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The Process of Motivational Interviewing with Offenders

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ABSTRACT

Motivational interviewing (MI) is a form of client-centred psychotherapy that resolves ambivalence and elicits motivation to change problem behaviours (Miller & Rollnick, 2009). An emerging theory suggests that MI works through the combination of a relational component and the goal directed application of MI methods to evoke and reinforce change talk (Miller & Rose, 2009).

A process study was conducted on an adaptation of MI for offenders, the Short Motivational Programme (SMP). The SMP combines MI and cognitive behavioural content across five sessions to enhance motivation for change among medium risk offenders (Devereux, 2009). A single-case design and descriptive statistics were employed and supplemented with inferential statistics. The MI Skills Code 2.1 (Miller, Moyers, Ernst, & Amrhein, 2008) was used to rate the language of 12 facilitators and 26 offenders during 98 video-recorded SMP sessions.

There was some evidence that facilitators were less able to use specific MI methods during sessions that included cognitive behavioural content. Offenders' ambivalence about changing offending behaviour was most pronounced during sessions that included cognitive behavioural content. Offenders' change and committing change talk was highest during sessions without cognitive behavioural content. Offenders who completed the SMP with more commitment to change demonstrated less ambivalence during earlier sessions. The relational component of MI appeared to be related to whether offenders completed the SMP. There was some evidence to support a relationship between the use of MI consistent methods and offender change talk. The use of MI inconsistent methods and a lack of MI consistent methods were related to ambivalence about changing criminal behaviour and premature exit from the SMP. These results suggested that facilitators should judiciously avoid the use of MI inconsistent methods and strategically employ MI consistent methods to reduce offenders' ambivalence about change. The integration of cognitive behavioural content and MI needs to be carefully considered in reference to the aim of each session, the subsequent session, and the programme's overall goal.

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INTRODUCTION AND OVERVIEW

Process studies have demonstrated that psychotherapy effects change in client outcomes through a combination of common and specific factors (Garfield, 1995). Common factors are psychotherapy elements that are shared by diverse modalities and have a demonstrable relationship to client outcomes. One of the more pertinent examples is the therapeutic relationship (Norcross & Wampold, 2011). Therapist empathy, a component of the therapeutic relationship, is espoused by Rogers (1951) as a central tenet of change in client-centred therapy. Correspondingly, proponents of cognitive-behaviour therapy (CBT) have recognised the pertinence of the therapeutic alliance, another component of the therapeutic relationship, as a prerequisite for therapeutic change (Scott & Beck, 2008). Divergent schools of psychotherapy place different emphases on the centrality and causative role of the therapeutic relationship on client outcomes. However, they share the view that the therapeutic relationship is an important condition of change (J. S. Beck, 1995; Ford, 1978; Freud, 1957; Rogers, 1951; Scott & Beck, 2008). This view is shared by the progenitors of motivational interviewing (MI; Miller & Rollnick, 2002), a client-centred form of psychotherapy that integrates behavioural concepts (Arkowitz, Westra, Miller, & Rollnick, 2008) to elicit and strengthen motivation to change (Miller & Rollnick, 2009).

Specific factors are elements unique to a therapeutic modality that are hypothesised to interact with client variables to effect changes beyond what might be achieved by common factors alone (Garfield, 1995). For example, MI clinicians use methods, such as evocative questions and reflections, to elicit and reinforce change talk from clients and subsequently resolve client ambivalence about behaviour change (Miller & Rollnick, 2002). Cognitive behavioural therapists use methods, such as dysfunctional thought records and behavioural experiments, to assist clients to identify, understand and influence their thoughts in order to effect changes in their emotions, physiological experiences and behaviours (J. S. Beck, 1995).

Studies have demonstrated that a range of client variables interact with common and specific therapy factors to affect treatment outcome (Lambert, 1992). One client variable,

motivation to change, has been implicated in treatment outcomes across a range of psychotherapies (Clarkin & Levy, 2004) and target problems (Burke, Arkowitz, & Menchola, 2003). The relationship between motivation to change, psychotherapy and outcomes has generated considerable research (Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010). These studies have demonstrated that motivation to change is a dynamic construct that is influenced by a therapist's interpersonal style (Miller, Benefield, & Tonigan, 1993). In light of these findings, researchers explored interventions to foster motivation to change. One approach, MI, found support in the addiction field (Burke et al., 2003) and early studies have suggested that adaptations of MI are effective with offender groups (McMurran, 2009).

In the early 1980s, MI was explicated by Miller (1983) as a brief intervention to assist individuals to resolve ambivalence and foster motivation to change. It is characterised by a Rogerian (Rogers, 1951) client-centred approach that is collaborative and subtly directive. The principles of MI (developing discrepancy, rolling with resistance, expressing empathy and supporting self-efficacy) enumerate the broad approach. Specific MI methods are strategically employed, while adhering to the above principles, to assist clients in resolving ambivalence, building motivation to change and committing to a change plan. However, despite a burgeoning evidence base (Burke et al., 2003; Lundahl et al., 2010), little was known until recently about how MI effects motivational and behavioural change (Arkowitz et al., 2008). Due to the accrual of process-outcome studies, MI scholars have explicated an emerging theory of MI (Miller & Rose, 2009). This theory suggests that MI combines a client-centred approach with a goal directed application of MI specific methods. The specific methods of MI reinforce language inferring change (known as change talk) and subvert language inferring resistance to change (known as sustain talk). In turn, a client's statements inferring commitment to change (known as committing change talk) are said to mediate the link between change talk and behaviour change.

Interest in MI with offenders has emerged from the broader field of correctional rehabilitation. Correctional researchers have enumerated a number of principles of effective rehabilitation programmes. The three most prominent are the principles of Risk, Need and Responsivity (Andrews & Bonta, 2010). The risk principle states that interventions need to be tailored to the offender's risk of recidivism. The need principle

states that interventions need to ameliorate malleable predictors of re-offending. The responsivity principle pertains to those aspects of an offender's rehabilitation that will either aid or thwart the effectiveness of treatment interventions. An offender's motivation to change is a component of treatment responsivity (Andrews & Bonta, 2010; Farr & Draycott, 2007) and has strongly predicted therapeutic alliance (Taft, Murphy, King, Musser, & DeDeyn, 2003) and treatment outcome (Anstiss, Polaschek, & Wilson, 2011). Lastly, these studies have demonstrated that correctional programmes that reduce recidivism tend to be structured, directive, skill oriented and cognitive behavioural (MacKenzie, 2006). Due to the deleterious effects of low motivation to change in correctional rehabilitation (McMurrin & Theodosi, 2007), correctional professionals have looked to adapt MI for offenders.

In keeping with the evidence base of 'what works' to reduce criminal recidivism (Andrews & Bonta, 2010; MacKenzie, 2006), correctional professionals have adapted MI for offenders by integrating it with cognitive behavioural content. One such approach is a five-session manual-based Short Motivational Programme (the SMP) developed by the New Zealand Department of Corrections (Anstiss, 2003; Devereux, 2009; Steyn & Devereux, 2006). The central thesis of this approach is that MI is used to resolve ambivalence and foster motivation to change while cognitive behavioural content is used to impart the skills necessary to change offending behaviour. Despite the inclusion of cognitive behavioural content, the SMP is not deemed to be correctional treatment per se, but rather aims to foster motivation to change and increase offenders' awareness of offence related cognitions and behaviours (Devereux, 2009). Both MI and cognitive behavioural methods have commonalities, such as emphasising collaboration, there are however significant differences (Miller & Rollnick, 2009; Moyers & Houck, 2011).

A humanistic philosophy that emphasises therapist acceptance, empathy and client autonomy underpins the MI method. In contrast, cognitive behavioural methods are predicated on cognitive and learning theories (Miller & Rollnick, 2009), and tend to be goal oriented, educative, structured and action oriented (J. S. Beck, 1995; Dobson & Dozois, 2001; Kertes, Westra, Angus, & Marcus, 2011). Further, cognitive behavioural methods are often manual-based (Najavits, Weiss, Shaw, & Dierberger, 2000) whereas manuals have demonstrated deleterious effects when applied to MI (Lundahl et al., 2010). Despite these divergent conceptions and methods, MI is consistently combined with

cognitive behavioural content for a range of psychological problems (Arkowitz et al., 2008), including offending behaviour (McMurrin, 2009). It remains unknown whether the inclusion of cognitive behavioural content compromises MI in terms of its delivery and subsequent client responses. Until recently, the studies required to answer this question have been hampered by the lack of an underpinning theory to explain how MI effects change. It is proposed here, that Miller and Rose's (2009) emerging theory of MI be used as a model to investigate the integration of MI and cognitive behavioural content for offenders. Understanding if and how these two approaches can be effectively combined would inform the use of MI in a correctional setting. As such, the focus of the current study is to investigate the nature of a programme (the SMP) that combines these two approaches for medium risk offenders.

Chapter one will discuss the psychotherapy process research in terms of common and specific factors and their relationships to psychotherapy outcome. This will highlight an important client factor, motivation to change. Chapter two will discuss the role of client motivation to change in psychotherapy. Chapter three will introduce MI as a form of psychotherapy designed to foster motivation to change and the literature that pertains to the process of MI will be explored in some detail. This will provide the requisite background material to introduce and discuss the adaptation of MI with offender groups in chapter four. Chapter five will discuss Miller and Rose's (2009) emergent theory of MI, the measurement of the constructs articulated by the theory and implications of the theory for the adaptation of MI for offenders. Lastly, chapter six will describe the aim of the current study: To elucidate the processes that underlie a programme that combines MI and cognitive behavioural content to foster motivation to change among medium risk offenders.

CHAPTER 1: PSYCHOTHERAPY PROCESS

Large scale reviews, such as that carried out by Lipsey and Wilson (1993) on 156 meta-analyses, found that psychotherapy has demonstrably positive effects on emotional and behavioural change. These findings have been statistically and clinically significant and surpassed placebo effects (Grissom, 1996). While evidence has clearly demonstrated that psychotherapy works for a range of people and problems, much remains unknown about how it works (Kazdin, 2007). Therefore, attention has shifted to identifying what variables predict variance in outcomes (Orlinsky, Ronnestad, & Willutzki, 2004).

The systematic use of process research dates back approximately 60 years; some 30 years after the advent of outcome research (Orlinsky et al., 2004). This delay stemmed from difficulties accessing and validly measuring therapeutic encounters. The use of audio-recording to capture therapeutic process commenced in the early 1950s and subsequently the dynamics of therapy became more readily available to multiple observers. This allowed objective techniques, such as content analysis, to be used to analyse therapeutic engagements and test the validity of explanatory theories (Auld & Murray, 1955). As a result, there has been a substantial growth in process-outcome studies and this has culminated in several key findings.

General process-outcome findings

Studies have not demonstrated a significant relationship between client outcomes and therapist gender, age or ethnicity (Beutler et al., 2004). There is some evidence to support ethnic matching (Flicker, Waldron, Turner, Brody, & Hops, 2008; Snowden, Hu, & Jerrell, 1995; Sue, Fujino, Hu, Takeuchi, & Zane, 1991) but studies suggest that therapists can be effective when working cross culturally (Chang & Berk, 2009). Therapist training, clinical experience and well-being have demonstrated modest relationships with outcome but with considerable variation between studies (Beutler et al., 2004; McCarthy & Frieze, 1999). Positive client outcomes can be achieved during psychotherapy by therapists with a range of professional identities (Beutler et al., 2004). Similarly, studies have demonstrated that MI can be effectively delivered by therapists with a range of professional backgrounds (Lundahl et al., 2010). However, there is considerable variation in the ability of therapists to alleviate clients' symptoms (Luborsky, McLellan, Woody,

O'Brien, & Auerbach, 1985). Luborsky, McLellan, Diguier, Woody, and Seligman (1997) demonstrated that the least effective therapists produced an overall negative effect while the most effective therapists effected positive change in over 80% of their clients. In the Luborsky et al. (1997) study, clients were randomly assigned to therapists and so differences due to patient pre-treatment adjustment were minimised. These findings were found despite the use of treatment manuals, and assiduous training, monitoring and supervision; all of which might be expected to reduce differences between therapists (Lambert, 1992). Most notably, therapists who are able to form strong therapeutic alliances have consistently achieved better outcomes for clients (Martin, Garske, & Davis, 2000). This finding holds true regardless of how the alliance is measured, who (therapist, client or third-person) measures it, what stage within the session of therapy it is assessed, the way the outcome is evaluated, and the therapy modality used (Horvath, Del Re, Flückiger, & Symonds, 2011).

Psychotherapy has produced positive outcomes when delivered to individuals or groups (McRoberts, Burlingame, & Hoag, 1998), over different lengths of time, under a variety of payment schedules, and in various settings (Orlinsky et al., 2004). Psychotherapy has demonstrated efficacy for clients with a range of demographic variables and diagnostic categories (Clarkin & Levy, 2004). However, clients with greater functional impairment, in particular clients with comorbid personality disorders, tend to fare less well (McDermut & Zimmerman, 1998). More sessions, rather than time in therapy per se, appear to lead to better outcomes (Howard, Kopta, Krause, & Orlinsky, 1986). The same evidence has demonstrated that the majority of change typically occurs earlier in therapy with diminishing returns beyond a given point (Kopta, Howard, Lowry, & Beutler, 1994). Lambert, Hansen, and Finch (2001) found that 50% of their sample ($n = 6,072$), taken from a range of settings, achieved clinically significant improvement after 21 sessions of psychotherapy. More than double this amount of sessions were needed before 75% of the sample achieved the same criterion. This finding, in combination with the interests of funders, has seen a trend toward time-limited therapies (Lambert & Ogles, 2004).

Meta-meta-analyses, such as that conducted by Lipsey and Wilson (1993), have demonstrated that a diverse range of psychotherapies are similarly effective for a range of problems with an overall effect size of .47. This finding has become euphemistically known as the 'Dodo Bird effect'. The term was coined by Saul Rosenzweig (Duncan,

2002) and is based on Lewis Carroll's *Alice in Wonderland* after the dodo bird announced "everybody has won and all must have prizes". It infers that all therapies are similarly effective. This was illustrated by the National Institute of Mental Health (NIMH) Collaborative Depression study which found interpersonal psychotherapy and cognitive behaviour therapy produced similar effects and neither therapy produced effects beyond those achieved by a placebo plus clinical management (Imber et al., 1990). A range of explanations for the lack of differences between therapies have been posited (Ahn & Wampold, 2001).

Common Factors

The common factors hypothesis suggests that there are a set of therapeutic variables common to most psychotherapies that account for a significant portion of therapeutic change in clients. The supposition of common factors shared by diverse therapies has received considerable support and generated vigorous debate (Ahn & Wampold, 2001). However, the notion that disparate therapies effect a significant degree of change through common curative factors has become increasingly accepted (Arkowitz, 2002; Garfield, 1995; Norcross & Wampold, 2011). A number of common factors have been posited. These include catharsis, the provision of a framework for clients to better understand their problems, hope effects, and the therapeutic relationship. The therapeutic relationship has received considerable attention (Martin et al., 2000; Norcross & Wampold, 2011).

The therapeutic relationship

Gelso and Carter (1985, p. 159) defined the therapeutic relationship as "the feeling and attitudes that counselling participants have toward one another, and the manner in which these are expressed". A number of constructs appear to be related to, or considered part of, the therapeutic relationship. Two prominent constructs that have had a demonstrable relationship to client outcomes include the therapeutic alliance and therapist empathy (Norcross & Wampold, 2011).

Gaston (1990) defined the therapeutic alliance as consisting of the client's capacity to engage in the therapeutic process, the client's affective bond with the therapist, the therapist's understanding and engagement with the client, and agreement between therapist and client on the goals of therapy. Like the therapeutic relationship, generally, therapies tend to differ in the emphasis placed on the therapeutic alliance as a causative

factor in client outcomes. However, divergent therapies commonly consider it to be a prerequisite condition for change (Ford, 1978; Freud, 1957; Scott & Beck, 2008). This includes therapies that have not traditionally emphasised the therapeutic alliance, such as behaviour therapy (Emmelkamp, 2004). This finding has been supported by more than 1000 process-outcome studies and appears particularly robust when based on client self-report (Orlinsky et al., 2004). Collectively, studies have suggested that the therapeutic alliance is associated with approximately 10% of the variance in treatment outcome (Beutler et al., 2004) with some variability in this finding with effect sizes ranging from .04 (Barber et al., 1999) to .77 (Mallinckrodt, 1993). Most recently, Horvath et al. (2011), in a synthesis of over 200 research reports and 14,000 treatments, demonstrated an effect size of $r = .25 - .30$ with a confidence interval of 95%. In a study by Barber et al. (1999) the therapeutic alliance predicted outcomes before any particular technique or symptom amelioration, which the authors suggested demonstrates a causative relationship between the therapeutic alliance and outcome. In contrast, Tang and DeRubeis (1999) concluded that the therapeutic alliance strengthened following cognitive changes and associated symptom improvement. This suggested that the therapeutic alliance may, at least in part, be a function of therapeutic progress. Also, the therapeutic alliance did not predict outcome in a study by Barber et al. (2001) of cocaine dependent outpatients receiving cognitive therapy, supportive-expressive therapy and individual drug counselling.

However, early measures of the therapeutic alliance did predict retention for outpatients receiving supportive, expressive and individual drug counselling but not for patients receiving cognitive therapy. Carroll, Nich, and Rounsaville (1997) similarly found that the alliance predicted retention for cocaine dependent patients but not for those receiving cognitive therapy. Other studies, however, have demonstrated that the therapeutic alliance is important during cognitive therapy (Kazdin, 2007). Despite some mixed findings, the majority of studies overwhelmingly support a moderate association between the therapeutic alliance and outcome for diverse therapies and problems (Martin et al., 2000). It is less clear how the therapeutic alliance contributes to change in client symptoms (Kazdin, 2007).

Therapist empathy is a component of the higher order therapeutic relationship construct. It is closely related to the therapeutic alliance and has been variously defined (Elliott, Bohart, Watson, & Greenberg, 2011). Therapist empathy can be differentiated from the

alliance construct in that the alliance construct focuses more on conscious collaboration between the therapist and client, whereas empathy focuses more on accurate understanding. Empathy is commonly defined as the therapist's ability to accurately experience the client's frame of reference and communicate a high degree of understanding of the client's feelings (Elliott et al., 2011).

The two therapies that have focused most on therapist empathy, psychodynamic and client-centred therapy, have emphasised the role of accurately understanding the client's experience and frame of reference (Elliott et al., 2011). In a study by Miller, Taylor, and West (1980), empathy predicted two thirds of client outcome ($r = .82, p < .0001$); in this case drinking rates, six months after termination. When these clients were followed up, therapist empathy continued to predict half ($r = .71$) and one quarter ($r = .51$) of client drinking rates at 12 and 24 months, respectively (Miller & Baca, 1983). This finding has also been maintained for therapy conducted in groups (Gaston, Marmar, Gallagher, & Thompson, 1991; Krupnick et al., 1996). A recent meta-analysis conducted by Elliott et al. (2011) produced a more modest finding, albeit significant, where empathy was a moderately strong predictor of outcome. This study covered 59 independent samples that included 3599 clients and produced a mean effect size of $r = .31, p < .001$ with a 95% confidence interval of .28 to .34. A meta-analysis by Bohart, Elliott, Greenberg, and Watson (2002) found, when comparing divergent psychotherapies, that empathy demonstrated the strongest relationship to outcome in cognitive behavioural therapy. A somewhat surprising finding given therapist empathy has tended to be more central in client-centred and psychodynamic therapies (Elliott et al., 2011). However, a later meta-analysis by Elliott et al. (2011) did not identify any significant differences between therapies.

A few studies have supported the hypothesis that therapeutic relationship factors, such as the alliance and empathy, cause therapeutic changes in clients (Barber, Connolly, Crits-Christoph, Gladis, & Siqueland, 2009). However, consistently and conclusively demonstrating causation has been difficult (Tang & DeRubeis, 1999; Zuroff & Blatt, 2006). This may in part be due to the practical, ethical and statistical quandaries associated with designing a study that is able to demonstrate that therapeutic relationship factors cause change, or are caused by change, or influenced by other variables. With few exceptions, e.g. Rational Emotive Behaviour Therapy (Dryden & Ellis, 2001), there is a

growing consensus among the multiplicity of therapies and theoretical frameworks that the therapeutic relationship, of which the alliance and empathy are central components, is an important condition of therapeutic change (Garfield, 1995; Norcross & Wampold, 2011).

Concurrently, there is an increasing awareness of how a client's idiosyncrasies, such as diagnosis, personality, and motivation to change, interact with common factor variables to produce divergent outcomes. It has therefore been posited that while common factors exist, there are factors unique to specific therapies and therapists that may effect greater change for clients with specific sets of problems and presentations (Kazdin, 2007).

Specific Factors

Arkowitz (2002) suggested that while therapists should heed the importance of common factors, such as the therapeutic alliance, larger effects can be achieved when specific approaches are concurrently introduced in reference to particular clinical problems and presentations. Garfield (1995) has cited the growing evidence for the superior efficacy of behaviour therapy for specific phobias and cognitive behavioural therapies for anxiety disorders (Emmelkamp, 2004) to support the notion that specific methods can produce superior results. Garfield (1995) has advocated for an "eclectic-integrative" approach to psychotherapy where a therapist may work predominantly in one therapeutic modality and introduce techniques from another modality if the client's problem(s) and presentation indicate that such an approach will achieve greater therapeutic gains.

This approach of specific therapies for specific problems is also reflected in the general movement toward empirically supported treatments (Chambless & Ollendick, 2001). This has, however, fuelled debate about the degree to which specific factors (elements unique to a particular psychotherapy) account for variance in client outcomes (Ahn & Wampold, 2001). Proponents of the specific factors approach have suggested that the small level of variance attributed to specific factors is an artefact of methodologies that, typically through the aggregation of studies, are insensitive to specific effects. Meta-analysis, for example, can generate erroneous conclusions by mixing dissimilar studies (Sharpe, 1997). Studies can introduce uncontrolled variability among therapists, therapies, settings and clients.

A meta-analysis by Smith, Glass, and Miller (1980) illustrated this point in a study that compared many studies by grouping therapies into two broad classes: behavioural and verbal. In the behavioural category were methods, such as systematic desensitisation that are typically defined as behavioural. In the verbal therapies category, Smith et al. (1980) allocated humanistic, psychodynamic and cognitive therapy. These two broad groupings were then compared and no difference was found between them. This finding was subsequently used to support the hypothesis that common factors are principally responsible for therapeutic change and to dismiss the significance of specific factors (Ahn & Wampold, 2001). In contrast, Follette and Hayes (2000) suggested that psychotherapy researchers are more likely to conceive cognitive therapy as belonging to the behavioural, rather than the psychodynamic or humanistic, schools of therapy. As such, support for common factors based on the Smith et al. (1980) study is at least in part based on a classification error (Hunsley & Di Giulio, 2002). Furthermore, there was also little control of other potential confounds such as problem severity.

Similarly, Perepletchikova (2009) suggested that many studies do not measure treatment integrity, beyond the use of a treatment manual, which can make comparisons between therapies difficult. This was illustrated in a study by Malik, Beutler, Alimohamed, Gallagher-Thompson, and Thompson (2003) that compared three manual-based cognitive therapies with each other and with psychodynamic manual-based therapies. The expected differences were found between cognitive and psychodynamic therapies. However, within the cognitive therapies, Malik et al. (2003) found large differences in the degree to which they were behaviourally focused. According to their manuals they were functionally equivalent. As such, studies may explicitly believe they are comparing similar treatments, due to the use of a manual, but may be more heterogeneous than expected. One possible solution is to observe sessions through the use of audio or video-recordings as a means of checking treatment integrity. These studies suggested that the conclusions about psychotherapy equivalence, especially when they are based on poorly defined or implemented treatments, need to be considered in light of their methodological weaknesses. In terms of aggregated studies, Hunsley and Di Giulio (2002) have concluded that when meta-analysis is appropriately used to investigate treatment effects (i.e. when measurement quality is controlled and treatments are accurately categorised) that some treatments are differentially superior for given sets of problems.

It is proposed by proponents of empirically supported treatments that the question of which treatments are superior glazes over the complexities of psychotherapy. Rather, what is needed is a nuanced explication of “what aspects of therapy and what kinds of therapy, provided how and by what kind of therapist, under what circumstances, for what kinds of patients, with what kinds of problems, are likely to lead to what kinds of results” (Orlinsky et al., 2004, p. 362). To answer these questions, researchers have looked toward which client factors indicate or contraindicate particular approaches. As such, a considerable amount of process research has sought to understand how client variables moderate psychotherapy outcomes.

Client factors

There are a range of client variables that may bear a meaningful relationship to treatment process and outcome. Lambert (1992) has suggested that up to 40% of client outcomes can be attributed to client variables. Variables of interest range from demographic factors, such as ethnicity, to more dynamic factors, such as diagnosis and motivation to change (Garfield, 1998). Although demographic variables are not necessarily insignificant, they have not been good predictors of treatment process and outcome (Clarkin & Levy, 2004). However, demographic factors may highlight variables of clinical relevance. For example, a young person may be experiencing a need for greater autonomy and an older person may be seeking life meaning. A client belonging to an ethnic minority group may be experiencing discrimination and a recent refugee may have experienced trauma in their country of origin, during transit or due to problems adjusting to their new home.

Client diagnosis has been a commonly studied variable in psychotherapy process and outcome (Clarkin & Levy, 2004). To a large degree the empirically supported treatments movement is based on the notion that diagnosis can be used to indicate what therapy will be most effective (Chambless & Ollendick, 2001). This approach, at least on face value, makes sense. A client presenting with schizophrenia is very different to, and requires a different intervention from, another presenting with a specific phobia (Garfield, 1998). Also, some therapies do appear to be more effective for clients on the basis of diagnosis. For example, there is considerable support, over alternative approaches, for exposure therapy for panic disorder (Emmelkamp, 2004). However, Clarkin and Levy (2004) have suggested that the supposition that empirically supported treatments can be developed for specific diagnostic groups can be misleading. Specifically, it discounts the diversity of

clients who present with matching diagnoses. While diagnosis has and continues to be a useful variable when considering psychotherapy process and outcome, an over-reliance on diagnostic labels discounts other important variables, such as problem severity, complexity and motivation to change. All of which may bear a meaningful relationship to treatment outcome (Garfield, 1998).

