health and offending for female youth in particular merits further analysis beyond the scope of this paper.

The conclusion that treatment of mental health problems was not associated with reoffending may be conservative given the findings on intermediate treatment targets; the great majority of youth across most criminogenic need domains had either both or neither of their criminogenic and mental health needs matched, while comparatively few had only one or the other need matched. Accordingly, while there was not a complete separation in the data, there was limited power to differentiate between groups to detect an effect between youth with only criminogenic needs matched and youth with both types of needs matched. Until the reasons for the association with intermediate treatment targets are better understood we may be limited in the analysis of mental health treatment as a moderator of criminogenic needs treatment.

In terms of the generalizability of the findings, the participants in this study were youth under community supervision and so comparisons to incarcerated youth should be made with caution. It should be noted that despite the fact that participants had been referred for comprehensive mental health assessments, this was not a sample exclusively of youth with mental health needs, as a significant number of youth were not identified as having mental health concerns following assessment. Indeed, the proportion of youth identified as having mental health difficulties in this study is consistent with the results of other studies based on general sampling of justice populations (Shufelt & Cocozza, 2006).

**Concluding Thoughts**

I propose that these findings reflect on the principle of specific responsivity in two major ways. The first is that this principle may serve as an acknowledgment of the relevance of other goals of treatment, but that these alternative goals should be explicitly understood as separate from the major rehabilitative goal of reducing reoffending. Hence, treatment in service
of these goals should be in addition to criminogenic needs treatment, not in replacement of it. Other goals may be deemed worthy because of their potential to improve general psychosocial functioning in accordance with social values such as meeting a duty of care for vulnerable persons, but these findings reinforce that treatment providers and policy makers should clearly articulate the goals of service by which outcomes are to be judged.

The second facet suggested by these findings is that responsivity variables cannot be understood as a static list but must be assessed in a dynamic and molecular way: dynamic, in that their relevance must be continually re-assessed, as it may shift over time and in response to other variables; and molecular, in that they must be assessed on an individualized basis, for a particular offender in a particular program. A list of potential responsivity variables may serve as a useful guide to treatment providers but should be interpreted through a process of ongoing assessment; purported responsivity variables are not automatically relevant to the offender's functioning in treatment programs, even if present. Treatment providers should maintain an ongoing awareness of whether these needs have become relevant and are having an impact on the offender's capacity to engage in treatment. Hence, mental health may directly impact treatment engagement for some youth but operate independently for other youth.

These findings are in agreement with previous findings that mental health is not directly related to reoffending outcomes but also point to the need for continued research to understand precisely how mental health treatment interacts with intervention targeting criminogenic needs. Youth may have mental health needs that are not relevant to the success of criminogenic needs treatment. Nevertheless, youth who receive comprehensive services targeting multiple domains of need have better outcomes. These services provide a benefit to individual youth and, in turn, to society.
General Discussion

The papers presented in this dissertation aimed to contribute to understanding the role of mental health in offending in two ways: first, by reviewing and analyzing the major literatures that have addressed the relationship between mental health and offending and providing a framework for interpretation, and second, by undertaking an empirical investigation that would directly contrast the possible hypotheses in a sample of youth.

Implications for Research

Integrating theoretical approaches

The first paper was addressed to the problem of two separate literatures in which authors either do not refer at all to the findings of the other major approach or else dismiss those findings without consideration of variables guiding interpretation. The psychopathology-oriented literature has often suggested that mental health problems are associated with recidivism, yet the RNR-based literature has consistently found the contrary. Much of the clinical work done with offenders with mental health needs might predictably, arguably appropriately, be done by practitioners with a primary familiarity with psychopathology-focused literature, rather than rehabilitation-focused literature; dismissal of the perspectives of this work on the basis of perceived inadequacies does little to address the interests of this audience. An important strength of this paper was the focus on a meaningful interpretation of differences between the two research approaches in an attempt to foster integration and greater communication. Another theme that arose several times was the need for research to move towards a finer-grained analysis of mental health to better understand the role of specific disorders and disorder profiles (e.g., clustered comorbidities). As reviewed in the first paper, many of the apparent differences in conclusions between the psychopathology and RNR literatures can be explained by differing inclusionary criteria, with the features of disorders
such as substance abuse and conduct disorder considered as mental health needs in one literature and as criminogenic needs in the second literature.