Treatment effectiveness has been attenuated for clients presenting with greater functional impairment and more pervasive and complex problems, such as co-morbidity, particularly when this has included a personality disorder (Clarkin & Levy, 2004). Findings have suggested that clients with more complex and pervasive problems do better with more sessions of psychotherapy and additional follow up (AuBuchon & Malatesta, 1994; Cooper, Coker, & Fleming, 1994; McDermut & Zimmerman, 1998). In a study by Shapiro et al. (1994), cognitive behavioural and psychodynamic interpersonal therapy was efficacious for 117 patients with depression. However, in both conditions, those patients with more severe depression did better with 16 rather than 8 sessions of therapy. In contrast, in a study by McCambridge and Strang (2004), one session of motivational interviewing demonstrated greater effectiveness for alcohol and cannabis users with increased problem severity. However, the evidence base has generally suggested that clients with more severe and complex problems require greater doses of psychotherapy to achieve an equivalent level of symptom remission.

A range of personality variables have been associated with treatment process and outcome. There has been some, albeit mixed, support for ego-strength as a predictor of psychotherapy outcomes (Clarkin & Levy, 2004). Studies have suggested that psychological mindedness may interact with the process of therapy to produce differential treatment effects (Blatt, Quinlan, Pilkonis, & Shea, 1995; Conte et al., 2004). The ability of clients to form functional interpersonal relationships has been associated with better treatment outcomes (Piper, Joyce, Azim, & Rosie, 1994). This ability may promote a healthy therapeutic alliance, allow concepts to be more readily communicated and practiced, and increase the likelihood of in-session changes being generalised outside of therapy.

Coping style appears to interact with the method of therapy to produce differential outcomes. In a study by Longabaugh et al. (1994), clients with a greater tendency to

externalise did better in cognitive behavioural treatments than relationship enhancement therapy. However, other studies have found contrary results (Project MATCH, 1997). Studies have generally found that clients who experience greater subjective distress are more motivated to engage in treatment but this finding is not universal (McLean & Taylor, 1992). As such, subjective distress is hypothesised to be a motivating factor for clients. In contrast, a study of recidivist sexual offenders demonstrated no association between psychological distress and treatment outcome (Hanson & Morton-Bourgon, 2005). But this needs to be considered in light of the sample; a population of persistent offenders with entrenched antisocial attitudes and antisocial personality traits. It is possible that such entrenched ways of thinking suppress the influence of subjective distress.

Motivation to change has been related to treatment engagement and outcome. Offenders who do not complete treatment, due to low motivation to change, have re-offended at higher rates than comparable offenders who did not begin treatment (McMurran & Theodosi, 2007). As such, poor motivation to change can deleteriously affect treatment outcome. The strong association between motivation to change and therapeutic outcome across a range of psychotherapies and target problems has engendered a substantial research agenda (Luborsky, Auerbach, Chandler, Cohen, & Bachrach, 1971; Wade, Frayne, Edwards, Robertson, & Gilchrist, 2009).

Motivation to change

Historically, motivation was viewed as a stable personality trait (Beckman, 1980; Clancy, 1964). Interventions for unmotivated clients (if they were not declined therapy on this basis) were typically confrontational in an effort to coerce clients into changing behaviour (Allsop, 2007). This shifted following research which demonstrated that client motivation to change fluctuated within a single session of psychotherapy (Rosenbaum & Horowitz, 1983). Subsequent research sought to understand if therapy and therapist factors could influence motivation to change (Miller, 1985). In a later study by Miller et al. (1993), resistance, used to signal a lack of motivation to change, was perpetuated by confrontational therapists and ameliorated by client-centred therapists. This suggested that in-session motivation to change was not only a dynamic variable but influenced by the therapist's interpersonal style. Consequently, a raft of motivational research emerged from the addictions treatment field due to low rates of treatment compliance (Hettema,

Steele, & Miller, 2005). Motivation to change was later found to be associated with treatment engagement and outcome for clients presenting with a range of problems (Burke et al., 2003). Given the re-conceptualisation of motivation to change as a dynamic interpersonal construct and its demonstrated influence on outcome for a range of problem behaviours, therapists became less likely to exclude unmotivated clients and more likely to prioritise motivation to change as an intermediate treatment goal.

However, there continues to be ambiguity in how motivation is conceptualised by psychology and psychologists (Draycott, 2007). Therefore, there is some value in providing a brief account of the theoretical progression of motivation as a psychological construct. This will demonstrate how motivation has come to be conceptualised within psychotherapy and within this study.

CHAPTER 2: MOTIVATION AND PSYCHOTHERAPY

Definitions of motivation have typically described a construct that gives rise to inner forces or motives, which in turn propel behaviour. These forces are viewed as goal directed and are either part of a biological process, cognitively mediated, or both (Colman, 2003; VandenBos, 2007; Weiner, 1972). The breadth of the motivational concept has provided fertile ground for theory development.

Motivational Theories

The biological conception, known as the regulatory approach, was the first systematic and empirically-based attempt to understand motivation. This was heralded by Darwin's concept of instincts as behavioural mechanisms to aid survival (Madsen, 1974). From strictly instinct-based paradigms, two schools of motivational thought emerged; learning psychology and personality psychology.

Hull's (1943) drive theory, influenced by Pavlov, Thorndike, Watson and the general behaviourist movement, was the most prominent of the theories premised on learning psychology (Weiner, 1972). Hull's theory is based on the notion that people have biological needs and that meeting these leads to a reinforcement effect (Arkes & Garske, 1977). Hull suggested that the nature and extent of biological needs, such as thirst and hunger, predicted the energy expended to meet the need. Drive theory generated a substantial amount of research but was criticised for its over-reliance on a stimulus-response view of human behaviour and the omission of cognitive functions and their role in mediating behaviour (Weiner, 1972). Further, drive theory was unable to predict the complexities of human behaviour despite its mathematical rigour. Therefore, scholarly attention shifted to how thought processes mediated stimulus-response behaviours (Weiner, 1972). One such example, considered to be quasi-cognitive, is Freud's psychoanalytic theory of motivation.

The psychoanalytic theory of motivation stemmed from the notion that behaviour is caused by instinctual desires, labelled "id", which manifest as urges (Weiner, 1972). Freud introduced cognition by suggesting that "the ego" regulated drives when the sought object was unattainable or when a greater reward could be achieved through delayed

gratification (Weiner, 1972). The “ego” concept extended Hull’s (1943) drive theory by adding a mediator between need, drive and need-satisfaction. However, Freud viewed this “cognition” as contingent on an initial drive or stimulus and therefore discounted the role of autonomous thought (Weiner, 1972). Furthermore, psychoanalytic theory was criticised for over emphasising the subconscious and overlooking goal achievement and self actualisation. Also, psychoanalytic theory did not explain the impact of learning, which was well captured by the general learning theories (Weiner, 1972). Lastly, the scientific rigour of psychoanalytic explanations of motivation was questioned (Arkes & Garske, 1977). Unlike behaviourist paradigms, it was difficult to develop operational definitions of the constructs underlying psychoanalytic theory, and therefore difficult to test the validity of Freud’s inferred constructs and relationships.

For contemporary motivational theorists, early learning and psychoanalytic theories were either too constrained or lacked scientific rigour (Weiner, 1972). Therefore, cognitive explanations of motivation emerged to explain how individuals actively explored, influenced and predicted the outcomes of their behaviour (Lefrancois, 2000). One example from social psychology is the theory of cognitive dissonance. Festinger’s (1957) cognitive dissonance theory is premised on the notion that when an individual simultaneously holds contradictory thoughts (knowledge, opinions or beliefs) they will act to reduce the contradiction (Lefrancois, 2000). The discomfort associated with these contradictory thoughts compels the individual to amend their thoughts or behaviour to achieve cognitive consonance. For example, an individual may enjoy gambling but also be aware that gambling is adversely affecting their relationships. These two contradictory cognitions (“I enjoy gambling” and “gambling harms my relationships”) cause discomfort for the individual possessing them. As such, individuals feel compelled to reduce the dissonance by either changing a thought (“if my partner does not know that I am gambling it cannot harm the relationship”) or behaviour (cease gambling or the relationship). Cognitive dissonance is considered a relevant motivational theory in that dissonant cognitions compel and shape behaviour and thoughts. Cognitive dissonance is used during therapeutic interventions, such as motivational interviewing (MI), to this effect (Miller & Rollnick, 2002). Typically in MI, a client’s beliefs, aspirations and goals are elicited and juxtaposed with his or her current behaviour. A clinician using MI subsequently supports the client to resolve the discomfort associated with these dissonant

thoughts by assisting the client to realign their behaviour to accomplish cognitive consonance.

Hull's (1943) drive theory, Freud's (Weiner, 1972) psychoanalytic theory and Festinger's (1957) cognitive dissonance theory represent a spectrum, from a regulatory to a purposive approach, of motivational theories (Lefrancois, 2000; Madsen, 1974; Weiner, 1972). The regulatory approach is based on a stimulus-response notion of motivation, is mechanistic and views the individual as passive, while the purposive approach is based on a framework of cognitively mediated and goal directed behaviour. The construct of motivation, as reflected by the purposive approach, best reflects the modern conceptual view of motivation in psychotherapy. This is not an exhaustive list of motivational theories but it illustrates the notion that motivation to change is dynamic and multidimensional. In part, the superfluity of motivational theories is due to the number of constructs that bear a meaningful relationship to motivation to change. Therefore, in explaining behaviour change, researchers have more recently drawn on more than a single motivational theory. The most prominent example of this is Prochaska and DiClemente's (1982, 1983) Transtheoretical Model of Intentional Behaviour Change.

The stages of change

Like MI, the Transtheoretical Model of Intentional Behaviour Change (TTM) emerged in the early 1980s. The TTM posits that an individual progress through a series of stages from not thinking about behaviour change through to consciously maintaining change (DiClemente, 2005). These stages (pre-contemplation, contemplation, preparation, action and maintenance) form the fundamental basis of the TTM (Prochaska & DiClemente, 1992). Progression through the stages is said to take place sequentially and sometimes, such as during a relapse, a person may regress to an earlier stage. Prochaska and DiClemente (1994) posited that different processes are employed to a greater or lesser extent depending on an individual's stage of change. These processes are consciousness raising, self-liberation, social liberation, self re-evaluation, environmental re-evaluation, counter-conditioning, stimulus control, reinforcement management, dramatic relief, and helping relationships (Prochaska & DiClemente, 1983). Prochaska and DiClemente (1982, 1983) have described progression through the stages as representing an increased likelihood of intentional behaviour change and therefore circumvent the conceptual ambiguity of motivation as a construct (Drieschner, Lammers, & van der Staak, 2004).

DiClemente and Velasquez (2002) posited that motivation to change is a key requisite for progressing through the stages of change. Nevertheless, this sequential progression is commonly purported to represent, or be analogous to, an increase in motivation to change (Blanchard, Morgenstern, Morgan, Labouvie, & Bux, 2003; Greenstein, Franklin, & McGuffin, 1999). The TTM's stages of change are commonly used to tailor motivational interventions based on the client's measured stage of change and this has included offender groups (Wong, Gordon, & Gu, 2007).

In many studies, particularly for health related behaviours, the TTM has demonstrated good predictive validity. These have included outcomes for smoking cessation, weight control and psychological distress (Prochaska & DiClemente, 1985). In one study by Prochaska, Norcross, Fowler, Follick, and Abrams (1992) of a work site weight loss programme, the TTM's ability to predict treatment outcome was superior to measures of self-efficacy, social support and weight history. The TTM has also predicted treatment attendance (Prochaska et al., 1992) and engagement (Joe, Simpson, & Broome, 1998). Despite the TTM's widespread application and popularity, it has received substantial criticism (Herzog & Blagg, 2007; Whitelaw, Baldwin, Bunton, & Flynn, 2000).

The TTM suggests that behaviour change is a planned process that occurs according to a stable pattern (i.e. sequential progression through the five stages by differentially employing the processes of change). However, Larabie (2005) demonstrated that more than half of smokers who presented to a general practice and subsequently attempted to quit smoking, had made no previous preparations to reduce their rate of smoking. This indicated that time spent in preparation is not a prerequisite for action (West, 2005), as articulated by the TTM's pre-contemplation stage. Although it is purported to be a stage based model, factor analyses do not always support this (Levesque, Gelles, & Velicer, 2000). Factor analysis of the University of Rhode Island Change Assessment Questionnaire (URICA; McConaughy, DiClemente, Prochaska, & Velicer, 1989), a measure based on the TTM stages of change, has only elucidated four factors (DiClemente & Hughes, 1990). Although it is unclear whether this is an issue associated with the URICA, as a measure, rather than the TTM as a model. Studies with offenders have sometimes demonstrated a three factor, rather than the five factor model, as posited by the TTM (Eckhardt & Utschig, 2007; Eckhardt, Babcock, & Homack, 2004; Hemphill & Howell, 2000). Even when five factors can be identified, there are considerable

correlations between the stages (demonstrated by measures based on the TTM) which undermine the contention that the TTM is constituted by discrete identifiable stages (Sutton, 2001). Drieschner et al. (2004) suggested that in order to represent levels of motivation, the stages of change need to constitute a single construct. However, this criticism needs to be considered within Prochaska and DiClemente's (1982, 1983) conceptualisation of the TTM, as a model of intentional behaviour change, not motivation. Nevertheless, instruments based on the TTM, such as the URICA, are commonly purported to measure motivation to change.

There are reservations about the external validity of the TTM. The sample used by Prochaska and DiClemente (1983) to develop and validate the TTM was self-selected and already had strong intentions to cease smoking. West (2005) demonstrated that of the 540 articles found in *PubMed* using the search phrase 'stages of change' almost 50 percent were restricted to addictive disorders like smoking, alcohol use and illicit drug use. In addition, the TTM was developed and subsequently validated on individuals ceasing to emit a single behaviour, smoking. In contrast, the TTM is often applied to settings that require the cessation and acquisition of many forms of behaviour. For example, when rehabilitating offenders the aim is not only for the individual to cease offending, which may encompass manifold behaviours, but to also acquire a range of pro-social behaviours (Ward, Mann, & Gannon, 2007). Furthermore, behaviours such as smoking are regularly emitted by an individual whereas offending behaviours, such as sex offences, have comparatively low base rates (Hanson & Bussière, 1998). This calls into question whether the TTM is a model that can be applied to behaviours outside the realm of smoking and substance use.

In terms of addictive behaviours, such as alcohol and drug use, the TTM does not include the influence of addictive processes, namely stimulus-response conditioning, that allow a behaviour to continue outside of conscious awareness (West, 2005). This may extend to offending behaviour where an offender wants to change but is unaware of the antecedent and consequent stimuli that maintain their behaviour.

Operationalising the stages of change

A number of measures have been developed to operationalise the stages of change represented by the TTM. These can be grouped into two categories: stages of change

algorithms and stages of change questionnaires (Carey, Purnine, Maisto, & Carey, 1999). Staging algorithms work by categorising individuals into a stage of change based on predetermined definitions (Prochaska, 1994). For example, DiClemente et al.'s (1991) staging algorithm for smoking cessation allocates individuals into the pre-contemplation stage if they have no intention to cease smoking in the next six months. Individuals indicating an intention to cease smoking in the next six months are placed in the contemplation stage. Individuals who intend to cease in one month and have made some attempts toward behaviour change are placed in the preparation stage. If behaviour change has occurred, in this case the cessation of smoking, individuals would be placed in the action stage. Lastly, if the cessation of smoking has occurred for more than six months, they would be placed in the maintenance stage.

Stages of change algorithms have not been used uniformly across studies and the stage definitions have been somewhat arbitrarily developed (Carey et al., 1999). The nature of staging algorithms precludes them from reliability measures of internal consistency and validity measures of factorial validity (Carey et al., 1999). Also, there is a degree of circular reasoning in algorithm measures where the occurrence of prior behaviour is used to predict the occurrence of the same behaviour in the future (Carey et al., 1999). Nevertheless, DiClemente et al. (1991) demonstrated that smokers assigned to different stages of change with a staging algorithm did differentially use the 10 processes of change outlined in the TTM. Stage of change has also demonstrated good predictive validity where stage of change predicted later smoking cessation attempts (DiClemente et al., 1991). A staging algorithm has been used with a New Zealand offender group; the criminogenic needs inventory – readiness to change scale (CNI-RTC; Coebergh, Bakker, Anstiss, Maynard, & Percy, 1999). A study by Polaschek, Anstiss, and Wilson (2010) found support for the convergent and concurrent validity of the CNI-RTC algorithm against an adapted version of the URICA (McConaughy et al., 1989). While staging algorithms have been popular, possibly due to their ease of use and face validity (Carey et al., 1999), their use varies across studies and there remains very little psychometric data.

In a study reviewing stage of change measures, Carey et al. (1999) found eight self-report measures; of which four were directly based on the TTM. The most widely adopted and psychometrically investigated was the URICA (McConaughy et al., 1989). The URICA was developed for psychotherapy clients but has also been used with offender groups

(McMurran et al., 1998), including New Zealand offenders (Anstiss et al., 2011; Austin, Williams, & Kilgour, 2011). It is scored by using statistical analyses (cluster or factor analysis) to allocate respondents to a stage of change or as a continuous score by subtracting the pre-contemplation total score from the sum of the contemplation, action and maintenance total scores. The URICA's internal consistency has been well supported across a range of studies and populations (Carey et al., 1999). DiClemente, Doyle, and Donovan (2009) found support for the predictive validity of the URICA but this was not supported by Pantaloni and Swanson (2003). Support for its convergent validity has been lacking (Belding, Iguchi, & Lamb, 1996).

While the URICA has been used with offenders, relatively few studies into the URICA's psychometric properties have been conducted with this group (Polaschek et al., 2010; Provan, Williams, & Sinclair, 2011). McMurran et al. (1998) investigated the URICA with psychopathic personality disordered offenders and reported low levels of internal consistency. Stage of change did not correlate well with staff-reported levels of motivation to change. McMurran et al. (1998) therefore deemed the URICA as contraindicated for use with offenders, although this should be interpreted in the context of the sample's challenging diagnosis. Two studies have supported the URICA's four factor structure for offenders (Levesque et al., 2000; Polaschek et al., 2010). Reporting on two studies, Tierney and McCabe (2004) demonstrated that offenders in different stages of change, based on the URICA, utilised different processes of change. But they found little support for its predictive validity. Polaschek et al. (2010) found support for the URICA's internal consistency, and convergent and concurrent validity against the CNI-RTC staging algorithm. But these findings have not been consistently replicated (Cohen, Glaser, Calhoun, Bradshaw, & Petrocelli, 2005; Eckhardt et al., 2004; Eckhardt & Utschig, 2007; Hemphill & Howell, 2000; Kim & Song, 2009).

Studies investigating the validity of the TTM with an offending population have returned mixed results. It remains unclear whether this is a product of the TTM model itself or the measures used to operationalise the model or both. However, the TTM remains the preeminent model of motivation to change and the URICA is the dominant TTM-based measure of motivation to change.

In brief summary, psychotherapy variables were historically investigated as independent predictors of outcome (e.g. Luborsky et al., 1971). There has, however, been a realisation that a multiplicity of variables may interact to mediate and moderate psychotherapy outcomes (Kazdin, 2007). This is exemplified by a contemporary approach to motivation to change that integrates an array of variables found to have meaningful relationships with intentional behaviour change. Research has demonstrated that motivation to change is associated with treatment outcome for psychotherapy clients, generally (Burke et al., 2003), and offenders, specifically (Anstiss et al., 2011; McMurrin & Theodosi, 2007). Also, motivation to change is a dynamic variable that can change during interpersonal exchanges (Miller et al., 1993). Given these findings, researchers have explored therapeutic methods to influence motivation to change. Motivational interviewing is one promising approach that was borne out of this re-conceptualisation of motivation and subsequent clinical practice.

CHAPTER 3: MOTIVATIONAL INTERVIEWING

The emergence of MI followed discussions in the early 1980s between William Miller and Norwegian colleagues about working with clients reticent about changing behaviour (Miller, 1996). Until that point, particularly within the addiction treatment field, poor motivation to change was attributed to the client (Rollnick & Allison, 2004). Miller (1996) suggested that instead it was the therapist's interactional style that was, at least in part, responsible for the client's motivation to change behaviour. His ideas were later published in a paper, *Motivational Interviewing with Problem Drinkers* (Miller, 1983), which constituted an early outline of MI. During the ensuing 15 years, MI gained substantial popularity in the addiction treatment field, despite a lack of research (Rollnick & Allison, 2004). A research base subsequently emerged into the effectiveness of MI with addictive disorders (Hettinga et al., 2005) and this has since spread to other problem domains (Lundahl et al., 2010), including offending (McMurrin, 2009). Despite a substantial upsurge in research into the effectiveness of MI for a range of problems, much remains unknown about how MI works (Burke, Arkowitz, & Dunn, 2002), and if it can be effectively integrated with other methods (Arkowitz et al., 2008). Based on emerging research and in the absence of an underpinning theory, a common criticism of MI (Draycott & Dabbs, 1998), Miller and Rollnick (1991, 2002) proposed a framework for effective MI practice. The framework is constituted by its spirit, principles and skills.

The Spirit, Principles and Methods of Motivational Interviewing

The spirit of MI is defined by the concepts of collaboration, evocation and autonomy. Collaboration is based on the therapist and client working together in a partner-like relationship that is favourable to change but not coercive. Evocation emphasises the therapist's role of drawing out the client's expertise and solutions. This deviates from cognitive and cognitive behavioural therapy where a therapist's role is to impart a set of skills (J. S. Beck, 1995; Miller & Rollnick, 2009). Instead, the MI approach presumes that clients already have the skills for change and that the therapist's job is to elicit these. Autonomy emphasises that it is the individual, not the therapist, who must formulate and enact change (Miller & Rollnick, 2002). The spirit of MI reflects Rogers (1951) necessary and sufficient conditions of therapeutic change and underpins its relational component.

However, through a set of principles and skills, MI goes beyond client-centred counselling to be subtly directive.

The four principles provide the link between the MI spirit and in-session clinical methods. These are developing discrepancy, rolling with resistance, expressing empathy and supporting self-efficacy (Miller & Rollnick, 2002). The therapist develops discrepancy by focusing on the divergence between the client's current behaviour and their broader goals and values. Consistent with cognitive dissonance theory (Festinger, 1957), the therapist subsequently assists the client to resolve this discrepancy through positive behavioural change. Rolling with resistance is based on studies which have demonstrated that confrontation can be counter-productive (Miller et al., 1993; Moyers & Martin, 2003) and is enacted through clinical skills, such as empathic responding. Rolling with resistance suggests that a client presenting as resistant should not be met with counter resistance. Resistance is used as a signal that the clinician is bearing in the wrong direction, or progressing too quickly and therefore needs to change direction or pace (Miller & Rollnick, 2002). This is based on the notion that if resistance is actively countered by the therapist it encourages the client to defend their position. Bem's (1972) self perception theory would suggest that by encouraging a client to defend their position they become more committed to the status quo and less likely to consider change. Expressing empathy, like the spirit of MI, is characteristic of MI's client-centred conceptions (Rogers, 1951). The final principle, supporting self efficacy, involves fostering an individual's belief in their ability to personally effect change (Bandura, 1977, 1997). In the absence of self-efficacy an individual may be prepared to change but encumbered by a lack of self-belief (Miller & Rollnick, 2002).

The principles of MI are instantiated by a number of MI methods. These methods are used throughout the course of MI but they tend to be employed somewhat differentially based on the client's initial motivation to change. During early sessions a combination of open-ended questions, affirming, reflecting and summarising are typically used. These methods are employed more during earlier sessions to develop the therapeutic alliance and assist the therapist in forming a clear picture of the client's problems, barriers to change and level of ambivalence. Concurrently, resistance is managed by using reflections, helping the client to shift focus, reframing and emphasising personal control. Once the requisite therapeutic alliance has formed and resistance has lessened, the

therapist employs more directive MI methods to evoke change talk and build motivation for change. Change talk is client language that reflects a movement toward making a positive behavioural change. In contrast, sustain talk is client language that reflects an interest in maintaining current behaviour. Evoking and reinforcing change talk shifts MI from being client-centred to subtly directive. Methods used to evoke change talk include evocative questioning to elicit discrepancies between a client's values and behaviours, decisional balance exercises to explore positive and negative aspects of current behaviour, time projection where the client is encouraged to look back to a time before the problem existed and look forward to how life might be different following change, and encouraging a client to elaborate on initial change talk. Change talk is the initial sign that a client's ambivalence is beginning to shift in favour of behaviour change. Change talk statements, in contrast to statements that endorse the status quo (sustain talk), are selectively reinforced through the use of MI skills such as elaborations, affirming, summaries and reflections. A therapist can use simple reflections to confirm their understanding, or complex reflections, to conjecture a concealed meaning in something the client has said and develop mutual insight into a client's problem(s). Both simple and complex reflections have a reinforcing effect for the client and therefore encourage them to further discuss behaviour change. This is, however, reliant on the therapist recognising and then reflecting change talk rather than inadvertently reflecting, and therefore reinforcing, sustain talk. The principle of supporting self-efficacy is typically enacted by the therapist through affirming the client's strengths and encouraging the client to reflect on past successes (Arkowitz et al., 2008; Miller & Rollnick, 2002; Rosengren, 2009).

While MI specific methods are important, the spirit and principles of MI distinguish it from a prescriptive set of techniques. Furthermore, Miller and Rollnick (2002) suggested that adherence to the four principles has better predicted outcomes. This reflects related findings that suggest a strict adherence to techniques, a common criticism of treatment manuals, can have deleterious effects on psychotherapy outcomes (Henry, Schacht, Strupp, Butler, & Binder, 1993; Henry, Strupp, Butler, Schacht, & Binder, 1993). Indeed, effect sizes have typically been larger when MI has not been guided by a manual (Hettema et al., 2005; Lundahl et al., 2010). The spirit and principles are adhered to throughout the course of MI whereas the MI methods are used differentially depending on the client's stage of change (Prochaska & DiClemente, 1982, 1983). The broad delivery of MI, however, is constituted by two phases (Miller & Rollnick, 2002).

The Phases of Motivational Interviewing

Phase one of MI focuses on eliciting motivation to change and resolving ambivalence in the direction of positive behaviour change (Miller & Rollnick, 2002). Ambivalence is resolved by amplifying a discrepancy between a client's value(s) and their current behaviour and then subtly supporting the client to resolve this discrepancy in the direction of positive (the desired) behaviour change. For example, a client may hold the value that it is important to spend time with family. However, due to their offending, they spend lengthy periods incarcerated and subsequently little time with family. Clients become compelled to resolve dissonance, either cognitively or behaviourally, due to the internal discomfort experienced during cognitive dissonance (Festinger, 1957). This ambivalence tends to vary as a function of the importance given to change by the client and the confidence in their ability to initiate and sustain behaviour change (Miller & Rollnick, 2002). There are four key skills that are introduced and focused on during phase one and used somewhat throughout MI. These are the use of open-ended questions, affirming, reflecting and summarising (Miller & Rollnick, 2002). Miller and Rollnick have described a point in phase one where the therapist needs to transition from building motivation to building commitment to a specific change plan (phase two).

There has been no research on how to recognise when it is appropriate to transition from phase one to two. However, Miller and Rollnick (2002) and Naar-King and Suarez (2010) have suggested that decreased resistance, less preoccupation with the 'presenting problem', implicit resolution in favour of behaviour change, increased talk about behaviour change, enquiries about how to change, conversations about how life might be different following change and experimentation with change outside of therapy, indicate the client is at a point of readiness to enact a specific change plan. The change plan involves setting goals, forming a clearly articulated plan, and solidifying commitment to implement the plan (Arkowitz & Miller, 2008). A key goal of phase two is to promote the client's commitment to change. Amrhein, Miller, Yahne, Palmer, and Fulcher (2003) found client commitment to change, particularly the strength of commitment to change toward the end of a single MI session, predicted subsequent behaviour change. However, the frequency of change talk per se has also predicted behaviour change in subsequent studies (Moyers, Martin, Houck, Christopher, & Tonigan, 2009).

The spirit, principles and MI methods are sufficiently generic as to allow it to be adapted with a range of client groups and target problems. This is exemplified by Miller and Rollnick's (2009, p.137) most recent definition of MI as a "collaborative person-centred form of guiding to elicit and strengthen motivation for change". As such, despite little theoretical grounding, MI has been fervently adopted and adapted for a range of target problems. Therefore, there has been much interest in testing the external validity of MI and this has generated a burgeoning evidence base.

Outcomes Studies

The first outcome studies of MI were generated by the addictions field (Hettema et al., 2005) but interest in evaluating the effectiveness of MI for a range of target problems has grown over the last 20 years. In a recent meta-analysis of 119 studies, MI produced small but statistically significant effect sizes (*Hedge's g* = 0.28) when compared to non-specific weak comparison groups (e.g. reading material and non-specific counselling) for substance abuse, health related behaviours, gambling, and treatment engagement (Lundahl et al., 2010). When compared to specific treatments, such as cognitive behaviour therapy, MI produced equivalent and similarly durable effects but achieved these effects in less time. This reflected earlier findings from a meta-analysis by Burke et al. (2003) and Project MATCH (1997), a large multi-site comparison between cognitive behaviour therapy, the Alcoholics Anonymous-based 12-step model, and MI. A meta-analysis by Vasilaki, Hosier, and Cox (2006) suggested MI was superior to other specific treatments, such as cognitive behaviour therapy, but this was based on alcohol use disorders alone. Also, in the Project MATCH (1997) study, MI was more effective than cognitive behaviour therapy for clients who presented with higher levels of anger and less effective than the comparison treatments for clients presenting with less anger. In a meta-analysis of 72 studies by Rubak, Sandbak, Lauritzen, and Chritensen (2005), all of which required a randomised controlled trial, MI was effective in decreasing risky sexual behaviour, increasing adherence to medication and encouraging healthy lifestyle changes. Burke et al. (2003) in a meta-analysis of 30 controlled clinical trials demonstrated that adaptations of MI, which included additional content or techniques such as a feedback component, were as effective as alternative therapeutic modalities, such as cognitive behaviour therapy and client-centred counselling. The effect sizes for substance abuse, dieting and exercise were typically in the medium range (*d* = .50) and rated as clinically significant. Alternative therapeutic modalities were more effective than MI for smoking

cessation and HIV-risk taking behaviours. However, a later study by Naar-King et al. (2006) demonstrated that MI was effective in reducing HIV-risk taking behaviour among adolescents. Adaptations of MI have also been effective for young people diagnosed with substance abuse disorders (McCambridge & Strang, 2004; Tevyaw & Monti, 2004). Tevyaw and Monti (2004) demonstrated that MI was most effective for those who commenced as less motivated and with heavier substance use patterns.

The most significant moderator of behavioural change in the Burke et al. (2003) meta-analysis was attendance and this was confirmed by Lundahl et al. (2010) in a subsequent meta-analysis. While significant effect sizes were shown in 40% of studies that consisted of only one session, this increased to 85% of studies when participants attended five or more sessions. However, Rubak et al. (2005) also found MI was effective in brief forms, such as a 15 minute one-off encounter. Other studies demonstrated that while positive outcomes increased with more sessions, the greatest gains were experienced during initial treatment sessions (Miller, 1985; Miller et al., 1993). These findings are consistent with psychotherapy process research per se (Lambert et al., 2001). Studies have suggested that the delivery of MI in accordance with a manual does not add to its effectiveness and in some cases this may detract from its client-centred conceptions (Hettinger et al., 2005). Motivational interviewing appears to be particularly effective for minority groups but with some mixed findings about its superiority for African Americans (Lundahl et al., 2010). Lastly, the level of previous training (e.g. bachelors versus doctoral degree) and professional identity has not moderated the effectiveness of MI (Lundahl et al., 2010).

Findings from MI outcome studies (particularly that MI is effective for substance abusing clients, for clients who are less motivated to change, who present with more anger and for clients from minority groups) have piqued the interest of correctional professionals in adapting MI for use with offenders. This interest has been supported by studies that have implicated motivation to change in the success of correctional rehabilitation programmes (Harper & Hardy, 2000; McMurrin, 2002; McMurrin et al., 1998; Murphy & Baxter, 1997).

CHAPTER 4: MOTIVATIONAL INTERVIEWING WITH OFFENDERS

Since the mid 1970s there has been a ground swell of research into ‘what works’ to reduce criminal recidivism (Lipsey & Cullen, 2007). The finding that motivation to change is significantly implicated in the success of correctional rehabilitation has emerged out of these studies (Andrews & Bonta, 2010; McMurrin & Theodosi, 2007). Therefore, prior to discussing the use of MI with offenders, there is merit in a very brief account of the correctional rehabilitation literature.

Correctional rehabilitation

Meta-analyses have consistently demonstrated that correctional rehabilitation reduces risk of recidivism (Andrews, 1995; Andrews, Zinger, et al., 1990; Dowden & Andrews, 1999; Dowden & Andrews, 2000; Izzo & Ross, 1990; Lipsey, 1992; Lipsey, Chapman, & Landenberger, 2001; Lipsey & Wilson, 1993; McGuire & Priestly, 1995; Wexler, Falkin, & Lipton, 1990). This vast compilation of empirical studies have highlighted up to 17 principles for effective correctional rehabilitation (Bonta & Andrews, 2007). The three most established are the principles of Risk, Need and Responsivity (RNR; Andrews & Bonta, 2010).

The risk principle posits that offenders who are more likely to re-offend benefit from intensive interventions and offenders less likely to re-offend benefit from less intensive interventions. The second principle states that effective correctional programmes focus on offending-related needs, also known as rehabilitative needs. These are factors which are malleable and predict recidivism. Therefore, once rehabilitative needs are ameliorated, an offender’s risk of recidivism reduces. The final principle, responsivity, outlines how rehabilitative programmes should be delivered. Two aspects of responsivity have been identified: general and specific. General responsivity states that effective correctional rehabilitation programmes tend to be highly structured, directive, skill oriented, and cognitive behavioural (Andrews, 1995; Izzo & Ross, 1990; Lipsey et al., 2001; MacKenzie, 2006). However, it would be reasonable to assert that offenders are unlikely to benefit from structured, directive, skill oriented cognitive behavioural programmes if they are unmotivated to engage in such programmes. It also purports that the therapeutic

relationship is an important condition for programmes to be effective (Bonta & Andrews, 2007). Specific responsivity is concerned with the idiosyncrasies of individual offenders that facilitate or obstruct the effectiveness of correctional rehabilitation. Examples include an offender's personality, literacy, way of learning and (of pertinence to the current study) their motivation to change.

Correctional rehabilitation studies have demonstrated that motivation to change is one of the strongest predictor variables for treatment engagement, participation and completion (De Leon, Melnick, Thomas, Kressel, & Wexler, 2000). Also, offenders who do not complete treatment have re-offended at higher rates than comparable offenders who abstained from treatment (McMurran & Theodosi, 2007). Furthermore, 75% of New Zealand offenders have demonstrated ambivalence about the factors that contributed to their offending and so low motivation to change appears ubiquitous (Devereux, 2009). Given these findings, correctional professionals (internationally and in New Zealand) have evaluated interventions, primarily adaptations of MI, to foster offender motivation to change.

Outcome Studies of Motivational Interviewing with Offenders

A systematic review of MI with offenders conducted by McMurran (2009) identified 13 published studies and 6 dissertation abstracts. However, only one of these, a New Zealand dissertation (Anstiss, 2005) that was later published by Anstiss et al. (2011) included a general offender group. Anstiss et al. (2011) showed that MI, combined with cognitive behavioural content, not only increased motivation to change but also reduced risk of recidivism. A recent study demonstrated that a similar adaptation of MI increased offender motivation to change among high risk offenders (Austin et al., 2011). De Leon et al. (2000) utilised an adapted form of MI and demonstrated a positive effect on engagement in an outpatient substance abuse programme for offenders on probation. Additionally, offenders' motivational levels predicted reduced recidivism. A study by Czuchry, Sia, and Dansereau (2006), comprised of three two-hour sessions of MI, demonstrated increased early treatment engagement amongst offenders on probation receiving treatment for substance abuse. In this particular study, female offenders experienced the greatest increase in motivation to engage. Male offenders still demonstrated clinically significant motivational gains in comparison to the control group. Wong et al. (2007) developed an approach (the Violence Reduction Programme) where

an offender's motivation to change, using the TTM, informed clinical interactions that were based on MI methods. Specifically, MI was used to foster motivation to change rehabilitative needs. The Violence Reduction Programme was effective in reducing risk of recidivism among resistant and violent offenders.

The use of MI with offenders has not always elucidated positive outcomes. A study by Amrod (1997) with male incarcerated offenders with alcohol use disorders found no increase in motivation to change compared to a randomised no-treatment control. This is surprising given the established effectiveness of MI in reducing substance abuse (Vasilaki et al., 2006). However, the Amrod (1997) study was delivered in a group format and, although based on very few studies, group-based MI has produced mixed results (Lundahl et al., 2010; Walters, Ogle, & Martin, 2002). While the preliminary evidence has suggested that MI can be effective with offenders (Anstiss et al., 2011; Austin et al., 2011; Ginsburg, Mann, Rotgers, & Weekes, 2002; Harper & Hardy, 2000; Murphy & Baxter, 1997), the scarcity of evidence does not allow any definitive conclusions (McMurrin, 2009).

In summary, a substantial body of evidence has demonstrated that correctional rehabilitation reduces recidivism when delivered in accordance with the RNR principles. Motivation to change, as elucidated in the responsivity principle, is an integral prerequisite if correctional programmes are to reduce recidivism. Therefore, correctional professionals have adapted MI for use with offenders who are unmotivated to change their offending behaviour.

Adapting Motivational Interviewing for Offenders

In correctional rehabilitation, MI has been used with offenders to enhance retention and engagement in subsequent treatment, to improve motivation to change offending generally, and to reduce risk of recidivism (McMurrin, 2009). As a prelude to later treatment, MI can be delivered in a pure form, followed by a cognitive behavioural programme that specifically aims to reduce recidivism. This approach preserves the integrity of MI, without the need to integrate other methods, and subsequently introduces a rehabilitative programme based on the 'what works' literature, which attests to the superiority of cognitive behavioural programmes to reduce recidivism (Andrews & Bonta, 2010). Given the evidence of 'what works' in correctional rehabilitation, a stand-alone

programme of pure MI is unlikely to reduce recidivism. This is because the evidence base suggests that effective correctional rehabilitation programmes are structured, directive, skill oriented, and cognitive behavioural (Andrews, 1995; Izzo & Ross, 1990; Lipsey et al., 2001; MacKenzie, 2006). Further, Gendreau (1996) has stressed that client-centred therapies have been ineffective in reducing recidivism. In contrast, the principles of MI are grounded in Rogers (1951, 1959) client-centred therapy (Miller & Rollnick, 2002). One possible solution is to use MI to deliver cognitive behavioural content (e.g. Devereux, 2009; Wong et al., 2007). This approach is predicated on the use of MI to foster motivation to change and cognitive behavioural content to ameliorate offending behaviour.

There is a clear rationale for such an approach. The therapeutic alliance and therapist empathy have consistently predicted outcomes in cognitive behaviour therapy (CBT). However, there is little in the CBT literature about how the alliance and therapist empathy is best fostered (Arkowitz et al., 2008). In contrast, empathy and the therapeutic alliance are an explicit focus during MI. Therefore, MI might be gainfully used to foster the therapeutic relationship while cognitive behavioural content is used to effect behavioural change. Driessen and Hollon (2011) suggested that MI might be used during CBT to guide how the therapeutic relationship should be conducted.

A recent book of MI, *Motivational Interviewing in the Treatment of Psychological Problems*, investigated the integration of MI with CBT to treat a range of psychological disorders (Arkowitz et al., 2008). The central thesis of this approach is that MI is used as a general style to manage resistance, and establish and maintain motivation to change, while CBT is used to effect behaviour change. Studies have demonstrated that integrating MI with CBT can produce outcomes for substance abuse populations superior to MI as a stand-alone treatment (Burke, 2011). More recently, MI has been integrated with CBT to treat eating disorders (Geller & Dunn, 2011), obsessive compulsive disorder (Simpson & Zuckoff, 2011), generalised anxiety disorder (Kertes et al., 2011), depression (Kertes et al., 2011), suicidality (Britton, Patrick, Wenzel, & Williams, 2010) and problem drinking (Moyers & Houck, 2011). These studies have suggested that MI might add to the effectiveness of CBT by reducing treatment attrition, increasing treatment compliance and homework completion, and provide a change-conducive interpersonal style while using CBT to facilitate behavioural change. This integration may be promising for clients

impeded by poor motivation to change, such as offenders, whom would otherwise respond well to CBT.

This approach of combining MI and CBT was undertaken with an offender group by Wong et al. (2007). The programme's content was based on cognitive behavioural principles to ameliorate rehabilitative needs (primarily a propensity for violence) but delivered through a MI style. First, offenders' stage of change was assessed based on the transtheoretical model of intentional behaviour change (Prochaska & DiClemente, 1982, 1983). Interventions were then delivered in a style that reflected their assessed stage of change. Offenders at the pre-contemplation stage were engaged with a MI style to subvert resistance and build motivation. As offenders progressed to more advanced stages of change they were provided with action oriented interventions, such as skills training, to ameliorate rehabilitative needs. A related paradigm is used by New Zealand's Department of Corrections in a five-session Short Motivational Programme (SMP). In this programme, two of the five sessions include explicit cognitive behavioural content, primarily educating the offender about the cognitive model and tasks to identify cognitive distortions, while employing MI methods to manage resistance and enhance motivation to change (Devereux, 2009). However, in contrast to the Wong et al. (2007) Programme, the SMP's content does not explicitly change based on the offender's motivation to change. Instead, Department of Corrections' facilitators are encouraged to differentially employ MI skills to manage resistance and enhance motivation to change offending. Evaluations of the SMP have demonstrated that it increases motivation to change, even among high risk offenders (Austin et al., 2011), and reduces their risk of recidivism (Anstiss et al., 2011).

There are many instances where MI and CBT are complimentary, for example, both espouse a collaborative style (Driessen & Hollon, 2011). This is explicitly stated in MI's spirit (Miller & Rollnick, 2002) and evident in CBT's collaborative approach to testing hypotheses and agenda setting (J. S. Beck, 1995). Furthermore, CBT and MI typically involve developing a plan to change behaviour and both tend to be time-limited and focus on specific behavioural targets (Arkowitz et al., 2008; Dobson & Dozois, 2001).

While similarities between these methods exist, there are also differences, and these potentially complicate their integration. Cognitive behaviour therapy is premised on

cognitive and learning theories (A. T. Beck, 1970), and is educative, structured and action oriented (J. S. Beck, 1995; Dobson & Dozois, 2001; Kertes et al., 2011). This contrasts with the client-centred conceptions of MI. Furthermore, CBT is often manual-based (Najavits et al., 2000), perhaps due to the greater focus on therapeutic procedures, whereas manuals have sometimes demonstrated deleterious effects when used during MI (Lundahl et al., 2010). While both methods involve developing a plan for change, within a cognitive behavioural approach a client who remains unmotivated to change would be directed to include this as a goal within the treatment plan, and treatment would proceed. In contrast, within a MI approach, the formulation of a change plan is discouraged until ambivalence has been fully resolved and adequate commitment to change established (Moyers & Houck, 2011). To proceed with a treatment plan would contravene a key tenet of MI, supporting client autonomy. A greater focus on educating the client is taken during CBT (J. S. Beck, 1995; Dobson & Dozois, 2001). During MI, the therapist remains more client-centred with a focus on eliciting the client's skills and resources rather than imparting their own skills (Flynn, 2010). The use of labels is discouraged during MI and therefore framing client thoughts as 'irrational' would contravene a MI approach. As such, integrating MI and CBT risks removing critical elements or arranging these elements in ineffectual constellations and therefore rendering it ineffective. Any such innovations require a clear understanding of how MI works to ensure that its 'active ingredients' are not inadvertently removed or arranged in a theoretically inconsistent manner (Miller & Rollnick, 2009).

One possible means of mitigating this complication is to use MI early in therapy, in non-adapted form, and then employ CBT once the client is motivated to change. Burke (2011) suggested that such an approach may confuse clients who resonate more strongly with one of the two approaches. However, Kertes et al. (2011) found that clients who engaged in MI prior to CBT rated the therapist during the CBT sessions as more collaborative. When a pre-treatment of MI was not included, clients reported the therapist to be more compliance oriented and directive. By using MI as a pre-treatment the potential complications associated with integrating these somewhat divergent methods was avoided. At this stage, process studies have not investigated how to manage conflicts between these approaches. Also, studies have not investigated the degree to which CBT shares the strategies espoused by MI (Driessen & Hollon, 2011).

The use of MI for offenders is further complicated by a potential conflict between the underlying philosophy of MI and the correctional environment per se (Britt, 2009). It may be difficult to deliver MI, while communicating a client's autonomy, in an environment where there is an explicit imperative for behaviour change. Britt (2009) suggested that this might be resolved, or at least countered, by delivering MI to offenders within a therapeutic framework that values offenders' autonomy. This approach is exemplified by the Good Lives Model (Ward et al., 2007), which focuses on offender's values and goals. It is possible that this added complexity would require specialised training and supervision to ensure that MI, within the correctional environment, is delivered in accordance with its underlying philosophy and principles.

In brief summary, with limited empirical data, Miller & Rollnick (2002) articulated a set of principles and methods to guide the use of MI. The use of MI has quickly spread in the addiction treatment field and there is considerable support for MI in alleviating addiction and health related problems (Burke et al., 2003). Given these promising findings, correctional professionals have adapted MI for offenders, and early data suggests tentative support for the effectiveness of these adaptations (McMurrin, 2009). These have typically involved integrating MI and cognitive behavioural content to foster motivation and awareness of problem behaviours (Devereux, 2009) and to change offending behaviour (Wong et al., 2007).

How these somewhat divergent methods are best integrated is a more vexing question. Little was known, until recently, about how MI effects motivational and behavioural change (Burke et al., 2002; Draycott & Dabbs, 1998). Indeed, the lack of a coherent theory has been a prominent criticism levelled at MI (Draycott & Dabbs, 1998). More recently, researchers have undertaken nuanced process studies of MI (Amrhein et al., 2003; Moyers, Martin, Christopher, et al., 2007), and this has culminated in an emerging theory that articulates how MI effects motivational and behavioural change (Miller & Rose, 2009). This theory may provide valuable guidance in the study of how MI and cognitive behavioural content can be gainfully combined to treat a range of psychological problems, including offending behaviour.

CHAPTER 5: A THEORY OF MOTIVATIONAL INTERVIEWING

To explain how MI effects motivational and behavioural change, researchers first looked to existing motivational theories, such as Ryan and Deci's (2002) self-determination theory.

Self-Determination Theory

Self-determination theory is a broad theory of personality development and self-motivated, or intrinsic, behaviour that has been developing for more than 40 years (Vansteenkiste & Sheldon, 2006). Self-determination theory posits that behaviour can be understood along a continuum from being controlled exclusively by external contingencies to being entirely self-regulated (Ryan & Deci, 2000). Early studies into self-determination theory suggested that external contingencies, such as rewards and deadlines, can actually undermine the degree to which individuals voluntarily persist in a task. These studies demonstrated that this is because participants motivated by external contingencies do not experience autonomy and a sense of self-initiated task engagement (Deci, Koestner, & Ryan, 1999). This leads to an experience of being controlled by external contingencies and a subsequent loss in the inherent enjoyment of the task. Self-determination theory, like MI, developed out of dissatisfaction with pre-existing frameworks that discounted an individual's phenomenology and intrinsic ability to change behaviour (Vansteenkiste & Sheldon, 2006). According to self-determination theory, people innately strive for personal growth, integration of the self and psychological consistency. Self-determination theory posits three primary psychological needs: competence, autonomy, and relatedness, which contribute to intrinsically motivated behaviour (Ryan & Deci, 2000).

There are similarities between the psychological needs outlined by self-determination theory and the principles of MI which, according to Markland, Ryan, Tobin, and Rollnick (2005), explain the effectiveness of MI. Based on self-determination theory, MI can be explained as a process of fostering the factors required to meet these psychological needs (Markland et al., 2005). The need for relatedness might be met through the MI principle of expressing empathy and through the MI skill of reflective listening. This approach does not put the therapist in a position of sole authority but encourages the empathetic

understanding required for the client to experience a strong sense of relatedness (Vansteenkiste & Sheldon, 2006). The need for autonomy is met during MI by adhering to the MI spirit and the principle of rolling with resistance. The therapist using an MI approach helps the client to explore their ambivalence and reach their own conclusions about what, when and how to change rather than requiring them to succumb to external demands. As such, the client experiences a growing sense of autonomy and ownership, not just of the presenting problems, but the possible choices and solutions (Vansteenkiste & Sheldon, 2006). Lastly, the MI principle of supporting self-efficacy assists clients to experience a greater sense of competence in their ability to effect behaviour change.

Self-determination theory not only differentiates between intrinsic and extrinsic motivation but suggests there are four forms of extrinsic motivation. These four forms differ in the degree to which socially valued tasks, with little intrinsic appeal, are integrated into the individual's values or internalised (Vansteenkiste & Sheldon, 2006). For example, an offender may voluntarily engage in treatment because it is consistent with a goal to form pro-social relationships and his or her values. Vansteenkiste and Sheldon (2006) posited that engaging in therapeutic interventions, such as MI, is not necessarily carried out because it is intrinsically appealing but because individuals view the potentially difficult task of behaviour change as consistent with goals and internal values. As such, Vansteenkiste and Sheldon (2006) suggested that MI does not promote intrinsic motivation but helps clients to integrate and internalise external contingencies by promoting behaviour change as consistent with strongly held values. This approach is consistent with cognitive dissonance theory (Festinger, 1957) and is reflected in Miller and Rollnick's (2002) MI principle of developing discrepancy. However, while behaviour change may not be initially appealing or enjoyable, it is possible to argue that the process of change may be intrinsically rewarding. Clients may return again and again for therapy because engaging with the therapist is comforting and, in itself, rewarding. This would contradict Vansteenkiste and Sheldon (2006) supposition that behaviour change is not an intrinsically enjoyable activity.

While self-determination theory is an encompassing theory, MI scholars have looked to a range of other more specific theories to explain the process of behaviour change during MI. Miller and Rollnick (2002) have investigated a range of factors as possible determinants of motivation.

The Determinants of Motivation

Miller and Rollnick (2002) cited a range of constructs that are targeted during MI and explain its effectiveness. These include cognitive dissonance, self-efficacy, readiness to change, ambivalence and locus of control.

According to the theory of cognitive dissonance, an individual becomes motivated to change because of the discomfort of holding dissonant cognitions. If this dissonance is great enough, it leads to such discomfort that an individual feels compelled to change their cognitions or their behaviour (Festinger, 1957). Miller and Rollnick (2002) explain that MI, through the principle of developing discrepancy, amplifies cognitive dissonance and supports the resolution of this dissonance in the direction of positive behavioural change. As outlined above, Vansteenkiste and Sheldon (2006) explain this as a process of aligning external contingencies with internal goals or values. Draycott and Dabbs (1998) suggested that the fundamentals of cognitive dissonance theory can be used to explain the effectiveness of MI more generally. Specifically, the MI principle of expressing empathy provides the non-judgemental environment needed for clients to become consciously aware of cognitive dissonance. The principle of rolling with resistance ensures that the internal discomfort associated with cognitive dissonance cannot be erroneously explained by the client as a product of interpersonal conflict. Client resistance can be conceptualised as a means of avoiding the behaviour change needed to achieve cognitive consonance. Instead, rather than change behaviour, a resistant client changes or adds cognitions that support current behaviour and reduces cognitive dissonance. Lastly, Draycott and Dabbs (1998) suggested that the MI principle of supporting self-efficacy is necessary to avoid a perceived inability to change to be used as a rationale to maintain the status quo.

Miller and Rollnick (2002) have drawn attention to the link between self-efficacy and motivation (Bandura, 1970, 1973, 1977, 1997; Deci & Ryan, 1985; Narciss, 2004). Self-efficacy theory suggests that those higher in self-efficacy are likely to experience greater motivation to change, and persist in their efforts at change, due to their expectation of success. Atkinson's theory of motivation suggests that this is mediated by the extent to which individuals are oriented towards achieving success or avoiding failure (Atkinson & Feather, 1966). For example, Feather (1966) suggested that individuals, while influenced by self-efficacy, are also influenced by the degree to which they either value achievement

versus the avoidance of failure. Feather (1966) found that when individuals had a greater orientation toward achieving success, in contrast to avoiding failure, they were more likely to persist with a subjectively difficult task.

Miller and Rollnick (2002) suggested that if behaviour change is not viewed as important, given other priorities, the status quo will remain. This resonates with the more encompassing expectancy-value theory of motivation. Expectancy-value theory is premised on the notion that the type of tasks chosen and the energy expended to achieve them are determined by the perceived value a given task is assigned and the likelihood of achieving it (Wigfield & Eccles, 2000).

Miller and Rollnick (2002) have also put forward three main forms of ambivalence (approach-approach, avoidance-avoidance and approach-avoidance) as determinants of motivation to change. Approach-approach ambivalence takes place when a choice exists between two mutually attractive options. Avoidance-avoidance ambivalence involves choosing between two options that are mutually undesirable. Lastly, approach-avoidance ambivalence involves a scenario where a person is both attracted to and repelled away from a single object or option. In terms of offending behaviour, a person may be attracted to offending because of the associated excitement and support from pro-criminal associates while concurrently deterred from offending because it contradicts their values.