Differing definitions at several points in the research design help to explain the differing conclusions. Yet it remains true that, to the extent that researchers are interested in clinical variables and offending outcomes, known criminogenic predictors should also be reported and analyzed. The results of the second paper did not support the utility of mental health variables in predicting reoffending. This finding is consistent with the RNR literature (e.g., Bonta et al., 1998), and is also consistent with the findings of other authors with an allied interest in offending and rehabilitation outside of the formal RNR framework (e.g., Skeem et al., 2014; Schubert et al., 2011). These considerations for research design and the careful reporting of results are foundational because they in turn guide policy and practice implications.

I aimed to address both the psychopathology and RNR based literature in the second paper. As predicted from the RNR-based literature, mental health did not function as a risk factor in that it did not predict reoffending. This portion of the investigation was addressed to the hypothesized relationship implicit or assumed in much of the clinical literature reviewed in the first paper. This paper clarified this finding in three ways. First, the definition of mental health problems was clearly articulated so as not to include diagnoses such as Conduct Disorder that overlap heavily with criminogenic needs and which have been (tacitly) excluded by RNR-based definitions. Second, the paper clearly distinguished in the analysis between the presence of mental health problems as assessed needs, regardless of treatment, versus the receipt of indicated treatment. In so doing, it addressed both the role of needs and the role of treatment of those needs. Interestingly, neither needs nor treatment were predictive of reoffending outcomes. This finding is consistent with the RNR literature but differs from the
clinical literature, which may be largely attributable to differences in study design such as those enumerated in the first paper (e.g., the definition of mental health, the timelines of interest). Third, the paper analyzed both a simple model of mental health variables and offending outcomes as well as an expanded model of mental health variables, criminogenic needs and offending outcomes. In so doing, its results can be compared to a wider range of literatures.

**The RNR framework and the construct of the responsivity principle**

At a broader level, these findings return to the question of how responsivity variables are hypothesized to function, how they can be investigated empirically, and what the implications may be for rehabilitative programming. The major authors of the RNR framework acknowledge that, "only a few of the possible variables that come under the responsivity principle have been studied in any detail (Andrews & Bonta, 2010a, p. 51). While the RNR descriptions of risk/need variables are distinguished from responsivity variables, these variables may be conceptualized as lying on a continuum from strong, specific predictors of high influence to weak, nonspecific predictors of some, but lesser, influence. Risk/need variables are most predictive of re-offending and so intervention targeted to those variables is most likely to reduce the rates of re-offending. Responsivity variables may be slightly predictive of recidivism, but they are much weaker predictors and correspondingly much less benefit is expected from targeting these variables alone (Bonta, 2010). Mental health as a broad construct provides an illustration of this notion of a continuum of risk: some features act as risk factors, some features may act as risk factors for particular individuals (i.e., for a small number of offenders with serious mental health issues whose offending is related to mental health episodes), and many features have a non-specific effect but may interfere with treatment responsiveness.
In the second paper, I explored two possible interpretations of the responsivity principle: as variables that affect the success of intermediate targets, and as variables that function to moderate the effect of criminogenic needs treatment on reoffending outcomes. The second interpretation of responsivity as a moderator of criminogenic needs treatment would seem to be more consistent with the theoretical description that responsivity variables may function to affect an offender's responsiveness to treatment, but this hypothesis was not supported by these findings. Is the finding of association with intermediate variables sufficient to be considered a responsivity variable? Or must there be evidence of a moderating effect before mental health can be suitably characterized as a responsivity variable? If based only on intermediate treatment targets, these findings provide empirical support for the description of mental health as a responsivity factor amongst youth. This interpretation may be consistent with the theoretical conceptualization that responsivity variables need to be appropriately attended to in order for offenders to engage with criminogenic needs programming (e.g., Bonta, 1995).

Further research is necessary to understand the relationship between proposed responsivity variables and intermediate treatment variables; if the relationship is explained by systems-levels variables, then this might challenge the conceptualization of specific responsivity as being primarily about characteristics of the offender. Alternatively, as proposed in the second paper, it may be that mental health does not necessarily function as a responsivity variable for all offenders with this type of need. Finally, mental health problems may not be best understood through the responsivity principle but may be a relevant consideration in some other way.
Implications for Practice

These findings have practice implications both for those with a primary interest in offending as well as in clinical treatment. Youth need service targeting a wide range of criminogenic needs. While the reasons are currently unclear, the present findings suggest that youth with mental health needs will have more needs met and consequently better outcomes when intervention is provided for both their mental health and criminogenic needs. Clinicians providing mental health services to this population should have some awareness of the foundational findings on criminogenic needs assessment and the principles of effective rehabilitation. This underlines the need for clearly defined professional roles, whether centred on the provision of treatment for mental health or centred on criminogenic needs assessment. Clinicians providing service should be cognizant of the research evidence and practice within an appropriate scope; practitioners focused on clinical assessment and treatment should exercise caution if their training and professional mandate is the treatment of mental health problems. Ideally, clinicians working with justice-involved youth should have an understanding of criminogenic needs and should treat these alongside mental health needs in order to best improve youths' functioning.