Finally, Miller and Rollnick (2002) have cited locus of control as a determinant of motivation to change. Locus of control is the tendency to explain outcomes based on factors that are either internal to a person or the result of an external contingency (Colman, 2003; Lefrancois, 2000). Research has suggested that individuals who explain outcomes based on internal factors are more likely to engage in and sustain efforts to effect behaviour change (Lefcourt, 1982). Locus of control is one component of attribution theory which also considers the stability of internal and external causes and the extent to which the individual is able to exert control over causal factors. Furthermore, locus of control has a demonstrated relationship with cognitive dissonance, in that evidence has suggested that internally-oriented individuals are more acutely affected by dissonant cognitions (Festinger, 1957).

Self-determination theory, cognitive dissonance theory, and Miller and Rollnick's (2002) determinants of motivation have provided some explanatory utility in explaining how MI effects change. However, MI researchers have sought to explicate specific models to explain how MI works during therapeutic interactions. One promising line of enquiry has been a psycholinguistic approach to the concepts of change, resistance and commitment.

Change, Resistance and Commitment

Researchers have suggested that the client-centred approach which underpins MI provides a change-conducive environment and reduces client resistance. It has been hypothesised, however, that a technical aspect of MI promotes motivation and commitment to behaviour change beyond what is achieved by client-centred counselling (Arkowitz & Westra, 2009). The technical aspect of MI includes a set of skills (known as MI consistent methods) that are used to differentially reinforce language indicative of positive behaviour change (known as change talk) and subverts language indicative of resistance or a continuation with the status quo (known as sustain talk). In turn, change talk is hypothesised to play an important role in resolving ambivalence, and therefore allowing clients to commit to a plan of change. Client commitment to change, hereafter referred to as committing change talk, is in turn hypothesised to predict behavioural change (Moyers, Miller, & Hendrickson, 2005).

Motivational interviewing methods and change talk

Miller and Rollnick (2004) have suggested that ambivalence, due to its very nature, is likely to produce speech that concurrently supports change (change talk) and the status quo (sustain talk). Early studies by Patterson and Forgatch (1985) demonstrated that an authoritarian counselling style in response to client resistance perpetuated sustain talk and therefore strengthened their resistance to change. When counsellors shifted to an empathic and reflective style, within the same session, clients' sustain talk reduced. Miller and Rollnick (2004) have therefore suggested that client resistance is under the experimental control of the therapist's interpersonal style. This finding was replicated in a later study by Miller et al. (1993). Furthermore, clients' sustain talk subsequently predicted poorer client outcomes.

While resistance is subverted through an empathic counselling style, it is hypothesised that ambivalence is resolved and motivation to change is fostered by reflecting, and

therefore reinforcing, change talk. It is this differential reinforcement of change talk, through the use of MI consistent methods, that constitutes the technical and directive aspect of MI (Miller & Rollnick, 2004). This is reflected in Bem's (1972) self-perception theory, which suggests people become more committed to that which they hear themselves defend. In support of this, Truax (1966) detected that Rogers responded favourably to client speech that was suggestive of therapeutic change while allowing other statements to pass without comment during client-centred therapy.

In a study by Miller et al. (1993), a two hour assessment for alcohol use was conducted and participants were randomly assigned to one of two styles of feedback (or a wait-list control). In both styles the therapist presented the assessment data back to the participant and helped the client interpret the data in reference to norms. The two therapist styles, directive and MI, were conducted by the same therapists but differed in how they responded to participants' responses. The directive condition used confrontation to respond to participants' attempts to minimise their alcohol use. The MI condition involved empathic feedback and reflective listening and the general approach adhered to during MI (Miller & Rollnick, 2002). During feedback, the directive style elicited greater sustain talk (arguments, interruptions and ignoring the therapist) and the MI style elicited half as much sustain talk and twice as much change talk. The feedback styles did not predict drinking outcomes after 6 weeks but the MI style did predict reduced drinking after 12 months, which was consistent with earlier studies (Miller et al., 1980; Valle, 1981). However, while client resistance predicted negative drinking outcomes, the frequency of change talk did not predict reductions in drinking. The Miller et al. (1993) study is somewhat weakened by possible allegiance effects due to the use of the same therapist for both conditions. Also, it is difficult to account for the degree of change that can be attributed to the specific skills of MI, known as MI consistent methods, compared to a general client-centred approach.

Nevertheless, since these early studies, other researchers have confirmed the relationship between MI consistent methods and increased in-session change talk across therapists (Moyers & Martin, 2006). A recent New Zealand study using a single-case design by Britt and Blampied (2009) demonstrated that training in MI (two days of training plus supervised practice and feedback) increased clinicians' use of MI consistent methods. Clinicians increased use of MI consistent methods was subsequently related to increased

client change talk as measured by the motivational interviewing skills code (Miller, Moyers, Ernst, & Amrhein, 2008). Client change talk tended to increase during sessions with the greatest increase during the latter third of MI sessions. However, although therapist empathy and use of MI consistent methods have predicted change talk, change talk has inconsistently predicted behaviour change (Miller et al., 1993). The hypothesis that behaviour change would be directly related to the extent to which clients argue for change, based on Bem's (1972) self perception theory, has not been well supported (Miller & Rollnick, 2004).

Psycholinguist, Paul Amrhein, subsequently encouraged MI researchers to take a more nuanced view of client language during MI (Amrhein et al., 2003). Previously, researchers had focused on change talk as a general category, measured its mean frequency and sampled the beginning of MI sessions. However, Amrhein noted that the frequency of language categories alone had not yielded significant relationships to outcomes in previous psychotherapy process research (Siegfried, 1995).

In a study investigating MI process and outcome with illicit drug users, Amrhein et al. (2003) dissected client change and sustain talk into linguistic sub-categories of desire, ability, reason, need and committing change talk. The 'desire' sub-category included all those statements that included the word 'want', 'desire' or 'like' or a close synonym or antonym that inferred a wish to change or sustain behaviour in reference to the target behaviour change. For example, "I want to cut down on drugs" or "I just love being stoned" The 'ability' sub-category included all those statements that included the word 'can', 'possible', 'will-power' or a close synonym or antonym that referred to the client's ability or inability to change behaviour. For example, "I know I can stop using now" or "I just don't have it in me to cut back". The 'reason' sub-category referred to those statements that included a rationale, basis, incentive or justification to change or sustain behaviour. For example, "it would be good for my kids" or "my kids don't even notice when I'm using". The 'need' sub-category included all those statements that included the word 'need' or 'must' or a close synonym or antonym that inferred a need to change or sustain behaviour. For example, "I must do something about my drug use" or "It's not something I really need to change". Lastly, the 'committing change talk' sub-category included all those statements that inferred an agreement, intention or obligation to change or sustain behaviour in the future. For example, "I'm going to use 50% less next month"

or “there’s no way I’m going to give up this month”. The aim of partitioning out change and sustain talk into sub-categories was to better understand the differential relationship of these sub-categories to outcome. Amrhein et al. (2003) also suggested that the strength of these categories, rather than frequency alone, be measured. For example, the statement “I desperately want to do something about my drug use” is qualitatively different to the statement “I think I want to cut back on my drug use”. Lastly, Amrhein et al. (2003) suggested that the complete session, rather than just the beginning, should be sampled for patterns in client change and sustain talk (frequency and strength) over time. This was done by splitting the session into ten even segments.

Committing change talk

The Amrhein et al. (2003) study demonstrated similar findings to Miller et al. (1993) in that change talk did not predict behaviour change. However, the combined change talk sub-categories of desire, ability, reasons and need to change, predicted clients’ committing change talk. In turn, the strength (but not the frequency) of committing change talk statements predicted behaviour change, which in this study comprised the proportion of days abstinent from illicit drug use. In particular, Amrhein et al. (2003) demonstrated that a positive slope in the trajectory of committing change talk strength during MI predicted behaviour change. The strength of clients’ committing change talk toward the end of a single MI session (in particular the seventh and tenth segments) was particularly prognostic of behaviour change. Amrhein (2004) posited that client committing change talk, particularly its strength, mediated the change talk sub-categories of desire, ability, reasons and need, to predict behaviour change.

A study by Hodgins, Ching, and McEwen (2009) with clients presenting with problem gambling supported Amrhein et al.’s (2003) findings. In the Hodgins et al. (2009) study, client change talk per se did not predict gambling outcomes but the strength of clients’ committing change talk was prognostic of gambling outcomes at 12 month follow-up. Further, a study by Aharonovich, Amrhein, Bisaga, Nunes, and Hasin (2008) demonstrated that for clients presenting for cocaine-dependence, the mean strength of clients’ committing change talk across sessions was related to a greater percentage of negative urine screens during treatment. In the Aharonovich et al. (2008) study clients received CBT, not MI, which indicated that committing change talk may have prognostic value across treatment modalities.

While the studies by Aharonovich et al. (2008), Amrhein et al. (2003) and Hodgins et al. (2009) are promising, the finding that client committing change talk predicts treatment outcome beyond the general category of client change talk has not been consistently replicated. A study by Baer et al. (2008), with adolescents presenting for substance abuse, found the general category of client change talk frequency was related to less substance use at one month follow-up. The sustain talk sub-categories of desire and ability predicted greater substance use at one- and three-month follow-up. Clients' committing change talk did not predict substance use outcomes. A study by Gaume, Gmel, and Daeppen (2008) demonstrated that the frequency of the change talk sub-category 'ability' was related to drinking outcomes. Moyers et al. (2009) found that the frequency of the general client change talk category predicted drinking outcomes for alcohol dependent clients. Client committing change talk did not predict drinking outcomes. Moyers et al. (2009) did not measure the strength of change talk because they were unable to achieve adequate inter-rater agreement for strength ratings. Further, a study by Magill, Apodaca, Barnett, and Monti (2010) with patients presenting to a hospital emergency department with excessive blood-alcohol levels, demonstrated that the general categories of client change and sustain talk predicted completion of a change plan. Among the sub-categories of change talk in the Magill et al. (2010) study, client committing change talk, ability and desire were more related to change plan completion than the remaining sub-categories. The sustain talk sub-category of reason was more related to a lack of change plan completion than the remaining sub-categories.

Thus far, studies have indicated that MI consistent methods, when used within a client-centred approach, are positively related to the amount of change talk and negatively related to the amount of sustain talk expressed by clients (Amrhein, Miller, Yahne, Knupsky, & Hochstein, 2004; Britt & Blampied, 2009; Moyers & Martin, 2006; Moyers et al., 2009). In contrast, MI inconsistent methods tend to elicit greater sustain talk responses from clients (Moyers et al., 2009; Patterson & Forgatch, 1985). It remains unclear whether client change talk frequency or strength is a stronger predictor of client outcome. Further, some studies have demonstrated that the change talk sub-category of committing change talk is more predictive of client outcomes than change talk per se (Aharonovich et al., 2008; Amrhein et al., 2003; Hodgins et al., 2009) but this has not

been consistently replicated (Moyers et al., 2009). Nevertheless, Miller and Rose (2009) have synthesised these findings into an emerging theory of MI.

An Emerging Theory

Studies have demonstrated that therapists trained in MI are better able to use MI consistent methods and elicit client change talk than therapists without MI training (Amrhein, 2004; Britt & Blampied, 2009; Houck & Moyers, 2008). Miller et al. (1993) demonstrated that a client-centred approach combined with MI consistent methods reduced client resistance and fostered client change talk. Similarly, Moyers and Martin (2006) demonstrated that MI consistent methods, such as open-ended questions, affirmations, reflections, and reframing, foster client change talk. There is some, albeit mixed, evidence to support the hypothesis that the general category of client change talk predicts client committing change talk which, in turn, predicts behaviour change (Amrhein et al., 2003; Moyers et al., 2009). Based on these findings, Miller and Rose (2009) have formulated a model to explain how MI effects motivational and behavioural change and this is outlined in Figure 1 below.

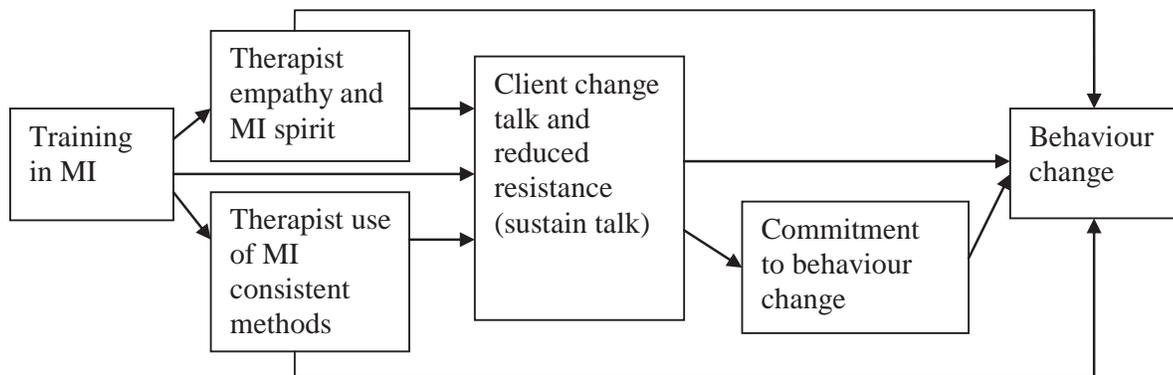


Figure 1. Hypothesised relationships among process and outcome variables in MI

Adapted from Miller and Rose (2009)

While Miller and Rose's (2009) theory provides a rubric for understanding how MI effects motivational and behavioural change, investigating such micro processes requires the use of valid and reliable measures (Burke et al., 2002). As interest in the process of MI has grown, researchers have sought to develop valid and reliable process measures.

Measuring the Process of Motivational Interviewing

Endeavours to develop a measure of MI process have centred on measuring the constructs reflected in the early writings by Miller and Rollnick (2002) and more recent process-outcome findings (Amrhein et al., 2003). Measures of MI process have centred on sampling actual MI sessions. This approach avoids relying on self-report but presumes that therapists and clients will not behave differently when being recorded. The evidence would suggest that while therapists and clients report experiencing some anxiety when being recorded, they mutually forget that they are being recorded soon after the session has commenced (Hill & Lambert, 2004). Process measures of MI have reflected the relational component by making a judgement about the gestalt of the session in terms of the therapist's adherence to the spirit of MI and the constructs of acceptance and empathy. Such evaluations allow the reviewer to get a sense of the atmosphere engendered by the therapist and the willingness of the client to engage. However, given recent process findings (Aharonovich et al., 2008; Amrhein, 2004; Amrhein et al., 2003, 2004; Hodgins et al., 2009; Moyers & Martin, 2006; Moyers et al., 2009), measuring the facilitators' use of MI consistent and inconsistent methods, and client change and sustain talk have become of central importance.

The first effort to develop a measure of MI process was taken by Miller et al. (1993). The study involved a controlled comparison between a client-centred and a directive counselling style delivered to clients with alcohol use problems. Miller et al. (1993) adapted Patterson's code for quantifying client resistance and related therapist behaviour (Chamberlain, Patterson, Reid, Kavanagh, & Forgatch, 1984; Patterson & Forgatch, 1985). The adaptation resulted in 38 therapist categories and 30 client response categories

As part of a study to investigate if a one-day workshop in MI effected change in therapist competency, Miller and Mount (2001) developed a specific MI process measure. This became known as the Motivational Interviewing Skills Code (MISC) and required three "passes" of a 20 to 30 minute segment of MI. A pass is a single review of a segment or session of MI. The first pass required a set of six global ratings to be assigned to the therapist, four global ratings to be assigned to the client and two relationship ratings. These global measures were theoretically linked to MI (Miller & Rollnick, 2002) and based on Truax and Carkhuff's (1967) research into the measurement of client-centred therapists. The global therapist ratings were developed to measure the constructs of

acceptance, egalitarianism, warmth, genuineness, empathy and the overall spirit of MI. The global client ratings were developed to measure affect, cooperation, disclosure and engagement. The second pass required detailed coding of therapist and client utterances (also known as behaviour counts). Therapist utterances were coded into 27 categories that either reflected behaviours consistent or inconsistent with MI. Client utterances were coded into four categories. Of most theoretical importance was language that reflected a move toward (change talk) or away (sustain talk) from behaviour change. Lastly, therapist and client speech was timed to ascertain how much time the therapist versus the client used talking.

An inter-rater reliability study by Moyers, Martin, Catley, Harris, and Ahluwalia (2003) of the MISC generated mixed results. Intraclass correlation coefficients (ICCs) for therapist global scores ranged from a poor .39 for acceptance to an excellent .77 and .79 for empathy and MI spirit, respectively. Similarly the ICCs for client global scores ranged from a poor .25 for cooperation to an excellent .76 for engagement. Therapist behaviour counts varied even more widely from -.04 for advice with permission to 1.00 for emphasise control. Change and sustain talk categories tended to vary between the fair and excellent range. Due to these findings, the MISC was revised. The codes that demonstrated poor inter-rater reliability, such as therapist warmth, client affect and cooperation, the interaction scale, personal feedback, repeat, rephrase and paraphrase were omitted or collapsed together to improve reliability. The third pass used to record therapist and client talk-time was removed as it was not considered cost-effective and did not add to its predictive validity (Miller et al., 2008). However, Miller et al. (2008) have recommended that the second pass be split into two; one to code therapists' use of MI consistent and inconsistent methods and the other for client change and sustain talk. This was suggested as a way of improving reliability by reducing the cognitive strain associated with concurrently attending to therapist and client language.

As discussed earlier, Amrhein and colleagues (2003) found that committing change talk was particularly prognostic of behaviour change. This reflected the early writings of Miller and Rollnick (2002), which suggested MI followed two phases: the first involved the resolution of ambivalence and the fostering of motivation to change while the second involved strengthening commitment to change behaviour. As such, committing change talk was retained as a mutually exclusive category. The change talk categories of desire,

ability and need were grouped under the umbrella category of “reasons to change”, although these can be partitioned during coding for a fine-grained analysis. Because Amrhein et al. (2003) found the trajectory of committing change talk strength was more prognostic of behaviour change than change talk frequency per se, a strength rating from -5, indicating strong sustain talk, to +5 indicating strong change talk was introduced. Due to difficulties attaining adequate inter-rater reliability, these ratings were later simplified into a three point scale of low, medium and high strength of change versus sustain talk (Miller et al., 2008).

The most recent version, MISC 2.1 (Miller et al., 2008), therefore reflects a more parsimonious instrument than the original. This simplification aims to increase its inter-rater reliability, although inter-rater reliability studies for the MISC 2.1 are yet to be conducted. Further, the key constructs elucidated by recent research (Amrhein, 2004; Miller & Rose, 2009; Moyers & Martin, 2006; Moyers et al., 2009) have been included in the MISC 2.1 (Miller et al., 2008).

Implications for Motivational Interviewing with Offenders

Based on the ‘what works’ literature of correctional psychology (Andrews & Bonta, 2010), programmes that effectively reduce offender recidivism tend to be structured, directive, skill oriented, and cognitive behavioural (Andrews, 1995; Izzo & Ross, 1990; Lipsey et al., 2001; MacKenzie, 2006). However, these programmes fail when offenders are unmotivated to engage (McMurran & Theodosi, 2007). One potential solution is to integrate MI and cognitive behavioural content. The basis for this approach is that MI methods might be used to build motivation to change so that offenders are motivated to engage in cognitive behavioural tasks. Adaptations of MI that include cognitive behavioural content, such as the short motivational programme (SMP), have been developed based on the broad principles outlined in Miller and Rollnick’s (1991, 2002) seminal texts. However, there are potential contradictions between the two approaches (Moyers & Houck, 2011).

In a paper propounding what MI is and is not, Miller and Rollnick (2009) highlighted that CBT, unlike MI, presumes the client has a deficit that needs to be amended and that CBT relies on the knowledge and technical skills of clinicians in applying principles of learning. In contrast, Miller and Rollnick (2009) suggested that rather than educating the

client, MI elicits solutions from the client and is aligned to the humanistic rather than the behaviourist school of thought. Furthermore, little is known whether these methods can be integrated for an offender group without compromising the effectiveness of each approach. An additional complication lies in the conflict between the philosophy of MI, one which emphasises client autonomy, and the nature of the correctional environment (Britt, 2009).

Findings from recent MI process-outcome studies, summarised by Miller and Rose's (2009) theory of MI, explains how MI works to effect motivational and behavioural change. This goes beyond what is articulated in the principles of MI and may fruitfully inform the adaptation of MI for offenders. This theory may provide a useful rubric for studying programmes that integrate MI and cognitive behavioural content to understand how the inclusion of cognitive behavioural content affects the process of MI and outcomes for offenders. Further, the recent development of an instrument (MISC 2.1; Miller et al., 2008) to measure the constructs highlighted by Miller and Rose's (2009) theory have allowed such process investigations to begin.

Summary

This review highlighted that psychotherapy exerts its effects on clients through a combination of common and specific factors (Garfield, 1995). The therapeutic relationship is perhaps the most well supported common factor between psychotherapies (Wampold, 2001). The therapeutic relationship is explicitly valued by the MI approach and is reflected in its client-centred conceptions, spirit and principles (Miller & Rollnick, 2002). Similarly, the therapeutic relationship is seen as an integral condition of change in cognitive behavioural approaches (Dobson & Dozois, 2001). Specific factors are unique to a given psychotherapy and hypothesised to exert additional therapeutic effects by interacting with client factors. Specific factors are used during MI (MI consistent methods) to resolve client ambivalence, elicit and reinforce change talk and assist clients to commit to a behaviour change plan. Similarly, J. S. Beck's (1995) cognitive therapy utilises specific therapeutic techniques, such as thought records and behavioural experiments, to effect changes in clients' thoughts, emotions, physiological experiences and behaviour.

Client motivation to change is related to psychotherapy outcomes across a range of psychotherapies and target problems. Contemporary theories of motivation have centred on a dynamic and multi-dimensional construct of motivation to change that is influenced by the therapist's interpersonal style (Miller et al., 1993). Motivation to change has been implicated in treatment engagement and outcome for offender groups (McMurran & Theodosi, 2007). As such, correctional professionals have looked to interventions, particularly MI, to promote offender motivation to engage in therapy and change behaviour (McMurran, 2009). These investigations have been carried out in the context of a substantial evidence base that attests to the effectiveness of cognitive behavioural programmes for reducing criminal recidivism (Andrews & Bonta, 2010).

Evidence to support the effectiveness of MI has accrued for a range of problem areas but specifically for substance abuse (Burke et al., 2003; Lundahl et al., 2010; Rubak et al., 2005; Vasilaki et al., 2006). This has included recent evidence to support the effectiveness of MI to promote motivation to change among offender groups (Anstiss et al., 2011; Austin et al., 2011; Farbring & Johnson, 2008). However, the advancement of MI has been based on a limited theoretical understanding (Allsop, 2007). Further, despite this limited theoretical understanding, MI is consistently being integrated with cognitive

behavioural content (Burke, 2011). However, there remains very little research into how these modalities are best combined.

A similar approach has been taken for offenders in New Zealand with the short motivational programme (SMP). In the SMP, MI is combined with cognitive behavioural content to foster motivation (Devereux, 2009) and reduce criminal recidivism (Anstiss et al., 2011). Despite an emerging theory of MI, no research has been conducted into how these two modalities can be effectively combined for offenders. As such, adaptations of MI which integrate cognitive behavioural content risk rendering it ineffective by inadvertently removing critical elements or organising them in ineffectual constellations. Adaptations of MI for offenders are further complicated by a potential conflict between the philosophy of MI, which emphasises client autonomy, and the nature of the correctional environment, especially for incarcerated offenders (Britt, 2009). McMurrin (2009) has suggested that clarification of the processes that underpin MI will provide a more informed approach to its development and use with offender groups.

Miller and Rose (2009), informed by recent process-outcome studies (Amrhein, 2004; Amrhein et al., 2003; Moyers & Martin, 2006; Moyers, Martin, Christopher, et al., 2007), have posited a theory to explain how MI effects motivational and behavioural change. Based on these process-outcome studies, Miller et al. (2008) developed the MISC 2.1 that allows the constructs outlined in Miller and Rose's theory to be quantified. This recent theory development, and the development of a derived measure, provides the basis for informed process investigations. Specifically, Miller and Rose's theory of MI and the MISC 2.1 might be gainfully used to conduct process investigations into the integration of MI with cognitive behavioural content for offenders. Such investigations might provide useful insights into the use of MI with offenders and the effect on MI of including cognitive behavioural content.

CHAPTER 6: AIM OF THE CURRENT STUDY

A preliminary aim of this study was to test the inter-rater reliability of the instrument used to measure MI skills, the MISC 2.1 (Miller et al., 2008) in a correctional setting. The scores generated with the MISC 2.1 are assigned by a single rater, in this case the researcher. As such, the generality of the data beyond the single rater can be brought into question (Tinsley & Weiss, 1975). Therefore, it was important to test to what degree scores assigned by the researcher were consonant with scores assigned by a second rater. Using a second coder to rate the same set of targets, and subsequently measuring the agreement between the raters, is one approach that can be used to establish greater assurance about the generality of the data from observational measures. This avoids an over-reliance on the potentially idiosyncratic ratings of a single coder.

The primary aim of this study was to elucidate the processes that underlie a five-session programme (Short Motivational Programme; SMP) that combines MI and cognitive behavioural content to foster motivation among medium risk offenders. Session one of the SMP is used to assess offenders' rehabilitative needs and therefore was used as a baseline data point. Sessions two and four include cognitive behavioural content but are intended to be delivered while employing the spirit, principles and methods of MI (Anstiss, 2003; Steyn & Devereux, 2006). Sessions three and five are MI sessions without cognitive behavioural content. As such, comparisons were able to be made between sessions that included and excluded cognitive behavioural content.

It was hypothesised that the researcher and a second coder will achieve good inter-rater agreement (Cicchetti, 1994) in scoring behaviours that reflect the key constructs investigated in this study. These constructs are depicted in Figure 2 and are based on Miller and Rose's (2009) theory of MI. Secondly, facilitators will demonstrate greater MI competency during sessions without cognitive behavioural content. Thirdly, offenders will be more likely to engage in change talk and less likely to engage in sustain talk during sessions that exclude cognitive behavioural content. Fourthly, facilitators MI competency will be positively related to offender change talk and inversely related to offender sustain talk. Change and sustain talk and committing change and sustain talk were each separated into two constructs, rather than opposite dimensions of one.

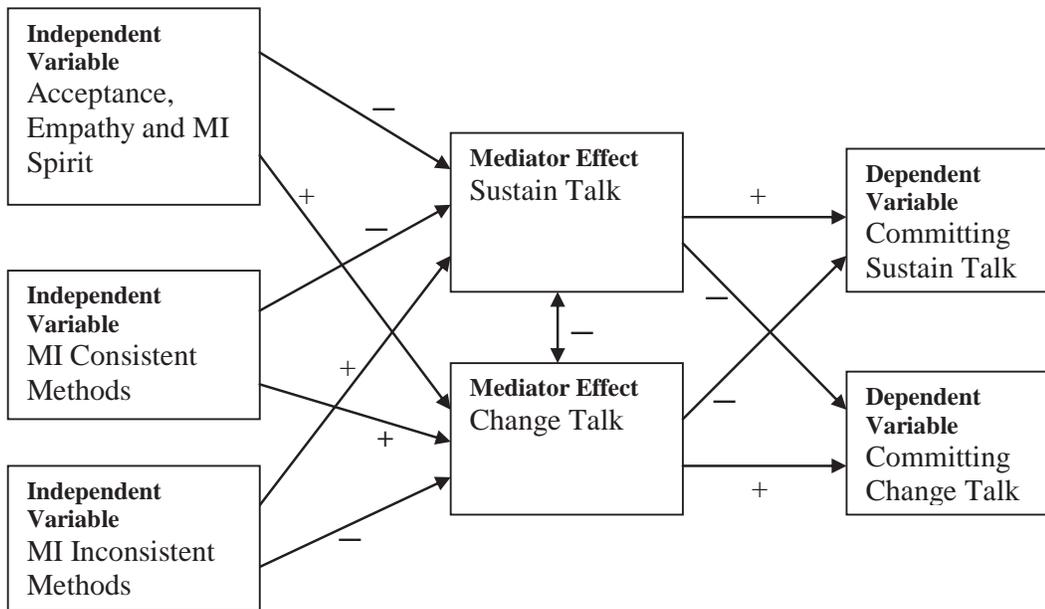


Figure 2. Model of hypothesised relationships among variables for the current study

Research Questions

1. What is the level of inter-rater agreement between the researcher and a second coder when using the MISC 2.1 to rate constructs in the emergent theory of MI?

1.1 The researcher and second coder will achieve a good level of inter-rater agreement, as defined by Cicchetti's (1994) guidelines, in rating the constructs (see Figure 2) in Miller and Rose's (2009) emergent theory of MI.

2. What is the nature of facilitators' use of MI during the SMP?

2.1 Facilitators will demonstrate a competent level of acceptance, empathy, and MI spirit (collaboration, evocation, autonomy) *across* SMP sessions.

2.2 Facilitators will, in-keeping with a competent level of MI skills, utter two reflections for every question *across* SMP sessions.

2.3 Facilitators will, in-keeping with a competent level of MI skills, utter 70% open-ended questions compared to total questions *across* SMP sessions.

2.4 Facilitators will, in-keeping with a competent level of MI skills, utter 50% complex reflections compared to total reflections *across* SMP sessions.

2.5 Facilitators will, in-keeping with a competent level of MI skills, utter 90% MI consistent methods compared to the sum of MI consistent and inconsistent methods *across* SMP sessions.

2.6 Facilitators will demonstrate greater competency in MI during sessions without cognitive behavioural content (sessions three and five).

3. What is the nature of offenders' change and sustain talk during the SMP?

3.1 Offender change and committing change talk will increase and offender sustain and committing sustain talk will decrease *across* SMP sessions.

3.2 Offender change and committing change talk will increase most at sessions without cognitive behavioural content

3.3 Offender change and committing change talk will increase and offender sustain and committing sustain talk will decrease *within* sessions two to five.

3.4 Offender change and committing change talk will increase and offender sustain and committing sustain talk will decrease more *within* sessions without cognitive behavioural content.

3.5 Offenders that experience more committing change talk in the final session will experience a higher rate of change talk and a lower rate of sustain talk *across* sessions one to four.

3.6 Offenders with a higher rate of committing change talk during session five will experience a higher rate of change talk and lower rate of sustain talk in preceding segments *within* session five.

4. What is the relationship between facilitators' use of MI with offenders' self-exploration, and offenders' change and sustain talk during the SMP?

4.1 Facilitators' global scores of acceptance, empathy and MI spirit will be positively related to offender self-exploration.

4.2 Facilitators' global scores of acceptance, empathy and MI spirit will be positively related to offender change and committing change talk and inversely related to offender sustain and committing sustain talk across sessions.

4.3 Facilitators' MI skills will be positively related to offender change and committing change talk and inversely related to offender sustain and committing sustain talk *across* sessions.

4.4 Facilitators' MI skills will be positively related to offender change and committing change talk and inversely related to offender sustain and committing sustain talk *within* sessions.

CHAPTER 7: METHOD

Research Design

The current study consisted of two parts: (a) a preliminary investigation of the inter-rater agreement between the researcher and a second coder in rating SMP sessions with the MISC 2.1 (Miller et al., 2008) (hypothesis 1.1); and (b) the primary investigation, based on Miller and Rose's (2009) emergent theory of MI, into the relationships set out in Figure 2 when applied to an offender group (hypotheses 2.1 to 4.4).

The preliminary inter-rater agreement investigation was conducted to test the likely generality of the data prior to testing the study's primary hypotheses. This was deemed necessary to ensure that the researcher, who coded all the SMP sessions, was not assigning ratings idiosyncratically.

The second part of the study employed a descriptive and single-case research design that was, when appropriate, supplemented with inferential statistics. This approach was taken due to the exploratory nature of the study and because the aim was to explicate the process of MI in a high level of detail across and within SMP sessions. In many cases the data were not independent of each other in that facilitators sometimes delivered the SMP to more than one offender in the sample and the data were longitudinal. Independence of observations is an important assumption of many inferential statistics and violating this assumption can deleteriously distort alpha levels, increasing the risk of a Type One error (Spicer, 2005; Stevens, 2002). Therefore, given the aim of the study and the nature of the data, a descriptive and single-case design, supplemented with inferential statistics when appropriate, was suited to answering the research questions.

Single-case research designs

Single-case research designs have a long history in the study of psychology, stemming back to experimental psychology in the late 1880s (Morgan & Morgan, 2003), and the subsequent work of Pavlov (1927) into conditioned reflexes and Skinner's (1963) research into operant behaviour. Single-case designs share a number of common elements. These include frequent measurement over time, the use of participants as their own controls, an emphasis on experimental replication, intensive observation of one or a

few subjects, the treatment of variability at the individual level, a focus on overt (typically observable) behaviour, and the use of visual inspection to elucidate the nature of any changes in the variables of interest (Kazdin, 2011; Morgan & Morgan, 2003). Single-case designs allow individuals to be studied intensively in a way that is rarely possible during group studies. Many argue that group studies smooth over important inter-individual variation that ought to be the true focus of research (Morgan & Morgan, 2003). Further, the use of frequent measurements over time allows the researcher to establish temporal precedence by observing whether behaviour changes before, during or after the introduction of the independent variable. Temporal precedence therefore allows researchers to make inferences about causality which is commonly not possible in pre-post group designs (Mitchell & Jolley, 2001).

The single-case design, however, has been criticised as a method for making valid scientific inferences (Mahoney, 2000). These criticisms have included difficulties associated with generalising findings from a single-case to a population (Morgan & Morgan, 2003). Single-case designs have been somewhat able to ameliorate this through the systematic replication of findings (Mitchell & Jolley, 2001). As such, comparable changes across individuals allow for greater confidence in the external validity of findings (Hayes, 1998). Replication can be achieved through the use of multiple base-line designs that typically stagger the introduction of the experimental condition. This avoids the possible ethical dilemma that might accompany an ABAB (treatment introduction and withdrawal) design (Kazdin, 2003, 2011).

The single-case design has also been criticised for its inability to control for threats to internal validity due to the absence of randomisation. Randomisation is typically used in group studies to cancel out the effects of random error (Mitchell & Jolley, 2001). In contrast, single-case designs are carried out as controlled experiments (Blampied, 2000) where researchers reduce threats to internal validity by keeping relevant variables constant. Similarly, the use of a manual may assist in the uniform delivery of an intervention and reduce the effect of spurious variables. Further, intra-individual replication can be invoked through a range of experimental designs to further test the internal validity of findings. These include the use of ABAB designs, multiple-baseline designs, changing criterion designs and alternating treatment designs (Barlow & Hersen, 1984). These approaches add to internal validity in that consistent change in the

dependent variable, following change in the independent variable, is unlikely to be due to chance alone. However, this can be difficult to conduct in some cases where learning is not easily reversed, or due to carry over effects between conditions, and in other cases it may pose ethical and practical dilemmas (Mitchell & Jolley, 2001). A baseline level of behaviour can be established through the use of many observations before the introduction of the independent variable. This allows any changes in the dependent variable, which do not coincide with the introduction of the independent variable, to be identified. It also reduces threats to internal validity such as history and maturation effects. However, sometimes establishing a lengthy baseline is unethical or impractical in applied settings. Further, the behavioural criterion (e.g. a client's change and sustain talk in the present study) may not be present or relevant outside of the intervention. History and maturation effects can be further managed by restricting the time period studied. Order effects can be managed by varying the sequencing of conditions between participants (Mitchell & Jolley, 2001), albeit difficult in applied settings. Further, the use of frequent observations allows participants to act as their own controls. This makes particular sense in clinical psychology in that clinicians are concerned with effecting change in an individual compared to his or her base-line functioning, not necessarily compared to a group average (Blampied, 2000; Morgan & Morgan, 2003).

Criticism has also been levelled at the use of visual inspection as the primary method of evaluating the data. In a related vein, critics have lambasted the absence of concrete decision rules about what changes in the data, upon visual inspection, constitute a reliably significant effect (Kazdin, 2003). Indeed, studies have demonstrated that expert judges can disagree about what constitutes a reliable and significant effect based on visual inspection (DeProspero & Cohen, 1979). Also, visual inspection has been criticised for being insensitive to small, albeit clinically significant, changes in the dependent variable (Kazdin, 2003). In contrast, proponents of single-case design research contend that the use of visual inspection increases the likelihood that findings are clinically significant, rather than simply statistically significant (Kazdin, 2011). Indeed, scholars have strongly debated the utility of statistical significance testing (Krueger, 2001; Rosenthal & Gaito, 1963) and some have suggested that its use be discarded in favour of closely examining the data and replicating results (Carver, 1978). Some of these concerns include dichotomous decision making that is premised on a rigidly enforced and somewhat arbitrary criterion (typically $p < .05$). A significant result is in part a function of the

sample size and if a result is found to be significant it does not inform the reader about the strength of the effect. As such, while statistical significance testing ameliorates some of the problems associated with visual inspection, it is sometimes used with little understanding of its limitations (Beretvas & Robinson, 2004).

Lastly, the use of many assessments over time allows inferences to be drawn about the trajectory of behaviour change during an intervention (Singer & Willett, 2003). However, frequent assessment can lead to testing effects in that participants may respond differently following many assessments. This can be ameliorated through the use of observation or different versions of the same measure. Observation is generally preferable in that using different versions of a measure may introduce variations that are due to the measure rather than actual change in the dependent variable. Further, the focus on observable behaviour, in contrast to self-report measures, reduces threats to validity associated with socially desirable responding, testing effects and other demand characteristics (Mitchell & Jolley, 2001). As such, single-case designs can ameliorate threats to internal validity and, through systematic replication, enhance external validity. They are also able to investigate individual change over time with a degree of detail that is rarely possible in group designs (Hayes, Laurenceau, Feldman, Strauss, & Cardaciotto, 2007).

It is this approach, of closely evaluating the behaviour of individuals (facilitators and offenders) across time (within and between SMP sessions), supplemented with descriptive and inferential statistics, that characterised the current study. More specifically, the single-case design component employed for the current study resembled an ‘alternating treatment design’. An alternating treatment design is used to elucidate the effects of two different treatments. In the current study, MI with cognitive behavioural content is compared to MI without cognitive behavioural content. This is preceded by an assessment session (session one), which acted as a baseline for the current study. Further, the way facilitators’ used MI was compared to offenders’ change and sustain talk between and within SMP sessions.

The short motivational programme

The SMP is a low intensity programme and therefore only delivered to medium risk offenders. However, in some cases the SMP is also delivered to high risk offenders if they are serving short sentences (e.g. Austin et al., 2011) and is sometimes delivered to lower

risk offenders if motivation to change is perceived to be inadequate for behavioural change.

The SMP was delivered over five sessions by trained facilitators and in accordance with a detailed manual (Anstiss, 2003; Steyn & Devereux, 2006). An initial pre-SMP session introduced the offender to the SMP by briefly explaining the goal of the SMP (as a preparatory programme for other offence-focussed interventions in prison or in the community), the focus on rehabilitative needs, how many sessions would be covered and the role of the facilitator. During the pre-SMP session the facilitators elicited offenders' consent to participate with a Department of Corrections SMP agreement form (Appendix A). This included consent to video-record SMP sessions and to use these for research purposes. If consent was obtained, the facilitator subsequently assessed each offender's pre-SMP motivation to change with an adapted form of the University of Rhode Island Change Assessment Questionnaire (DiClemente & Hughes, 1990). Each subsequent session included a bridge from the previous session, an agenda that introduced the focus of the session, a review of the homework, facilitation of the agenda through a MI approach, a final summary and the setting of homework to be reviewed at the following session.

Session one

Session one consisted of an assessment interview to elicit the offender's unique set of rehabilitative needs (Andrews & Bonta, 2010), while adhering to principles of MI (Miller & Rollnick, 2002). This involved discussing the events that led to and included the offending. These events were discussed temporally by proceeding through the Police Summary of Facts. Any disagreement with the Police Summary of Facts was used to further elicit their perspective of what happened during the offending rather than confronting them on any discrepancies. In keeping with the principles of risk, need and responsivity (RNR; Andrews & Bonta, 2010), a list of potential rehabilitative needs was reviewed (see Appendix B), and the offender was engaged in a collaborative discussion about the presence or absence of each rehabilitative need in their index offending. Rehabilitative needs that the facilitator believed were present in the offending, but dismissed by the offender were left for later consideration. The second part of session one involved discussing the lifestyle factors, social influences and thinking patterns that contributed toward the likelihood of offending. To identify the lifestyle factors, the

offender described a typical weekday and weekend. To identify social influences on offending, the offender listed their most important and frequent relationships, describing briefly the nature of each. The facilitator subsequently enquired about who on the list of their social influences had a criminal record, was involved in illegal activities, is a gang member, and who on the list was either proud or upset by the offender's criminal behaviour. Based on this information the social influences on the list were designated as either a positive (not involved in illegal activity and discourages the offender's criminal behaviour), negative (involved in criminal activity and/or supportive of the offender's criminal behaviour) or neutral (does not encourage or discourage the offender's criminal behaviour) influence. Finally, the offender's offence supportive attitudes were elicited through the use of Socratic questioning. For homework, the offender was encouraged to review the list of rehabilitative needs generated and those that were left with a question mark, noting down any questions before the next session. These rehabilitative needs became the focus of subsequent sessions as the target behaviours for change.

For the purpose of this study, when sessions were coded, the identified rehabilitative needs represented the target behaviour change upon which decisions were made about whether an utterance represented a movement toward change (change talk) or away from change (sustain talk). The broad MI style was to be employed during sessions to avoid eliciting resistance from the offender. However, session one is not specifically a MI session, or a MI session with cognitive behavioural content, and was therefore considered a baseline for the current study.

Session two

Session Two involved collaboratively generating an offence chain based on the information elicited in session one. The discussion of an offence-chain is analogous to educating the client on the cognitive model (J. S. Beck, 1995) but carried out while adhering to the spirit and principles of MI (Miller & Rollnick, 2002). This was pre-empted by reviewing a hypothetical example to reduce the potential for the offender to feel confronted or blamed. Once the offender grasped the offence chain concept, the facilitator encouraged them to map their own index offence, and rate the thoughts (in terms of their belief in these) and their emotions (in terms of their strength) associated with each event up until the commission of the offence. The offender was encouraged to identify the rehabilitative needs that linked one event with another. For example, how

alcohol and drug use or antisocial associates made it more likely that s/he would act in ways that were normally not condoned. The offender was encouraged to review the offence chain for homework and to note down any questions. As such, session two uses MI to deliver cognitive behavioural content.

Session three

Session Three began with a time projection exercise to assist the offender in developing discrepancy between their offending behaviour and their goals and values. This was done by asking the offender to describe how their “ideal life” would look in five to ten years. The facilitator encouraged them to think in terms of personal changes, their relationships, employment, finances, education and training, and their home-life. The facilitator subsequently asked the offender to do a similar time-projection exercise based on the assumption of continued offending with the specific aim of developing discrepancy between offending behaviour and future goals. Following the time-projection exercise, the use of decision grids was introduced to develop discrepancy for specific rehabilitative needs. The first rehabilitative need was identified by reviewing the offence chain diagram completed in the previous session and choosing a rehabilitative need that the offender was least resistant to ameliorate. The decision grid exercise allowed the costs and benefits associated with the rehabilitative need(s) (e.g. alcohol and drug misuse or antisocial associates) to be discussed in terms of its short and long-term consequences. This exercise aimed to develop discrepancy by highlighting the tendency for offending behaviour to generate many short-term benefits with little or no long-term benefits. Following the decision grid exercise the facilitator encouraged the offender to explore their reasons for changing the identified rehabilitative need(s). Facilitators were encouraged to generalise an increase in motivation to change from one rehabilitative need to another, particularly when these needs were related, such as violence propensity and relationship difficulties in the case of a domestic violence offence.

In contrast to sessions two and four (discussed next), session three does not include cognitive behavioural content (Anstiss, 2003; Steyn & Devereux, 2006). This is partly reflected in the methods employed during session three: time projection and a costs and benefits (decision grid) analysis. While the use of these methods on their own does not constitute MI (Miller & Rollnick, 2009), they are nevertheless commonly employed. For

homework, offenders were encouraged to look over their decision grid(s) and complete further decision grids on any other identified rehabilitative needs.

Session four

Session Four focused on how to identify and amend cognitive distortions that support offending. Session four is characteristic of a cognitive behavioural approach in that it focuses on how thoughts, influence feelings and offending behaviour. This was done by introducing a hypothetical example so that the offender was not immediately challenged into defending their thinking. The facilitator explained how cognitive distortions affect behaviour and provided examples of common types of cognitive distortions, such as minimisation, justification and shifting responsibility. This was done in such a way as to normalise the presence of cognitive distortions in everyday behaviour and minimise any need for the offender to defend their thinking. This was repeated with a second hypothetical example before encouraging the offender to reflect on how they have used cognitive distortions to support their offending behaviour. The offender's use of cognitive distortions was typically elicited by reviewing the offence chain, with associated thoughts and feelings, which was collaboratively developed during session two. As such, like session two, session four uses MI to deliver a session that includes primarily cognitive behavioural content.

For homework, offenders were encouraged to reflect on the time projection exercise completed in session three and develop a list of goals that would help them desist from further offending. These could be goals while in prison, such as completing a subsequent rehabilitation programme, or community programmes (e.g. drug and alcohol programmes or a stopping violence programme) to ameliorate the effects of the identified rehabilitative needs. Offenders were encouraged to think of skills-focused goals that related to their rehabilitative needs that were clear, achievable and specific.

Session five

Session Five aimed to strengthen commitment for change by translating goals into a change plan. The use of a change plan is a common component of MI used to develop commitment to change (Miller & Rollnick, 2002). This approach is supported by Miller and Rose's (2009) theory of MI which suggests that behaviour change occurs once an individual has developed the requisite commitment to change. Miller and Rollnick's

(2002) earlier writings posited that if ambivalence is not adequately resolved a change plan will only engender greater resistance to change. Therefore, the SMP manual prescribed that if the offender continued not to acknowledge their offending or was unwilling to move toward ameliorating their rehabilitative needs, their motivation to change was to be re-assessed, and SMP cordially concluded (Anstiss, 2003; Steyn & Devereux, 2006). Commitment to a change plan was fostered by further reinforcing their selected goals and assisting them to define them more precisely. The change plan outlined the steps for achieving each goal, pro-social peers that could support their goals and any obstacles to change and how these might be mitigated. This was documented through the use of a change plan worksheet, which is similar to that described by Miller and Rollnick (2002, p. 137). Lastly, the offender's motivation to change was re-assessed. Like session three, and in contrast to sessions two and four, session five does not include cognitive behavioural content.

In summary, the SMP is an attempt to integrate MI and cognitive behavioural content to resolve ambivalence and elicit motivation to change. While the primary aim of the SMP is to enhance offender motivation (Devereux, 2009), sessions two and four include cognitive behavioural content, with a view to ameliorating rehabilitative needs. The aim is to always cover this content while employing the spirit and principles of MI. Session three and five include content that is prominently used during MI interventions (time-projection exercise, decision grids and change plans) and do not include cognitive behavioural content.

Participants

This study was constituted by two sets of participants: 12 facilitators who delivered the SMP (employed by the Department of Corrections) and 26 offenders who participated in the SMP.

The Department of Corrections employs approximately 125 facilitators at any one time, excluding those working in special treatment units, and approximately 80% ($n = 100$) of these have the experience and training required to deliver the SMP. However, the volume of SMPs delivered varies markedly between facilitators in that some take a much greater focus on the SMP while others deliver alternative Departmental programmes (G. Sinclair,

personal communication, September 14, 2011). As such, while the sample of facilitators represents only 12% of those accredited to deliver the SMP, it is likely to represent a higher proportion of facilitators who are regularly facilitating the SMP. Approximately 220 SMPs, covering five sessions or those that are able to be completed, are delivered each year. Facilitators contributed an average of 3.77 SMP sessions each. In nine cases, the facilitator-offender dyads (see Table 1) completed all five SMP sessions. However, not all the sessions were successfully video-recorded and therefore could not be coded. Seven offenders (A1, C4, G10, G13, G19, G25 and H25) exited the SMP prematurely and therefore these facilitator-offender dyads did not complete all five sessions. In total, 2 pre-SMP sessions, 21 session ones, 21 session twos, 22 session threes, 17 session fours and 17 session fives were video-recorded and coded. The two pre-SMP sessions were entered into SPSS but not included in analyses because there were too few for comparisons across facilitators and offenders. As such, 98 SMP sessions were retained for analyses. The sessions video-recorded, and therefore coded, and the sessions completed by each facilitator-offender dyad are recorded in Table 1 below.

Table 1

SMP Sessions Successfully Video-Recorded and Coded and SMP Sessions Completed (N = 26 Facilitator-Offender Dyads)

Facilitator- Offender Dyad	SMP Sessions	
	Video-recorded and coded	Sessions completed
A1	Pre-session to 4	Pre-session to 4 (exited)
A22	Sessions 1 to 5	Pre-session to 5
B2	Sessions 1 to 5	Pre-session to 5
B3	Pre-session to 5	Pre-session to 5
C4	Sessions 1 and 2	Pre-session to 2 (exited)
D5	Sessions 2 to 5	Pre-session to 5
D23	Sessions 2 to 5	Pre-session to 5
E6	Sessions 1 to 5	Pre-session to 5
F7	Sessions 1 to 3	Pre-session to 5
F8	Sessions 1 to 4	Pre-session to 5
G9	Sessions 1 to 5	Pre-session to 5
G10	Sessions 2 and 3	Pre-session to 3 (exited)
G11	Sessions 1 to 5	Pre-session to 5
G12	Sessions 1 to 5	Pre-session to 5
G13	Sessions 1 to 3	Pre-session to 3 (exited)
G19	Session 1	Pre-session and 1 (exited)
G25	Session 1	Pre-session and 1 (exited)
H14	Sessions 2 to 5	Pre-session to 5
H15	Sessions 1 to 5	Pre-session to 5
H25	Session 1	Pre-session and 1 (exited)
I16	Sessions 1 to 4	Pre-session to 5
I17	Sessions 1 to 5	Pre-session to 5
I18	Sessions 1 to 5	Pre-session to 5
J20	Sessions 1 to 5	Pre-session to 5
K21	Sessions 1, 3 and 5	Pre-session to 5
L24	Sessions 3, 4 and 5	Pre-session to 5

The requirement for inclusion in the study was that facilitators were approved by the Department of Corrections to deliver the SMP to medium risk offenders.

Facilitator demographics

Facilitators' demographic variables (age, gender and ethnicity), their years of experience as facilitators, numbers of SMPs conducted and amount of additional training received (in addition to standard Department of Corrections SMP training) is presented in Table 2.

Facilitators did not report doing any similar previous facilitation before commencing in their role with the Department of Corrections. However, prior to commencing as a Department of Corrections facilitator, they completed an eight-week training course that covered a range of foundational facilitation skills. Additionally, SMP facilitators were required to complete a further five days of training in the SMP. This was a seminar-based course that aimed to familiarise facilitators with the SMP content and the practice of the MI components of the programme (G. Sinclair, personal communication, January 13, 2012). Lastly, to be approved to deliver the SMP, facilitators were required to meet a professional practice standard that included supplying a portfolio of evidence, a supervisor's report, a manager's report and co-facilitator reports. This evidence is then reviewed by a panel of experts before facilitators are approved to deliver the SMP (G. Sinclair, personal communication, March 31, 2011).

Facilitators' qualifications included psychology, social sciences and arts, law, counselling, Māori and nursing. Four of the twelve facilitators had received additional MI training, including workshops by experienced MI clinicians, Dr Eileen Britt and Dr William Miller.

Table 2

Facilitator Demographic Data (N=12)

Gender	Male	6
	Female	6
Age (SD)		34 (7.30)
Range		26-48
Ethnicity	NZ European	6
	NZ Māori	3
	Indian	1
	English	1
	NZ-Chinese	1
Highest Qualification	Postgraduate Diploma	3
	Bachelor's Degree	8
	Diploma or Certificate	1
Years as Facilitator (SD)		3.42 (1.44)
Range		1.75-6 years
Previous SMPs Conducted (SD)		8.50 (6.20)
Range		2-20
Days of MI Training in addition to standard Department of Corrections Training (SD)		2.33 (2.39)
Range		0-8

Offender demographics

The offenders' demographic information (age, ethnicity, gender and risk of recidivism) is presented in Table 3. This includes their rehabilitative needs and sentence types.

Table 3

Offender Demographic Data (N=26)

Age	Mean (<i>SD</i>)	37.57 (9.99)
	Range	21-56
Ethnicity	New Zealand Māori	10
	New Zealand European	6
	Pacific Island Peoples	6
	Afghani	1
	Unknown	3
Gender	Male	23
	Female	3
Risk of Recidivism	Mean (<i>SD</i>)	.41 (.15)
	Range	.12-.61
Rehabilitative Needs	Alcohol and Drug Use	20
	Offence Supportive Attitudes	16
	Antisocial Associates	15
	Unhelpful Lifestyle Balance	14
	Violence Propensity	13
	Relationship Difficulties	8
	Mood Management Problems	1
Sentences	Prison	12
	Community Probation	9
	Home Detention	5

Risk of recidivism

Offenders' risk of recidivism was measured with the Risk of Reconviction X Risk of Re-imprisonment scale (RoC*RoI; Bakker, O'Malley, & Riley, 1999) upon commencing their sentences. The RoC*RoI is a second generation actuarial risk assessment developed by Bakker et al. (1999). A RoC*RoI score is calculated for every offender from their offending history and demographic information, and is based on the case histories of 133,000 New Zealand offenders. Actuarial approaches, such as the RoC*RoI, have consistently out-performed clinical judgements made by correctional professionals (Bakker, Riley, & O'Malley, 1998). Receiver Operating Characteristic analysis, based on signal detection theory, was used to explore the RoC*RoI's predictive validity. An area under the curve of .76 was demonstrated for the scale, suggesting excellent predictive validity (Bakker et al., 1998). It generates a probably estimate of an offender's risk of re-imprisonment five years following release and can range from 0 (indicating a very low probability of recidivism) to 1 (indicating a very high probability of recidivism). The RoC*RoI is used to guide decisions about intervention intensity as per the risk principle of effective correctional rehabilitation (Andrews & Bonta, 2010). The SMP is a low intensity programme and so it is largely delivered to offenders with a risk score of .30 to .70, which reflects a medium risk of recidivism.