These findings also suggest the need for support for correctional workers whose primary training is not in mental health and who may be unsure of how the mental health needs of youth could impact case management and treatment engagement. Given the prevalence of mental health problems in this population, there must be services available to receive referrals from justice system personnel (e.g., probation officers in the case of community-sentenced youth). In addition, the prevalence of these problems reinforces the need for widespread screening so that probation officers are not left without support to try to identify affected youth and, especially, youth whose functioning is severely impaired (Grisso, Vincent, & Seagrave,
Finally, the results of the present study suggest that it is vitally important that probation officers provide appropriate services to treat the criminogenic needs of offenders, whether or not they have mental health problems.

**Implications for Policy**

These research findings also suggest some specific avenues for further research to guide policy and practice. Unfortunately, one of most notable findings from the second paper was the high proportion of youth who had neither their mental health nor their criminogenic needs met. Research is clearly needed to identify and understand the barriers to service (see Haqanee et al., 2014). Specific to the findings presented here, as discussed in the second paper, it is unclear why youth whose mental health needs were treated were also more likely to have their criminogenic needs treated in some domains (Education/ Employment, Family, and Personality/ Behaviour). Possible suggested reasons for this relationship included: provision of supervision by more experienced probation officers who were more successful in their interventions and/or better able to coordinate services; the receipt of more comprehensive or "wraparound" services, which might also encourage better treatment compliance through easier physical access to services concentrated in a single site, or possibility for more relationship-building with staff and non-specific factors such as therapeutic mentorship; a higher intensity of service through the receipt of intervention from multiple sources targeting the same domain (e.g., both mental health and criminogenic needs programming encouraging improvements in school functioning). Research to identify the variables mediating this effect might provide promising direction to improve criminogenic needs intervention and, accordingly, to decrease the risk of reoffending for youth.

While the study was not designed to examine reasons why so many youth failed to have their needs met, other research in the same jurisdiction sampled in the second study has found
that services are not available (Haqanee et al., 2014). The lack of available services poses an enormous practical challenge to the achievement of reduced recidivism. Moreover, it serves to reinforce that whatever services are offered must be informed by evidence.

It must be acknowledged that work with youth in the justice system entails a further consideration that may be of less relevant to the adult system. That is, by virtue of youth’s vulnerability and minor status, the state’s assumption of some partial custody over them entails a duty of care. Hence there is an expectation that the state will attend not only to rehabilitative goals but also in some measure to youths’ health, safety and development, including such needs as education and mental health. There exists a well-recognized tension in expecting the justice system, which is usually perceived as adversarial, to assume a therapeutic role (Grisso, 2008). Yet it is also true that the justice system is a major de facto provider of care for those with mental health problems. There is therefore a need for coherent policy response that acknowledges this reality (Fraser et al., 2009).

The provision of mental health treatment may be widely acknowledged to be a worthwhile goal. The justification for this goal, however, is significant; to the extent that the policy objective is humane and ethical care for persons with mental health problems, then the provision of treatment is broadly sufficient to meet that goal. However, if the policy objective is reduced rates of reoffending but the provision of mental health services fails to meet that goal, then treatment of the offender may be rejected as a futile goal. The intended goal is therefore significant, and research findings clearly suggest that mental health services are poorly aligned with a stated goal of reduced reoffending, but more appropriate services are available (Grisso, 2007; see also Andrews & Bonta, 2010a, or Latessa et al., 2002, for a discussion of the historical "nothing works" position). To address the challenges of mental

health problems and reoffending, the goals of a research programme, intervention, or policy must be clearly articulated to provide a clear criterion by which to judge success.
References


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1 I urge caution in the reporting of sources. In my review of the literature, I found several references to the notion that mental health is a risk factor for recidivism which, upon closer inspection, were not references to primary sources. As one example, in attempting to trace the source of a recent claim, I found the original finding was four sources (and more than thirty years) removed. Elsewhere, discussions of possible relationships are cited by subsequent authors with the same weight as empirical findings.

2 Of what has been written, most concerns the notion of ‘general’ or ‘external’ responsivity, which pertains more to program or system characteristics associated with intervention effectiveness, rather than to specific responsivity, or characteristics of the individual offender, including mental health status.