A medium risk of recidivism can be re-stated as a 30 to 70 percent risk of recidivism within five years of release. This represented 29.8% of the prison population in the 2003 census of prison inmates and home detainees (Department of Corrections, 2003). Lower risk offenders are generally not eligible for rehabilitative programmes and higher risk offenders are referred for more intensive interventions as predicated by the risk principle of correctional rehabilitation (Andrews & Bonta, 2010).

Four offenders had RoC*RoI scores of less than .30, which is below the requisite risk threshold for rehabilitative programmes, but nevertheless participated in the SMP. This typically occurs when offenders are perceived by correctional staff to be unmotivated to change, despite their low risk of recidivism, and therefore likely to benefit from a motivational programme.

Measures

There are a range of measures of MI process and each has its strengths and weaknesses. Madson and Campbell (2006) reviewed four specific measures of MI fidelity. These included the MI Treatment Integrity Code (MITI), the MI Process Code (MIPC), the MI Supervision and Training Scale (MISTS) and the MI Skills Code (MISC). Further measures of MI process include the MI Sequential Code for Observing Process Exchanges (MI-SCOPE; Martin, Moyers, Houck, Christopher, & Miller, 2005), and the Change Language Assessment in MI (CLAMI; Miller, Moyers, Manuel, Christopher, & Amrhein, 2008). For the current study, it was important to code both facilitator and offender language. The MITI, MIPC and MISTS only code clinician language. Similarly, the CLAMI only samples client behaviour and therefore these measures were not appropriate for analysing relationships between clinician and client behaviour. The SCOPE is an exhaustive measure of MI process that captures both clinician and client behaviours. It measures the variables captured by Miller and Rose's (2009) theory of MI and would have been an appropriate instrument. However, the SCOPE requires the use of transcripts, which the researcher did not have permission to generate. Therefore, the facilitators' use of MI and the offenders' in-session language were measured with the MISC, the latest of which was version 2.1 (MISC 2.1; Miller et al., 2008). The MISC 2.1 was the most comprehensive measure of both clinician and client language in MI and had the greatest psychometric support.

The Motivational interviewing Skills Code, Version 2.1

The MISC 2.1 (Miller et al., 2008), originally developed in 1997, was designed to measure adherence to the key components of MI, to provide clinicians feedback about their use of MI consistent and MI inconsistent methods, to evaluate the effectiveness of MI training, to conduct process research and to predict treatment outcome. Therapist and client global ratings are used to generate a measure of how the gestalt of the session was conducted in reference to tenets of MI (acceptance, empathy and MI spirit) and the client's level of self-exploration during a single session. Behaviour counts are carried out to measure the use of MI consistent and MI inconsistent methods. Client change talk (language indicative of positive behaviour change) and sustain talk (language indicative of maintaining current behaviour) is coded in reference to target behaviour(s), such as alcohol use. Each one of these categories, and respective sub-categories, is noted in Table 4 below.

Table 4

MISC 2.1 Categories Coded for the Present Study

Target		Scale	Category	
Facilitator	Global Scales	Acceptance		
		Empathy		
		MI Spirit	Evocation Collaboration Autonomy-Supportive	
	Behaviour Counts	MI Consistent	Advise with Permission	
			Affirm	
			Emphasise Control	
		MI Inconsistent	Open Question	
			Simple Reflection	
			Complex Reflection	
			Reframe	
Neutral	MI Inconsistent	Support		
		Advise without Permission		
		Confront		
		Direct		
		Raise Concern without Permission		
Offender	Global Scale	Self-Exploration		
	Behaviour Counts	Change and Sustain Talk	Reasons	
			Desire	
			Ability	
			Need	

Committing Change Talk

Taking Steps

Other

Follow/Neutral

Note. Change talk and Sustain talk represent the combined sub-categories of reason, desire, ability and need.

Process for reviewing SMP sessions with the MISC 2.1

The MISC 2.1 manual (downloadable from www.casaa.unm.edu/download/misc.pdf) stipulates that the recorded session is reviewed twice: once to assign the global ratings and again to assign therapist and client behaviour counts. However, the authors have recommended that less experienced coders, rate therapist and client behaviour counts over two separate passes (Miller et al., 2008). This reduces the risk of erroneous coding due to the cognitive strain associated with attending concurrently to the therapist and client coding categories. In the current study, facilitator and offender behaviour counts were rated separately during the training phase until adequate competency allowed the coders to concurrently attend to facilitator and offender language. The authors have recommended that global ratings be assigned first, without stopping the recorded session, so the coder can experience the gestalt of the session without interruptions. This prevents possible contamination from the task of behaviour counts, although the researcher was unable to find any research to confirm that this contamination occurs. It also allows the subsequent therapist and client behaviour counts to be coded within the context of the overall session (Miller et al., 2008). Rating both the gestalt of the session and behaviour counts is important because, to some degree, it is possible to demonstrate the use of MI consistent methods without demonstrating the accepting, empathic, evocative, collaborative and autonomy-supportive approach upon which MI is predicated. An approach that ignored these global aspects of MI would likely render the use of MI consistent methods redundant (Miller & Rollnick, 2002).

Global ratings for therapists and clients

For therapists', in this case Department of Corrections facilitators, global ratings measured the ability to communicate acceptance, empathy and the spirit of MI. The spirit of MI is constituted by the constructs of collaboration, evocation and autonomy-support.

These ratings are based on a seven-point Likert scale where each end is anchored with a brief descriptor of what would constitute a high versus a low rating (Miller et al., 2008).

High acceptance is ascribed to facilitators that consistently communicate unconditional positive regard. Low acceptance is ascribed to facilitators that are consistently perceived as harsh, judgemental, labelling or condescending.

High empathy is ascribed to facilitators who demonstrate a consistent and active interest in accurately understanding the offender's perceptions, situation, meaning and experiences. Low empathy is ascribed to facilitators who demonstrate little interest in accurately understanding the offender's perceptions, situation, meaning and experiences. Facilitators low in empathy may be pre-occupied with eliciting factual information in the absence of understanding the offender's subjective experience.

High collaboration is ascribed to facilitators that focus on exploring with offenders their own concerns and avoid persuasion. Such facilitators are perceived to work alongside an offender. Low collaboration is ascribed to facilitators who are confrontational, authoritarian and rigid. Such facilitators are more likely to take an expert stance and educate the offender.

High evocation is ascribed to facilitators that actively work with offenders to draw on their own strengths and ideas. Such facilitators work with offenders to help them articulate their own reasons for change rather than imposing their own. Low evocation is ascribed to facilitators that demonstrate little interest in understanding the offender's own reasons for changing, or not changing. They focus more on persuading rather than eliciting solutions from the offender.

High autonomy is ascribed to facilitators who, despite their own interests in behaviour change, communicate the offender's freedom to choose whether they wish to change or not. Such facilitators explore options for changing, or not changing, and avoid the use of imperatives. Low autonomy is ascribed to facilitators who communicate a lack of acceptance about the offender's choice about behaviour change. They tend to use imperative language to convey a sense of "having to change".

It is prescribed in the manual that a therapist's global rating needs to be based on an *average* presentation across a session. Therefore, this is likely to include periods of higher versus lower levels of acceptance, empathy and MI spirit that is subsequently averaged out (Miller et al., 2008).

For clients, which in this study are offenders, the global rating measures their *highest* level of self-exploration during the coded session. However, the MISC 2.1 manual indicates that this needs to be more than a momentary high. The client's level of self-exploration does not need to relate to the target behaviour(s), in this case an identified rehabilitative need and offending, or reflect change in any specific direction (D. Ernst, personal communication, March 31, 2011). This measure was largely premised on the work of Truax and Carkhuff (1967) which utilised a 10-point Likert scale. In developing the MISC, the 10-point scale was reduced to seven points to be consistent with the therapist global ratings (D. Ernst, personal communication, March 31, 2011).

Each point is anchored by a separate descriptor. A high level of self-exploration is demonstrated by a client who actively engages in intrapersonal exploration across a number of domains and may experience a shift in self-perception. A low level of self-exploration is demonstrated by a client who does not disclose any personally relevant material during a session. Descriptions of what level of self-exploration constitutes each point of the scale are provided (Miller et al., 2008). For global scores, the MISC 2.1 manual suggests that the rater makes notes to assist in an objective overall assessment after the entire session is viewed and this was the approach employed for the current study.

Behaviour counts for therapists and clients

For assigning behaviour counts, speech is partitioned into therapist and client volleys. Volleys are constituted by one or more spoken thoughts, known as utterances, and each utterance can be assigned a range of behaviour counts, as outlined in Table 4 above. A single sentence may contain more than one utterance and therefore can be assigned more than one type of behaviour count. However, within any one volley, a single category of behaviour count can only be assigned once. The MISC 2.1 authors dissuade coders from using inference to assign behaviour counts. Instead, utterances are assigned codes based

on a system of categorisation and decision rules, outlined in the MISC 2.1 manual, with minimal reference to the overall session (Miller et al., 2008).

MI consistent and MI inconsistent methods

Therapist behaviour counts are constituted by either MI consistent, MI inconsistent or Neutral language. There are 15 possible language categories of which four are qualified with additional subcategories. These include Advise (subcategorised as with or without permission), Affirm, Confront, Direct, Emphasise Control, Facilitate, Filler (these are typically pleasantries), Giving Information, Question (subcategorised as open or closed), Raise Concern (subcategorised as with or without permission), Reflection (subcategorised as simple or complex), Reframe, Support, Structure and Warn (Miller et al., 2008).

Change and sustain talk

Any language used by the client that suggests a move in the direction of the target behaviour change is labelled change talk. Client language that indicates a movement away from the target behaviour change is labelled sustain talk (Miller et al., 2008). In this study, the target behaviour change is offending behaviour and those malleable factors that contributed toward their offending, known as rehabilitative needs. Rehabilitative needs that were commonly targeted during the SMP included antisocial associates, violence propensity, alcohol and drug use, relationship problems, unhelpful lifestyle balance and offence supportive attitudes. Change and sustain talk is comprised of four categories: reason (with sub-categories of desire, ability and need), taking steps (self-reported evidence of actual behaviours that reflect willingness to change or conversely an inclination not to change), other (a residual category for change or sustain talk that is linked to the target behaviour change and includes problem identification), committing change talk (change or sustain talk that communicates intentions to change behaviour or not change behaviour) and follow/neutral (talk that is not linked to the target behaviour change). Codes are assigned a positive or negative valence to reflect whether the language is indicative of change or sustain talk. For example, the statement “I know I can stop offending if I put my mind to it” would be coded Reason (sub-classified as ability) and given a positive valence to indicate change talk. In contrast, the statement “I just don’t have it in me to stop offending” would be coded as Reason (sub-classified as ability) but assigned a negative valence to indicate sustain talk.

It is possible to assign a strength rating of low, medium or high to change and sustain talk (Miller et al., 2008). As such, the valence (+ or -) is accompanied by a 1 (indicating low), 2 (indicating medium) and 3 (indicating high) strength in the direction of change or sustain. For example the statement “There’s no way I can go back to jail again or I’ll lose my family” is coded as Reason, with a positive valence, and assigned a high strength rating (R+3). The statement “I will have to do something about my offending if I want to improve things with my partner” would be coded as Reason, with a positive valence, but assigned a medium strength rating (R+2). The statement “I guess I might have to think a bit more about how my offending affects others” would again be coded Reason, with a positive valence, but assigned a weak strength rating (R+1). This acknowledged that it is not only the frequency of change or sustain talk but its strength that may be related to subsequent behaviour change (Amrhein et al., 2003, 2004).

The MISC 2.1 also allows competency indices to be calculated to evaluate the quality of MI produced (Miller et al., 2008). These competency indices can then be compared to gold standards of beginning proficiency and competence in MI. These do not represent norms but are based on expert consensus. These indices include a clinician’s mean global rating across acceptance, empathy and the spirit of MI, their ratio of reflections to questions used, their percentage of open-ended questions compared to total questions used, their percentage of complex reflections compared to total reflections used and their percentage of MI consistent methods compared to MI inconsistent methods used.

Psychometrics of the MISC 2.1

The majority of the published psychometric studies were carried out on the MISC 1.0 (e.g. Madson & Campbell, 2006), an earlier version of MISC 2.1, and for some coding categories these studies have demonstrated unacceptable reliability (Moyers et al., 2003). These early reliability studies, and a later factor analysis of the MISC 1.0 carried out by Moyers, Martin, Manuel, Hendrickson, and Miller (2005), led to the development of a more parsimonious instrument, the MISC 2.1. Some of these amendments included, simplifying the therapist global rating scale by removing the global interaction scale, and collapsing the change and sustain talk categories of desire, ability, and need into the generic category of ‘reasons to change’ (known as change talk and sustain talk in the current study), collapsing the categories of repeat, rephrase, paraphrase or summarise into one category, reflections, with two subcategories of simple and complex. Committing

change talk has been added as a separate behaviour count because it has predicted behaviour change in prior studies (Amrhein, 2004; Amrhein et al., 2003). Further, all client change and sustain talk categories are assigned a strength rating (-3 to +3) following the study by Amrhein et al. (2003) which demonstrated that the strength of committing change talk, particularly toward the end of a single session, predicted behaviour change.

Due to the relative novelty of the MISC 2.1, there have been no published studies evaluating its psychometric properties, but due to its greater parsimony it is expected to be less vulnerable to coding errors and therefore more reliable than the earlier versions. It also integrates recent MI research about the relationship between therapist and client language and client outcomes (Aharonovich et al., 2008; Amrhein, 2004; Moyers, Martin, Christopher, et al., 2007) and therefore better reflects Miller and Rose's (2009) emerging theory of MI. Therefore, while the MISC 2.1 lacks data on its psychometric properties, it was deemed most suitable for the current study. Furthermore, a preliminary aim of the current study was to measure the inter-rater agreement for the MISC2.1 between the researcher and a second coder on a sample of the SMP DVDs coded for the current study (see hypothesis 1.1).

The predecessor of the MISC 2.1, the MISC 1.0, has predicted behaviour change for client drug use (Amrhein et al., 2003), alcohol use (Gaume, Gmel, Faouzi, & Daeppen, 2009), completion of a change plan (Magill et al., 2010), gambling outcomes (Hodgins et al., 2009) and smoking cessation (Catley et al., 2006). Miller and Mount (2001) reported good construct validity for the MISC 1.0 by having independent coders rate MI sessions conducted by experts. As predicted, the MISC 1.0 results suggested that the experts were very proficient in delivering MI. A factor analysis conducted by Moyers, Martin, et al. (2005) generally supported the construct validity of the MISC 1.0 but also suggested some changes that were subsequently adopted as part of the MISC 2.1. de Jonge, Schippers, and Schaap (2005) used MI role-plays to investigate the validity of the MISC 1.0. The therapists were mainly social workers trained in CBT who were being trained in MI. One would act as the therapist while the other acted as a client presenting with alcohol use problems and were requested to present unmotivated to change their alcohol use. de Jonge et al. (2005) generally confirmed the content validity of the MISC 1.0, but reported that it was unbalanced in terms of how it sampled the principles of MI. This

appears to have been somewhat rectified in the new version, MISC 2.1, but there remains very little measurement of the principle of developing discrepancy. Similarly, de Jonge et al. (2005) found that the traps of MI (Miller & Rollnick, 2002), such as the *premature-focus trap*, were not specifically captured. On inspection, this appears to still be the case with the MISC 2.1, although such violations are considered when scoring the spirit of MI global scale.

Reliability studies of the MISC are sparse. The first of these was conducted by Tappin et al. (2000) on a very early version with community midwives trained in MI as part of a smoking cessation trial. In the Tappin et al. (2000) study, the six therapist global ratings were collapsed into one, the four client global scales were collapsed into one and the two interaction scales were collapsed into one. Inter-rater reliability, using intraclass correlation coefficients (ICCs), was .39 for the global therapist scale, .53 for the client scale and .51 for the interaction scale. It was .45 for MI consistent behaviours and .67 for MI inconsistent behaviours, and .77 for client change talk and .76 for client sustain talk. Inter-rater reliability for the individual behaviour counts that constitute change and sustain talk was not reported.

Moyers et al. (2003), based on Cicchetti's (1994) categorisation guidelines, reported good reliability for the majority of the global scales and behaviour counts. In terms of the global scales that were later retained in the MISC 2.1, ICCs of .39 for acceptance, .77 for empathy and .79 for the spirit of MI were demonstrated. For the client global scales, ICCs of .40 for affect, .73 for disclosure, and .76 for engagement were demonstrated. These client global scales have been collapsed into a single "self-exploration" scale in the MISC 2.1 version. The behaviour counts ranged from a poor -.04 for advice with permission to an excellent 1.00 for emphasise control. Fair to excellent levels of reliability were demonstrated for direct, facilitate, filler, giving information, closed-ended question, open-ended question, reframe and support. The study demonstrated poor reliability for advice without permission, affirm, confront, raise concern without permission, structure and warn. The Moyers et al. (2003) study also reported on additional therapist behaviour counts that generally received poor reliability ratings and have been omitted from the MISC 2.1 version. The differing forms of change and sustain talk were not captured but ICCs of .78 for the combined sub-categories of change talk, .53 for the combined sub-categories of sustain talk and .58 for follow/neutral were demonstrated.

de Jonge et al. (2005) also measured the reliability of the MISC 1.0. The MI sessions used for the study were relatively brief with an average length of seven minutes and 50 seconds. The ICCs, with coders as a random effect, demonstrated inter-rater reliability for the therapist global scales of .24 for acceptance, .40 for empathy and .40 for the spirit of MI. They also reported on additional global scales that achieved poor inter-rater agreement and these have been omitted from the MISC 2.1 version. Chi-square analysis was used to measure therapist behaviour count frequencies. These demonstrated considerable variances for the categories of affirm, confront, support, rephrase and paraphrase. Rephrase and paraphrase have been collapsed together and form the category of simple reflection in the MISC 2.1.

A number of studies using the MISC 1.0 for MI process research have reported inter-rater reliability for their own study sample but this has typically been limited to summary scores (Baer et al., 2004; Mullins, Suarez, Ondersma, & Page, 2004). Most recently, Campbell, Adamson, and Carter (2010) used an adaptation of the MISC 2.0, where they included some categories from the MISC 1.0 version, to investigate the role of client language during motivational enhancement therapy for clients presenting with alcohol dependence. Using ICC, this study achieved poor inter-rater agreement for global measures but therapist and client behaviour counts were in the fair to excellent range.

The predecessors of the MISC 2.1 have been criticised for being labour intensive (de Jonge et al., 2005). Therefore, the MISC 2.1 is best suited to research that aims to study the process of MI in detail, such as this study.

Procedure

Approval for this study was granted by the Massey University Human Ethics Committee (MUHEC 10/030) and the Department of Corrections (see Appendix C).

Participant selection

The SMP facilitators were recruited through a convenience sample from the pool of current Department of Corrections' facilitators delivering the SMP to medium risk offenders. The researcher and a colleague introduced the study at the facilitators' National Training Event in October 2010 through a plenary presentation. Facilitators interested in participating in the study were encouraged to register their interest with the researcher following the presentation. The researcher also met with facilitators' team leaders and encouraged them to support the research. Facilitators were further notified by their national manager and team leaders of the study via a departmental email. Thirty-two facilitators registered their interest and provided their contact details for further information. The interested facilitators were contacted by email with an information sheet (Appendix D) and consent form (Appendix E) and requested to signal their consent in their reply. Facilitators were encouraged to reply to their team leader or directly to the researcher. Of the 32 facilitators that indicated their interest in the research, 18 consented to participate. Of these 18, 14 facilitators forwarded Digital Versatile Discs (DVDs) of their SMP sessions. The remaining facilitators were unable to provide DVDs of SMP sessions due to cancellations and postponements. Of the remaining 14 facilitators, one participant's DVDs were used for practice purposes, and therefore omitted from the sample, and another facilitator's DVDs would not play, leaving a total of 12 facilitators.

Participating facilitators were provided with a demographic questionnaire (Appendix F) to place the study in context. Facilitators were asked to submit between one and five (based on availability) of their most recent SMPs which constituted five SMP sessions or those that were otherwise completed and recorded. They were encouraged to forward SMP DVDs without regard for whether the offender had completed all five SMP sessions or whether all sessions were able to be successfully recorded. Facilitators forwarded their SMP DVDs to a designated Department of Corrections office.

Training in the motivational interviewing skills code 2.1

Training in the coding of SMP sessions followed four steps: familiarisation with the MI method, external training by someone experienced in the use of the MISC, further supervised training, and ongoing training and practice with the SMP. These steps were carried out over a five-month period from November 2010 to March 2011. First, the researcher and second coder (a doctoral level psychology student) familiarised themselves with the clinical method of MI through the literature. This included seminal texts and articles (Arkowitz et al., 2008; Miller & Rollnick, 2002; Miller & Rose, 2009; Rosengren, 2009), training video tapes (Miller, Rollnick, & Moyers, 1998) and a two day MI training course delivered by Dr Eileen Britt, a senior clinical psychologist and a member of the international Motivational Interviewing Network of Trainers. Further, the researcher had previously conducted research evaluating the effectiveness of SMP with high risk offenders (Austin et al., 2011). This included the use of a related coding instrument, the motivational interviewing treatment integrity code (Moyers, Martin, Manuel, et al., 2007).

Second, the researcher and second coder undertook two days of training in the use of the MISC 2.1. The training was delivered by Dr Simon Adamson, a senior clinical psychologist at the University of Otago, with experience in using the MISC. Dr Adamson liaised with the developers of the measure and was provided with training resources. These resources included pre-coded transcripts to be used for training and comparison. The training included familiarisation with the manual, discussions of how it could be used with the SMP, coding pre-coded transcripts, coding examples of MI carried out by Dr William Miller and Dr Theresa Moyers and the coding of a SMP DVD. The pre-coded transcripts were provided by the University of New Mexico's Department of Psychology and were used as a gold standard for learning. This approach took a graded learning process where the coders commenced with simple tasks, such as parsing utterances and coding open-ended versus closed-ended questions. Once competence developed with these tasks, coders progressed onto more difficult tasks, such as coding simple and complex reflections. Lastly assigning global scores and making strength ratings was introduced. This graded learning approach was advocated by the instruments developers (Miller et al., 2008).

Third, the researcher and second coder undertook another three days of coding practice, supervised by their mutual supervisor, Dr Mei Wah Williams. This involved further

familiarisation with the MISC 2.1 and extensive practice with an SMP session. The second coder signed a confidentiality agreement (Appendix G) before commencing. Parts of the SMP session were coded together to develop consistency in coding before attempts were made to code independently. Subsequent sections, typically split into 10 minute blocks, were coded independently and compared.

Lastly, the researcher and second coder undertook another three days of coding practice. This consisted of coding sample SMP sessions together and discussing reasons for assigning codes and coding SMP sessions independently and discussing any subsequent discrepancies. This included generating a set of decision rules (Appendix H) to compliment the MISC 2.1 manual. The coding rules were used for coding SMP content that did not reflect the standard MI content upon which the MISC 2.1 was developed. This was deemed important because the SMP integrates MI and cognitive behavioural content and therefore deviates from more prototypical MI. These rules were developed to complement the MISC 2.1 by removing ambiguity when it was applied to the SMP and they did not supersede the MISC 2.1 guidelines. For example, explaining the nature of SMP and how to complete the SMP URICA was coded as “Giving Information”. A similar approach was taken by Campbell et al. (2010) when using an adapted version of the MISC 2.0, an earlier version, to evaluate motivational enhancement therapy. The training phase involved approximately 80 hours of training and was twice that recommended in the MISC 2.1 manual (Miller et al., 2008). This was deemed necessary because SMP differed from prototypical MI sessions and because there was no inter-rater reliability data for the MISC 2.1.

Coding SMP sessions with the MISC 2.1

As per the MISC 2.1 manual (Miller et al., 2008), SMP DVDs were first assigned global scores to reflect the facilitator’s level of acceptance, empathy and MI spirit (evocation, collaboration and autonomy), and the offender’s level of self-exploration. These global scores required that the entire session was viewed without stopping. The length of the session was then recorded and divided into six even segments. This was done to allow the data to be analysed within sessions over time.

During a second pass, facilitator and offender behaviour counts were assigned. The MISC 2.1 allows coders to pause, rewind and start the session as many times as required to

accurately code each utterance. Each facilitator and offender utterance was coded and entered into an Excel spreadsheet. Codes were entered in the order that they occurred. For facilitators, behaviour counts were aggregated into the categories of MI consistent methods, MI inconsistent methods and Neutral. For offenders, behaviour counts were aggregated into the categories of change talk (constituted by reasons, desire, ability and need statements) change talk (other), committing change talk, change talk (taking steps) and change talk total. Sustain talk was aggregated into the same set of categories (see Table 4). At the end of each segment the behaviour counts for each category were summed to form a segment total. The six segment totals were summed to calculate the session total for each facilitator and offender behaviour count category.

Standardising behaviour counts for comparisons between facilitator-offender dyads

Facilitator and offender behaviour count frequencies (totalled for each segment and session) were divided by the segment and session length in minutes. This generated values that represented the mean frequency per minute of a given behaviour count for each segment and session. This was done so that the frequency of behaviour counts could be validly compared across sessions of different lengths. To illustrate, if a session lasted for 60 minutes, it was divided into six 10 minute segments before the coding of facilitator and offender behaviour counts. If a facilitator uttered 21 instances of MI consistent methods in the first segment, 21 would be divided by the segment length (10 minutes) to generate a value, in this case 2.1. As such, the facilitator uttered, on average, 2.1 instances of MI consistent methods per minute during the first segment. The same approach was used with session totals where the total of any one category, such as MI consistent methods, was divided by the total session length in minutes. A similar approach of standardising behaviour counts between segments of varying lengths was used by Amrhein et al. (2003). Behaviour count frequencies were summed and calculations were conducted by developing appropriate formulas within the Excel spreadsheet for which each facilitator-offender's data had been recorded. These values were then entered into SPSS Version 19 (SPSS Inc, 2010) for data analysis. The coding was completed from March to July 2011.

In summary, subsequent to familiarising themselves with the MI method, and before the commencement of coding proper, the researcher and second coder undertook

approximately 80 hours of training. This graded approach to learning how to code MI was similar to that employed in comparable studies (Campbell et al., 2010; Magill et al., 2010) and approximately twice the amount of time typically devoted to studies that evaluated the reliability of the MISC 1.0 (de Jonge et al., 2005; Moyers & Martin, 2003) and recommended in the MISC 2.1 manual (Miller et al., 2008).

Because ratings generated with the MISC 2.1 are somewhat subjective (i.e. judgements about the presence of behaviour are made by a single rater), the generality of the data beyond the single rater becomes questionable (Tinsley & Weiss, 1975). Using a second coder to rate the same set of targets, and subsequently measuring the agreement between the raters, is one approach that can be used to test the likely generality of the data. This ensures that inferences are not based on data by a single idiosyncratic rater. It was therefore deemed important to measure the degree of inter-rater reliability between the researcher and a second coder.

Inter-rater reliability

Inter-rater reliability is the degree to which scores obtained from two or more observers relate to one another. It can also be stated as a ratio of the proportion of variance that stems from raters divided by the sum of the proportion of variance due to raters and the proportion of variance due to targets (Haynes & O'Brien, 2000). In the current study, the raters were the researcher and a second coder. The targets were the MISC 2.1 coding categories (Table 4).

There are a number of statistics that can be used to calculate inter-rater reliability. The current study, in the main, utilised interval level data and therefore the intraclass correlation coefficient (ICC) was appropriate (Tinsley & Weiss, 1975). Likert scales however, such as the facilitator and offender global scales, are considered ordinal level data (Nanna & Sawilowsky, 1998). Nevertheless, Tinsley and Weiss (1975) have suggested that ICC can be applied to Likert scale data if the assumption of equal intervals is not grossly inappropriate. This was considered the case for the acceptance, empathy and MI spirit scales, and is consistent with research evaluating the inter-rater reliability of the MISC (de Jonge et al., 2005; Moyers & Martin, 2003) and comparable studies (Campbell et al., 2010). Furthermore, ICC is a more rigorous estimate of inter-rater reliability than other correlational statistics, such as Pearson's correlation coefficient. It

also corrects for chance agreement and systematic bias, and is therefore considered the statistic of choice when measuring inter-rater reliability (Cicchetti, 1994). However, each of the seven points on the client self-exploration scale is anchored by an idiosyncratic description to define each point in the scale. Therefore, it is not possible to assume equal distances between points (Tinsley & Weiss, 1975) and cannot be considered interval level data. Therefore, it was more appropriate to measure the inter-rater reliability of the self-exploration scale using Cohen's Kappa (Landis & Koch, 1977). A Kappa from 0.40 to 0.59 is considered moderate, 0.60 to 0.79 is considered substantial and 0.80 and above is considered outstanding (Landis & Koch, 1977).

The ICC measures inter-rater reliability by comparing variability of ratings made by different raters of the same target compared to the total variation across all ratings and all targets (Fleiss, 1973). There are a number of ICC variations and choosing the appropriate variation depends on the study's design and conceptual intent (Shrout & Fleiss, 1979). First, it needs to be established how the data will be treated, whether the raters are a random sample from a population of raters or fixed, and what inferences are to be made based on the ICC computation. The intention was not for both coders to rate all SMP sessions and subsequently average out the ratings but to understand to what degree the two raters agreed on a sample of the data. As such, single measure reliability was invoked. Raters in the current study were not randomly selected from a pool and are therefore considered as fixed effects. Further, the intent was not to generalise the findings but to make inferences about the level of agreement between raters for the current study alone (Shrout & Fleiss, 1979). As such, an ICC based on a two-way mixed ANOVA model (single measure) is recommended (McGraw & Wong, 1996). The second decision is premised on whether the intent of the computation was to measure the consistency between rankings (i.e. the degree to which raters consistently vary in their ratings to the same targets) or the degree to which the two raters assigned the same absolute values. By invoking the consistency option, a high level of inter-rater reliability might be achieved if ratings change between targets in a systematic manner between coders without the need to agree on exact ratings. In contrast, by invoking the absolute agreement option, a high level of inter-rater reliability would require consistency and absolute agreement on the actual values assigned (McGraw & Wong, 1996). The latter was considered important in the current study and therefore the absolute agreement option was invoked. This is commonly referred to as inter-rater agreement rather than inter-rater reliability. Therefore,

the ICC model used for the current study was a two-way mixed ANOVA (single measure) with absolute agreement (McGraw & Wong, 1996; Shrout & Fleiss, 1979).

Positive ICC values that approach 1.0 indicate that there is little or no variance between data and no residual variance. Values that approach 0 indicate that within group variance is equal to the variance between groups. Sometimes an ICC may be low due to a lack of variation in the cases rated, low base rates or both. The ICC can also be negative when the within group variance is greater than the between groups variance (Haggard, 1958).

Inter-rater agreement for the current study

Inter-rater agreement was measured after the training phase to decide if ‘coding proper’ could commence. Inter-rater agreement was measured again on a 22% sample of the SMP sessions to ensure that the researcher, who coded all the SMP sessions, was not assigning ratings idiosyncratically. The inter-rater agreement sample ($n = 22$ SMP sessions) was randomly selected (with the use of a random number generator) to be coded by the researcher and a second coder. The 22% inter-rater agreement sample was coded by the second coder immediately following the training phase and by the researcher after all other SMP DVDs were coded. This was deemed to be a more conservative estimate of inter-rater agreement as it would be more likely to capture drift in the primary researcher’s coding following the training phase.

Inter-rater agreement for the training phase is presented next. Inter-rater agreement for the 22% sample of SMP sessions is presented within the results section and constitutes the first hypothesis.

Inter-rater agreement following the training phase

The researcher and second coder independently coded the same two SMP sessions to generate a measure of inter-rater agreement after the training phase and before coding the remaining data set. Inter-rater agreements were calculated for MI consistent and MI inconsistent behaviours, and change and sustain talk. Cichetti’s (1994) categorisation system was used to judge ICCs. A correlation coefficient of below .40 is poor, .40 to .59 is fair, .59 to .74 is good and .75 to 1.0 is excellent. A minimum ICC of .6 was employed as a benchmark before coding proper could commence. At this stage, the inter-rater

agreement for global measures could not be calculated because only two sessions were coded, which would be an inadequate sample size for making comparisons.

The ICCs across 10 minute segments within each of these sessions were .97 for MI consistent methods, .75 for MI inconsistent methods, .95 for change talk and .61 for sustain talk. This was deemed to be an adequate level of inter-rater agreement to proceed with coding proper, although the ICC for sustain talk indicated that some further attention was required. Inter-rater agreement (at this stage) was not calculated for the individual behaviour counts that constituted the summary scores of MI consistent and MI inconsistent behaviour and change and sustain talk. Instead, a more nuanced investigation into the inter-rater agreement achieved for global scales and individual behaviour counts was carried out to answer the first hypothesis. However, the above four summary scores were those that most conceptually linked to the research questions, other than committing change talk, and therefore inter-rater agreement was deemed adequate to proceed with coding the remaining SMP sessions.

Ethical Considerations

It was possible that facilitators may perceive that not participating in this study, due to its endorsement from their senior manager, would reflect negatively upon them and therefore feel coerced into participating. This is an important issue because voluntary participation is an important component of informed consent (Love, 2000). To manage this, facilitators were informed that participation, or lack of participation, would remain confidential and would not be revealed to other Departmental staff, including their team leader and manager. Facilitators were also informed that they were able to withdraw at any stage from the study.

Similarly, the degree to which offenders are able to act voluntarily when consenting to participate in research raises ethical concerns (Johnston, 2000). Offenders may perceive that if they were seen to be noncompliant, for example by declining an invite to participate in the SMP, they would be punished. Offenders may also perceive that by participating they will be given preferential treatment. Because voluntary participation is an important component of informed consent (Love, 2000) the ability of offenders to provide genuine consent can become tenuous. Furthermore, offenders were informed by

facilitators that progress reports will be placed on their file and that their file could be reviewed by the parole board. As such, there is a strong incentive to participate. Johnston (2000) argued that such inducements (positive or negative) are ethical when they are consistent with the goals of treatment; presuming the goals of treatment are in themselves ethical. Johnston purported that an offender who enters treatment due to a perception that the parole board will grant an earlier release is consistent with the goals of treatment. He suggested that early release contingent upon a reduction in risk of recidivism is consistent with the goal of treatment, reduced recidivism and community safety, which are ethically defensible. Further, some offenders on community sentences were instructed to attend the SMP as a condition of their parole. Such inducements are considered ethical by Johnston in that they are linked to reduced recidivism and public safety. Some evidence has suggested that offenders who are mandated to attend treatment achieve similar benefits to those who voluntarily attend (Anglin, Brecht, & Maddahian, 1989) but these findings have not been consistently replicated across various offender samples (Feder & Dugan, 2002).

For consent to be informed, offenders need to be able to understand what they are providing consent for, and this requires they understand the consent form. Research has demonstrated that more than 90% of youth offenders have significant difficulties in at least one area of achievement, including reading comprehension (Rucklidge, McLean, & Bateup, 2009). While the offenders in the current study were adults it would be reasonable to contend that adult offenders may share similar problems in their reading comprehension to youth offenders. To mitigate this, the facilitator would read through the Department of Corrections information and consent form with the offender (unless they clearly preferred to read it themselves), and periodically checked with the offender to confirm their understanding.

It was possible that offenders, in the course of discussing their offending behaviour may divulge information about past or planned serious undetected offending. Offenders were therefore informed by facilitators that if past offending, for which they had not been convicted, or planned serious offending was divulged the facilitator would have a duty to inform the appropriate authorities. What constituted a serious offence was not articulated in the Department of Corrections' information and consent form.

While video-recorded SMP sessions were coded, no information that could identify a facilitator or an offender was collected. The second coder signed a confidentiality agreement before viewing SMP sessions to be coded. Any information that could identify a facilitator or offender was deleted upon the completion of the coding exercise.

Facilitators who requested a summary of the findings were sent a copy (Appendix I) to the address provided on their consent forms. They were also kept informed of developments during the study, including a poster presentation that was delivered at the New Zealand Psychological Society Annual Conference in Queenstown in 2011 (Austin, Williams, Clarke, & Sinclair, 2011).

CHAPTER 8: RESULTS

Data analyses were conducted using the Statistical Package for the Social Sciences Version 19 (SPSS; SPSS Inc, 2010). Preliminary analyses were done first to screen for missing data and outliers. Outliers were checked for their validity and retained. Following this, group-level trends were explored with descriptive statistics. An initial investigation was conducted into the inter-rater agreement between the researcher and second coder when using the MISC 2.1 (Miller et al., 2008) to code SMP sessions. Subsequently, descriptive statistics and a single-case design approach were employed for the remaining hypotheses (Kazdin, 2011). When appropriate, hypothesis testing was supplemented with inferential statistics.

Descriptive Statistics

The mean, standard deviation, and minimum and maximum values for each measure across and within sessions are reported in Tables 5 and 6, respectively. Values for facilitators' use of MI consistent and MI inconsistent methods and offenders' change and sustain talk are expressed as a proportion of the session or segment length. For example, the mean MI consistent value of 2.10 in Table 5 indicates that facilitators uttered an average of 2.10 instances of MI consistent methods per minute across all SMP sessions. In contrast, facilitators uttered an average of 0.14 instances of MI inconsistent methods per minute across all SMP sessions. This was done so that behaviour counts (MI consistent and inconsistent methods, offender change talk and sustain talk, and offender committing change and committing sustain talk) could be compared between sessions and segments of varying lengths.

The MI consistent methods scale is made up of the combined sub-categories of advise with permission, emphasise control, reframe, support, affirm, open-ended questions, and simple and complex reflections. The MI inconsistent methods scale is made up of the combined sub-categories of warn, raise concern without permission, advise without permission, direct and confront. Change and sustain talk are made up of the combined categories of reason, desire, ability and need and are simply referred to as Change Talk and Sustain Talk.

Table 5

*Descriptive Statistics for the RoC*RoI and the MISC 2.1 across SMP Sessions**(N = 98 sessions)*

Constructs	Scale or Category	<i>M</i>	<i>S.D.</i>	Minimum	Maximum	Missing
Risk of Recidivism	RoC*RoI	0.41	0.15	0.12	0.63	4.00
MISC 2.1						
Facilitator Global Scores	Acceptance	4.81	1.52	1.00	7.00	0.00
	Empathy	4.79	1.42	2.00	7.00	0.00
	MI Spirit	4.83	1.37	1.00	7.00	0.00
Offender Global Score	Self-exploration	4.92	1.01	2.00	7.00	0.00
Facilitator MI Methods	MI Consistent	2.10	0.81	0.88	5.00	0.00
	MI Inconsistent	0.14	0.16	0.00	0.80	0.00
Change Talk Categories	Change Talk	0.27	0.28	0.00	1.66	0.00
	Committing	0.06	0.09	0.00	0.53	0.00
	Other	0.15	0.16	0.00	0.98	0.00
	Taking Steps	0.04	0.07	0.00	0.53	0.00
Sustain Talk Categories	Sustain Talk	0.12	0.16	0.00	0.75	0.00
	Committing	0.01	0.03	0.00	0.15	0.00
	Other	0.15	0.16	0.00	0.72	0.00
	Taking Steps	0.01	0.02	0.00	0.12	0.00

Note. RoC*RoI = Risk of Conviction X Risk of Incarceration Scale; MISC 2.1 = Motivational Interviewing Skills Code, Version 2.1; MI Consistent Methods = Combined sub-categories of Advise with Permission, Emphasise Control, Reframe, Support, Affirm, Open-ended Questions, and Simple and Complex Reflections; MI Inconsistent Methods = Combined sub-categories of Warn, Raise Concern without Permission, Advise without Permission, Direct and Confront; Change and Sustain Talk = Combined sub-categories of Reason, Desire, Ability and Need; MISC 2.1 behaviour counts are given as a proportion of the session length

Table 6

Descriptive Statistics for the MISC 2.1 within Sessions (N = 581 Session Segments)

Construct	Scale or Category	<i>M</i>	<i>SD</i>	Minimum	Maximum
Facilitator MI	MI Consistent	2.12	1.08	0.00	7.58
Methods	MI Inconsistent	0.15	0.24	0.00	1.70
Change Talk Categories	Change Talk	0.27	0.41	0.00	2.50
	Committing	0.06	0.15	0.00	1.29
	Other	0.37	0.41	0.00	2.37
	Taking Steps	0.04	0.11	0.00	0.73
Sustain Talk Categories	Sustain Talk	0.12	0.26	0.00	1.75
	Committing	0.01	0.05	0.00	0.83
	Other	0.16	0.29	0.00	2.84
	Taking Steps	0.01	0.03	0.00	0.47

Note. MISC 2.1 = Motivational Interviewing Skills Code, Version 2.1; MI Consistent Methods = Combined sub-categories of Advise with Permission, Emphasise Control, Reframe, Support, Affirm, Open-ended Questions, and Simple and Complex Reflections; MI Inconsistent Methods = Combined sub-categories of Warn, Raise Concern without Permission, Advise without Permission, Direct and Confront; Change and Sustain Talk = Combined sub-categories of Reason, Desire, Ability and Need; MISC 2.1 behaviour counts are given as a proportion of the segment length so segments of varying lengths could be compared during subsequent analyses.

Competency Indices are descriptive statistics that quantify the quality of MI sessions. These indices are given as a mean rating for facilitator global scales (acceptance, empathy and MI spirit), the ratio of total reflections to total questions, open-ended questions as a percentage of total questions, complex reflections as a percentage of total reflections, and MI consistent methods as a percentage of MI consistent plus MI inconsistent methods.

Table 7

Descriptive Statistics for the MISC 2.1 Competency Indices (N = 98 sessions)

Scale	<i>M</i>	<i>S.D.</i>	Minimum	Maximum	Missing
Acceptance	4.81	1.52	1	7	0.00
Empathy	4.79	1.42	2	7	0.00
MI Spirit	4.83	1.37	1	7	0.00
Reflection to Question Ratio	0.97	3.29	0.16	33.00	0.00
Percent Open Questions	46.15	12.99	12.00	71.00	0.00
Percent Complex Reflections	53.19	19.97	14.00	92.00	0.00
Percent MI Consistent Methods	91.85	8.69	59.00	100.00	0.00

Note. MISC 2.1 = Motivational Interviewing Skills Code, Version 2.1; Competency Indices are given as a mean ratio or percentage across all SMP sessions

Normality

Some inferential statistics were planned to supplement the use of single-case methods and descriptive statistics. Parametric tests require data to meet the statistical assumption of normality. Normality was tested with the Kolmogorov-Smirnov statistic. These are outlined in Table 8 for values across and within SMP sessions for the MISC 2.1 with respective skewness and kurtosis scores.

Table 8

Tests of Normality for MISC 2.1 Scores across (N = 98) and within SMP Sessions (N = 581)

Across Sessions					
Construct	Scale or Category	Kolmogorov-Smirnov		Skewness	Kurtosis
		Statistic	Sig.		
Facilitator Global Scores	Acceptance	0.26	0.00	-0.85	-0.47
	Empathy	0.23	0.00	-0.69	-0.70
	MI Spirit	0.24	0.00	-0.97	0.08
Offender Global Score	Self-exploration	0.27	0.00	-0.51	0.16
Competency Indices	Reflection to Question Ratio	0.40	0.00	9.71	95.43
	Percent Open Questions	0.09	0.06	-0.23	-0.48
	Percent Complex Reflections	0.11	0.01	-0.08	-0.97
	Percent MI Consistent Methods	0.22	0.00	-1.61	2.19
Facilitator MI Skills	MI Consistent	0.09	0.07	0.94	1.14
	MI Inconsistent	0.19	0.00	1.73	2.98
Offender Change Talk	Change Talk	0.17	0.00	1.84	5.28
	Committing Change Talk	0.26	0.00	5.11	33.96
Offender Sustain Talk	Sustain Talk	0.22	0.00	1.96	4.15
	Committing Sustain Talk	0.48	0.00	6.45	49.64
Within Sessions					
Facilitator MI Skills	MI Consistent	0.07	0.00	0.96	1.72

	MI Inconsistent	0.27	0.00	2.40	6.94
Offender Change Talk	Change Talk	0.26	0.00	2.00	4.10
	Committing Change Talk	0.42	0.00	4.16	22.71
Offender Sustain Talk	Sustain Talk	0.36	0.00	3.12	11.72
	Committing Sustain Talk	0.52	0.00	8.65	107.28

Note. MISC 2.1 = Motivational Interviewing Skills Code, Version 2.1; MI Consistent Methods = Combined sub-categories of Advise with Permission, Emphasise Control, Reframe, Support, Affirm, Open-ended Questions, and Simple and Complex Reflections; MI Inconsistent Methods = Combined sub-categories of Warn, Raise Concern without Permission, Advise without Permission, Direct and Confront; Change and Sustain Talk = Combined sub-categories of Reason, Desire, Ability and Need; Sig. = Significance.

The significance levels of the Kolmogorov-Smirnov statistic indicated that the assumption of normality was violated (Pallant, 2007) for most MISC 2.1 scales across and within sessions. Two exceptions were the scores on the MI consistent methods scale and the percent open questions index across sessions. Skewness and kurtosis values, Normal Q-Q Plots, Detrended Normal Q-Q Plots and histograms (with a normal curve) for the remaining scales indicated that the facilitator and offender global scales and complex reflections were not unduly skewed. However, the reflection to question ratio, MI inconsistent methods, and offender change and sustain talk scales and committing change and sustain talk categories across and within sessions had clearly violated the assumption of normality.

Some degree of non-normality is expected when measuring psychological constructs (Pallant, 2007). Nevertheless, this degree of non-normality suggested parametric tests were unsuitable when this involved the reflection to question ratio, MI inconsistent methods, change and sustain talk scales, and committing change and sustain talk categories. When this is the case Tabachnick and Fidell (2007) suggested that the data are transformed. However, given the controversy associated with transforming data (Pallant, 2007), and that the skewed data represented the actual nature of the constructs that were measured (i.e. the scale of measurement was not arbitrary), data transformations were not performed. Rather, when inferential statistics were used with these scales, the non-parametric alternative was employed.

1. What is the level of inter-rater agreement between the researcher and a second coder when using the MISC 2.1 to rate SMP sessions?

Because ratings generated with the MISC 2.1 are somewhat subjective (i.e. judgements about the presence of behaviour are made by a single rater), the generality of the data beyond the researcher can be questionable (Tinsley & Weiss, 1975). It was therefore deemed important to measure the degree of inter-rater agreement between the researcher and a second coder. Therefore, an initial aim of this study (constituted by hypothesis 1.1 below) was to measure the inter-rater agreement between the researcher and a second coder on a sample of SMP sessions using the MISC 2.1 (Miller et al., 2008). This provides additional assurance that inferences are not based on data generated by a single idiosyncratic rater.

Hypothesis 1.1

The researcher and second coder will achieve a good level of inter-rater agreement, as defined by Cicchetti's (1994) guidelines, in rating SMP sessions with the MISC 2.1 for the constructs represented in Miller and Rose's (2009) theory of MI. The key constructs propounded by Miller and Rose's (2009) theory are the relational component of MI (represented by the global scales of acceptance, empathy and MI spirit), the scales of MI consistent and MI inconsistent methods, change and sustain talk, and committing change and committing sustain talk.

Table 9 documents intraclass correlation coefficients (ICCs) for the MISC 2.1 therapist and client global scores, MI consistent and MI inconsistent behaviours (including constituent sub-categories) and change and sustain talk (including constituent sub-categories) across the 22 sessions that represent the inter-rater agreement sample. MI *consistent* methods is made up of the sub-categories of advise with permission, emphasise control, reframe, support, affirm, open-ended questions, and simple and complex reflections. MI *inconsistent* methods is made up of the sub-categories of warn, raise concern without permission, advise without permission, direct and confront. Change and sustain talk is made up of the sub-categories of reason, desire, ability and need. Inter-rater reliability for the self-exploration scale was measured using Cohen's Kappa because it was deemed to represent an ordinal level of measurement.

Table 9

*Inter-rater Agreement of Global Scores and Behaviour Counts for MISC 2.1 Session
Totals (N = 22 SMP Sessions)*

Scale	ICC	Agreement category	Sig.
Acceptance	.86	Excellent	.00
Empathy	.86	Excellent	.00
MI Spirit	.80	Excellent	.00
Offender Self-exploration	.39 (Kappa)	Below Moderate	.00
MI Consistent Methods	.95	Excellent	.00
Advise with Permission	-.06	Poor	.56
Emphasise Control	.28	Poor	.23
Reframe	.06	Poor	.44
Support	.75	Excellent	.00
Affirm	.94	Excellent	.00
Open Question	.89	Excellent	.00
Complex Reflection	.89	Excellent	.00
Simple Reflection	.95	Excellent	.00
Raise Concern with Permission		Zero variance items	
Closed Question	.95	Excellent	.00
Filler	.75	Excellent	.00
Giving Information	.79	Excellent	.00
Structure	.68	Good	.00
Facilitate	.98	Excellent	.00
MI Inconsistent Methods	.90	Excellent	.00
Warn	.68	Good	.00
Raise Concern without Permission	.56	Fair	.03
Advise without Permission	.76	Excellent	.00
Direct	.64	Good	.01
Confront	.84	Excellent	.00
Change Talk	.87	Excellent	.00
Change Talk (Reason)	.82	Excellent	.00
Change Talk (Other)	.49	Fair	.07
Committing Change Talk	.40	Fair	.13

Change Talk (Taking Steps)	.59	Good	.02
Change Talk (Desire)	.87	Excellent	.00
Change Talk (Ability)	.91	Excellent	.00
Change Talk (Need)	.67	Good	.01
Sustain Talk	.92	Excellent	.00
Sustain Talk (Reason)	.85	Excellent	.00
Sustain Talk (Other)	.86	Excellent	.00
Committing Sustain Talk	.90	Excellent	.00
Sustain Talk (Taking Steps)	-.29	Poor	.72
Sustain Talk (Desire)	.87	Excellent	.00
Sustain Talk (Ability)	.96	Excellent	.00
Sustain Talk (Need)	.24	Poor	.27

Note. MISC 2.1 = Motivational Interviewing Skills Code, Version 2.1; MI Consistent Methods = Combined sub-categories of Advise with Permission, Emphasise Control, Reframe, Support, Affirm, Open-ended Questions, and Simple and Complex Reflections; MI Inconsistent Methods = Combined sub-categories of Warn, Raise Concern without Permission, Advise without Permission, Direct and Confront; Change and Sustain Talk = Combined sub-categories of Reason, Desire, Ability and Need

Each session was split into six even segments so that analyses could be conducted within sessions. Therefore, inter-rater agreement was also investigated across the 132 segments that constituted the 22 sessions. Table 10 documents ICCs of the MISC 2.1 for MI consistent and MI inconsistent behaviours (including constituent sub-categories) and offender change and sustain talk (including constituent sub-categories) across the 132 segments.

Table 10

Inter-rater Agreement of MISC 2.1 Behaviour Counts for Segment Totals within Sessions
(N = 132 Session Segments)

Scale	ICC	Agreement category	Sig.
MI Consistent Methods	.92	Excellent	.00
Advise with Permission	-.01	Poor	.52
Emphasise Control	.41	Fair	.00
Reframe	-.03	Poor	.56
Support	.74	Good	.00
Affirm	.90	Excellent	.00
Open Question	.86	Excellent	.00
Complex Reflection	.88	Excellent	.00
Simple Reflection	.91	Excellent	.00
Raise Concern with Permission		Zero variance items	
Closed Question	.93	Excellent	.00
Filler	.66	Good	.00
Giving Information	.87	Excellent	.00
Structure	.48	Fair	.00
Facilitate	.94	Excellent	.00
MI Inconsistent Methods	.80	Excellent	.00
Warn	-.03	Poor	.56
Raise Concern without Permission	.54	Fair	.00
Advise without Permission	.66	Good	.00
Direct	.57	Fair	.00
Confront	.85	Excellent	.00
Change Talk	.88	Excellent	.00
Change Talk (Reason)	.87	Excellent	.00
Change Talk (Other)	.64	Good	.00
Committing Change Talk	.65	Good	.00
Change Talk (Taking Steps)	.60	Good	.00
Change Talk (Desire)	.69	Good	.00
Change Talk (Ability)	.87	Excellent	.00
Change Talk (Need)	.45	Fair	.00

Sustain Talk	.86	Excellent	.00
Sustain Talk (Reason)	.80	Excellent	.00
Sustain Talk (Other)	.84	Excellent	.00
Committing Sustain Talk	.57	Fair	.00
Sustain Talk (Taking Steps)	-.08	Poor	.67
Sustain Talk (Desire)	.49	Fair	.00
Sustain Talk (Ability)	.74	Good	.00
Sustain Talk (Need)	.15	Poor	.18

Note. MISC 2.1 = Motivational Interviewing Skills Code, Version 2.1; MI Consistent Methods = Combined sub-categories of Advise with Permission, Emphasise Control, Reframe, Support, Affirm, Open-ended Questions, and Simple and Complex Reflections; MI Inconsistent Methods = Combined sub-categories of Warn, Raise Concern without Permission, Advise without Permission, Direct and Confront; Change and Sustain Talk = Combined sub-categories of Reason, Desire, Ability and Need

Table 11 documents ICCs for the strength (low, medium and high) of offender change and sustain talk and the sub-categories of change and sustain talk across sessions.

Table 11

Inter-rater Agreement for Strength of Change Talk and Sustain Talk Categories for the MISC 2.1 across Sessions (N = 22 Sessions)

Scale (strength rating)	ICC	Agreement category	Sig.
Change Talk (low)	.53	Fair	.00
Change Talk (medium)	.70	Good	.00
Change Talk (high)	.53	Fair	.00
Sustain Talk (low)	.41	Fair	.03
Sustain Talk (medium)	.81	Excellent	.00
Sustain Talk (high)	-.09	Poor	.57
Change Talk Reason (low)		No items	
Change Talk Reason (medium)	.90	Excellent	.00
Change Talk Reason (high)		Zero variance items	
Sustain Talk Reason (low)		No items	
Sustain Talk Reason (medium)	.84	Excellent	.00
Sustain Talk Reason (high)		No items	
Change Talk Desire (low)	-.16	Poor	.63

Change Talk Desire (medium)	.89	Excellent	.00
Change Talk Desire (high)		Zero variance items	
Sustain Talk Desire (low)		No items	
Sustain Talk Desire (medium)	.24	Poor	.26
Sustain Talk Desire (high)		No items	
Change Talk Ability (low)		No items	
Change Talk Ability (medium)	.90	Excellent	.00
Change Talk Ability (high)		Zero variance items	
Sustain Talk Ability (low)		Zero variance items	
Sustain Talk Ability (medium)	.96	Excellent	.00
Sustain Talk Ability (high)		No items	
Change Talk Need (low)	.00	Poor	.50
Change Talk Need (medium)	.70	Good	.00
Change Talk Need (high)		No items	
Sustain Talk Need (low)		No items	
Sustain Talk Need (medium)	.16	Poor	.34
Sustain Talk Need (high)		No items	
Change Talk Other (low)	.43	Fair	.10
Change Talk Other (medium)	.45	Fair	.09
Change Talk Other (high)	-.09	Poor	.58
Sustain Talk Other (low)		Zero variance items	
Sustain Talk Other (medium)	.87	Excellent	.00
Sustain Talk Other (high)		Zero variance items	
Committing Change Talk (low)	.66	Good	.01
Committing Change Talk (medium)	.33	Poor	.18
Committing Change Talk (high)		Zero variance items	
Committing Sustain Talk (low)		Zero variance items	
Committing Sustain Talk (medium)	.78	Excellent	.00
Committing Sustain Talk (high)		Zero variance items	
Change Talk Taking Steps (low)		Zero variance items	
Change Talk Taking Steps (medium)	.52	Fair	.04
Change Talk Taking Steps (high)		Zero variance items	
Sustain Talk Taking Steps (low)		No items	

Sustain Talk Taking Steps (medium)	-.32	Poor	.74
Sustain Talk Taking Steps (high)		No items	

Note. MISC 2.1 = Motivational Interviewing Skills Code, Version 2.1; Change and Sustain Talk = Combined sub-categories of Reason, Desire, Ability and Need

Summary of hypothesis 1.1

The above analysis was carried out to measure the level of inter-rater agreement between the researcher and a second coder on a sample of SMP sessions prior to testing subsequent hypotheses. Given the hypotheses posed for this study, based on Miller and Rose's (2009) emergent theory of MI, the facilitator scales of most relevance were the global scales of acceptance, empathy and MI spirit, and the scales of MI consistent methods and MI inconsistent methods. The offender scales of most relevance were the global self-exploration scale, change and sustain talk, committing change and sustain talk, and the change and sustain talk strength ratings.

Excellent levels of inter-rater agreement were achieved for facilitator global scales, MI consistent methods, MI inconsistent methods and change talk and sustain talk for sessions and segments. These findings supported hypothesis 1.1 based on Cichetti's (1994) categorisation system for ICCs.

The self-exploration scale closely approached moderate inter-rater reliability based on Cohen's Kappa. Committing change talk achieved only fair inter-rater agreement across sessions but achieved good inter-rater agreement within sessions. Committing sustain talk achieved only fair inter-rater agreement within sessions but achieved excellent inter-rater agreement across sessions. These results provided mixed support for hypothesis 1.1.

Discussion of hypothesis 1.1

On average, committing change and committing sustain talk achieved a good level of inter-rater agreement across sessions and segments. Further, committing change and committing sustain talk has predicted behaviour change in prior studies (Aharonovich et al., 2008; Amrhein et al., 2003; Hodgins et al., 2009) and therefore was retained for subsequent hypothesis testing. Because the self-exploration scale and offender committing change and sustain talk categories did not reach a consistently good level of

inter-rater agreement, based on Cicchetti's (1994) guidelines, some caution is warranted in the interpretation of this data.

Many of the sub-categories that comprise the summary scales were coded with a high degree of inter-rater agreement. However, other than committing change and committing sustain talk, data analyses were restricted to the summary scales, namely facilitator and offender global scales, facilitator MI consistent and MI inconsistent methods, and offender change talk and sustain talk, and one sub-category, offender committing change and sustain talk. This was done for three reasons: some of the behaviour counts achieved only poor to fair inter-rater agreement, such as advise with permission; studies have demonstrated the global scores, summary scales and committing change and sustain talk are the constructs most empirically related to motivational and behavioural outcomes, as illustrated in Miller and Rose's (2009) emerging theory of MI, and; studies of inter-rater reliability have only been carried out on the MISC 1.0 and therefore it was deemed important to restrict subsequent hypothesis testing and analyses to only the most reliable scales (Dr Simon Adamson, personal communication, July 26, 2011).

The researcher had hoped to include an analysis of change and sustain talk strength in subsequent hypothesis testing. This was based on a study by Amrhein et al. (2003) that demonstrated a relationship between the within-session trajectory of committing change talk strength and behaviour change. However, only poor to fair inter-rater agreement was achieved for low and high strength ratings of offender change and sustain talk sub-categories, which included committing change talk. Previous inter-rater reliability studies have not investigated change and sustain talk strength ratings (de Jonge et al., 2005; Moyers et al., 2003; Tappin et al., 2000). However, studies that have used the strength ratings have reported on inter-rater reliability. Amrhein et al. (2003) found that inter-rater correlation averaged .83 across change and sustain talk strength ratings for deciles of a single session. However, this study did not describe whether inter-rater reliability changed depending on the sub-category (reasons, desire, ability, need, taking-steps, other and commitment) and strength (a range of -5 to +5 was used) of change and sustain talk. Campbell et al. (2010) measured inter-rater reliability across change and sustain talk sub-categories and achieved a fair rating for ability, a good rating for taking steps and committing change talk and excellent ratings for reason and the average for all change and sustain talk sub-categories. However, the specific inter-rater reliability for each

strength rating (a range of -3 to +3 was used) by change and sustain talk sub-category was not reported. A recent study by Moyers et al. (2009) was unable to demonstrate adequate inter-rater agreement amongst the strength of change and sustain talk sub-categories. Dr Theresa Moyers, one of the developers of the MISC 2.1 and its earlier versions, reported that it has been difficult to achieve adequate inter-rater agreement of strength ratings despite judicious training and supervision (T. B. Moyers, personal communication, August 1, 2011). Due to the inadequate inter-rater agreement of low and high change and sustain talk strength ratings, and a lack of published reports to support the inter-rater reliability of strength ratings, they were not included in subsequent hypothesis testing and analyses for the current study.

Analyses were therefore restricted to the global scales of facilitator acceptance, empathy and MI spirit and offender self-exploration; the facilitator scales of MI consistent and MI inconsistent methods; offender change talk and sustain talk and offender committing change talk and committing sustain talk.

2. What is the nature of facilitators' use of MI during the SMP?

Hypothesis 2.1

Facilitators will demonstrate a competent level of acceptance, empathy, and MI spirit (collaboration, evocation, autonomy) across SMP sessions.

Cut-off scores were used to evaluate facilitators' competence in MI. These were largely based on the beginning proficiency and competency thresholds of the MI Treatment Integrity Code (MITI 3.0; Moyers, Martin, Manuel, Miller, & Ernst, 2010), which is a measure based on the MISC 2.1 (Moyers et al., 2005). These cut-off scores were generated by the authors of the MITI, experts in MI, and are not considered to be norms.

The MITI generates a global clinician rating based on the ability of the clinician to demonstrate the spirit of MI (evocation, collaboration and autonomy-support), empathy and direction. However, unlike the MITI, the MISC 2.1 *does not* measure *direction*. Instead, the MISC 2.1 measures the ability to demonstrate *acceptance*. Therefore, for the current study, the global clinician rating was based on the mean of the MISC 2.1 global scales of MI spirit (evocation, collaboration and autonomy-support), empathy and acceptance. This differs to the MITI through the exclusion of *direction* and the inclusion of *acceptance*. Furthermore, the MITI uses a five-point scale for global scores whereas the MISC 2.1 uses a seven-point scale. Therefore, the researcher converted the MITI global clinician rating for beginning proficiency (3.5 out of 5) and competency (4 out of 5) into percentages of 70 and 80, respectively. These were used to calculate beginning proficiency and competency cut-off scores for the MISC 2.1. As such, beginning proficiency and competency scores of 4.90 and 5.60, respectively, were generated for the global scales (acceptance, empathy and MI spirit) and the global clinician rating of the MISC 2.1.

The global clinician rating and cut-off scores for the global measures were generated by the researcher, based on the MITI, and do not represent norms. Further, the global clinician rating used here differs to that in the MITI and therefore direct comparisons to studies using the MITI are not possible. As such, it is possible that SMP facilitators are able to be effective without achieving these standards, and this would need to be tested with further research (Dr Eileen Britt, personal communication, July 6, 2012).

On average facilitators did not achieve competency for acceptance, empathy and MI spirit compared to cut-off scores, although there was considerable variation. Therefore, hypothesis 2.1 was not supported.

Table 12

Mean MISC 2.1 Scores for Facilitators across SMP Sessions (N = 98 sessions)

Scale	Study Sample		Cut-off Scores	
	<i>M</i>	<i>SD</i>	Beginning Proficiency	Competency
Global Clinician Rating	4.81	1.37	4.90	5.60
MI Spirit	4.83	1.37	4.90	5.60
Acceptance	4.81	1.51	4.90	5.60
Empathy	4.79	1.42	4.90	5.60
Reflection to Question Ratio	0.97	3.29	1.00	2.00
Percent Open Questions	46.15%	12.99	50.00%	70.00%
Percent Complex Reflections	53.19%	19.97	40.00%	50.00%
Percent MI Consistent Responses	91.85%	8.69	90.00%	100.00%

Note. Cut-off scores (other than global scores) were taken from the Motivational Interviewing Treatment Integrity Code (MITI), a measure based on the MISC 2.1. They were generated by experts in MI and are not norms (Moyers, Martin, Manuel, et al., 2007). The global scores were calculated based on the MITI and were generated by the researcher.

Hypothesis 2.2

Facilitators will, in-keeping with a competent level of MI skills, use two reflections for every question across SMP sessions, as shown in the Reflection to Question ratio. As seen in Table 12, facilitators uttered on average slightly less than one reflection for every question. Therefore, hypothesis 2.2 was not supported.

Hypothesis 2.3

Facilitators will, in-keeping with a competent level of MI skills, use 70% open questions compared to total questions. As seen in Table 12, facilitators uttered slightly less than 50% open questions. Therefore, hypothesis 2.3 was not supported.

Hypothesis 2.4

Facilitators will, in-keeping with a competent level of MI skills, utter 50% complex reflections compared to total reflections across SMP sessions. As seen in Table 12, facilitators' uttered more than 50% complex reflections compared total reflections across SMP sessions. Therefore, hypothesis 2.4 was supported.

Hypothesis 2.5

Facilitators will, in-keeping with a competent level of MI skills, utter 100% MI consistent methods compared to the sum of MI consistent and inconsistent methods across SMP sessions. As seen in Table 12, facilitators uttered 90% MI consistent methods compared to the sum of MI consistent and MI inconsistent methods. Therefore, hypothesis 2.5 was not supported.

Hypothesis 2.6

Facilitators will demonstrate greater competency in MI during sessions without cognitive behavioural content (sessions three and five) when compared to sessions with cognitive behavioural content (sessions two and four). Based on Table 13 and Figure 3, facilitators' global scores were marginally greater at session three, but not session five, compared to sessions two and four. Differences in acceptance, empathy and MI spirit were not markedly different across SMP sessions. Due to the negligible differences between sessions the facilitator global scales were not further investigated with inferential statistics.

Table 13

MISC 2.1 Session Totals for Facilitator Global Scales (N = 98 Sessions)

Scale	Mean (SD)				
	Session 1	Session 2	Session 3	Session 4	Session 5
Acceptance	4.52 (1.97)	4.67 (1.53)	5.05 (1.29)	4.94 (1.31)	4.80 (1.52)
Empathy	4.71 (1.74)	4.67 (1.59)	4.95 (1.17)	4.89 (1.18)	4.60 (1.45)
MI Spirit	4.38 (1.77)	4.76 (1.41)	5.09 (1.15)	4.94 (1.11)	4.93 (1.34)

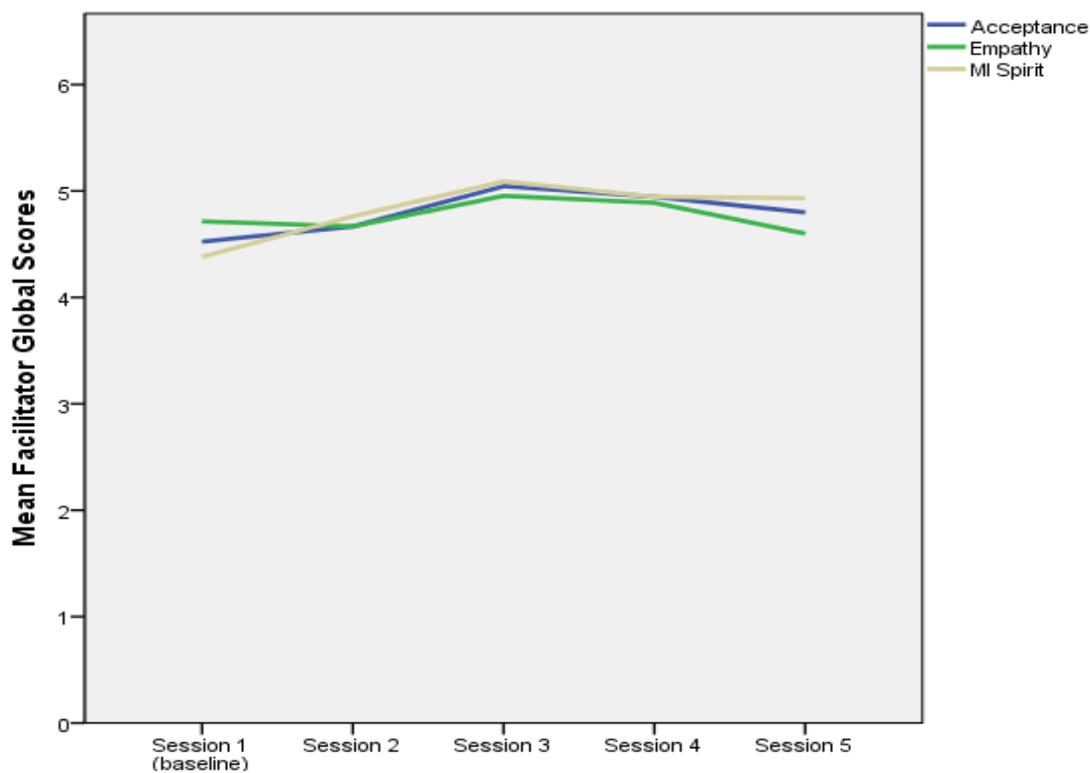


Figure 3. Facilitator global scores across SMP sessions

The use of MI across SMP sessions was further investigated by analysing indices of MI competence based on facilitators' use of open-ended questions, complex reflections and MI consistent methods. Based on Table 14 and Figure 4, facilitators' use of MI consistent methods and open-ended questions was not any greater during sessions three and five

compared to sessions two and four. However, facilitators used more complex reflections (an explicit MI skill) during session three and five compared to sessions two and four. Therefore, facilitators' rate of complex reflections was further explored through significance testing. Facilitators' scores on the percent of complex reflections index were not unduly skewed (see Table 8). Therefore, a one-way repeated measures ANOVA was conducted to compare scores on the percent of complex reflections at sessions one to five. There was a significant effect for time, Wilks' Lambda = .05, $F(4, 5) = 25.78$, $p < .05$ and a large effect size, multivariate partial eta squared = 0.95 (Cohen, 1988). Comparisons between sessions were planned and therefore a Bonferroni adjustment was invoked to control for Type One errors. The SPSS pairwise comparisons table demonstrated a significant increase in complex reflections at session three and a significant decrease at session four. The illustrated increase in complex reflections at session five was not found to be significant.

Table 14

MI Competency Indices based on Session Totals (N = 98 Sessions)

Scale	Mean (SD)				
	Session 1	Session 2	Session 3	Session 4	Session 5
Percent Open-ended Questions	33.95 (8.54)	51.05 (11.37)	51.77 (10.46)	51.76 (9.48)	43.64 (15.05)
Percent Complex Reflections	44.57 (19.78)	52.81 (17.66)	62.18 (19.11)	49.50 (16.35)	58.00 (21.59)
Percent MI Consistent Methods	91.10 (12.37)	93.48 (7.10)	91.18 (7.69)	91.83 (5.80)	91.57 (10.12)
Reflection to Question Ratio	0.54 (0.26)	0.65 (0.31)	2.25 (6.88)	0.59 (0.35)	0.64 (0.41)

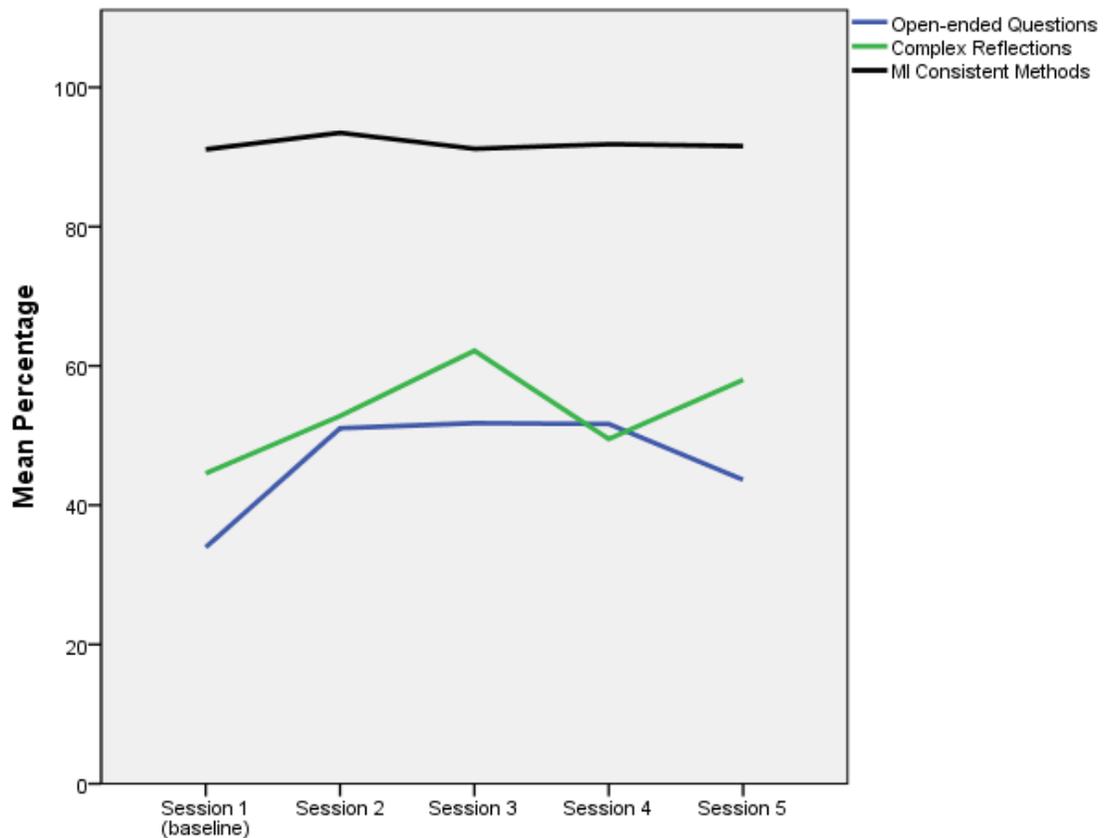


Figure 4. MI competency indices across SMP sessions

The reflection to question ratio, as an indicator of MI competence, was also investigated. Table 14 and Figure 5 suggested that the ratio of total reflections to total questions was markedly higher at session three, but not during session five, compared to sessions two and four. Therefore, facilitators' ratio of total reflections to total questions was further explored through significance testing. Facilitators' scores on the reflection to question ratio were unduly skewed (see Table 8) and therefore the non-parametric equivalent of the one-way repeated measures ANOVA, the Friedman Test, was performed. The results of the Friedman Test indicated that there was not a statistically significant difference in facilitators' reflection to question ratio between SMP sessions, $\chi^2 (2, n = 9) = 6.23, p > .05$.

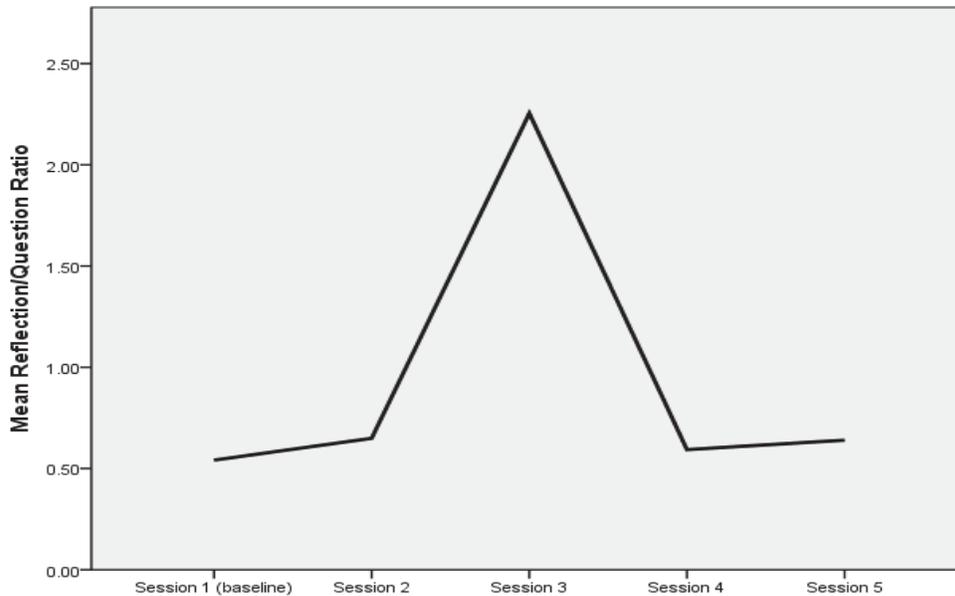


Figure 5. Reflection to question ratio across SMP sessions

As such, there was mixed support for hypothesis 2.6 that facilitators would demonstrate greater competency during MI sessions that did not include cognitive behavioural content (sessions three and five) compared to sessions that included cognitive behavioural content (sessions two and four).

Summary of hypotheses 2.1 to 2.6

A range of summary scores were calculated and compared to thresholds developed by expert opinion and the researcher to measure competence in MI (Moyers, Martin, Manuel, et al., 2007). Mean complex reflection scores were in the competent range but mean global scores were not. Similarly, there were too many MI inconsistent methods used, too few reflections compared to questions and too few open- compared to closed-ended questions used to reach competence on these indices. Based on visual inspection, global scores of acceptance, empathy and MI spirit varied marginally between sessions. The rate of complex reflections was higher at sessions three and five. Testing supported a significant increase at session three but not at session five. Based on visual inspection, the reflection to question ratio was higher at session three, but this was not found to be statistically significant. Further, the rate of open-ended questions and MI consistent methods were no greater at session three and five compared to sessions two and four. As such, there was only mixed support for the hypothesis that facilitators will demonstrate greater competence in sessions without cognitive behavioural content.

3. What is the nature of offender change and sustain talk?

Hypothesis 3.1

Offender change and committing change talk will increase and offender sustain and committing sustain talk will decrease across sessions.

To answer hypothesis 3.1, the rates of offender change and committing change talk and sustain and committing sustain talk were investigated across each of the five sessions. Table 15 and Figure 6 illustrated that change talk, on average, increased across sessions but this included substantial fluctuations. There was a marked increase in change talk at sessions three and five compared to sessions one, two and four. Change talk remained higher during session four, compared to sessions one and two, and therefore represented a mean increase. Other than a small decrease during the fourth session, committing change talk increased across sessions with the largest increase at session five. Sustain talk increased across sessions in a similar pattern to change talk. Committing sustain talk remained low but increased slightly at sessions three and five. This pattern of change and committing change talk across sessions supported hypothesis 3.1. However, the pattern of sustain talk across sessions did not support hypothesis 3.1.

Table 15

MISC 2.1 Session Totals for Change and Sustain Talk (N = 98 Sessions)

Scale or Category	Mean (SD)				
	Session 1	Session 2	Session 3	Session 4	Session 5
Change Talk	0.11 (0.11)	0.15 (0.17)	0.56 (0.37)	0.18 (0.13)	0.35 (0.21)
Committing Change Talk	0.02 (0.03)	0.02 (0.03)	0.06 (0.07)	0.04 (0.05)	0.19 (0.16)
Sustain Talk	0.08 (0.17)	0.07 (0.09)	0.18 (0.16)	0.11 (0.15)	0.21 (0.22)
Committing Sustain Talk	0.01 (0.03)	0.01 (0.03)	0.02 (0.04)	0.00 (0.01)	0.02 (0.03)

Note. Change and Sustain Talk = Combined sub-categories of Reason, Desire, Ability and Need

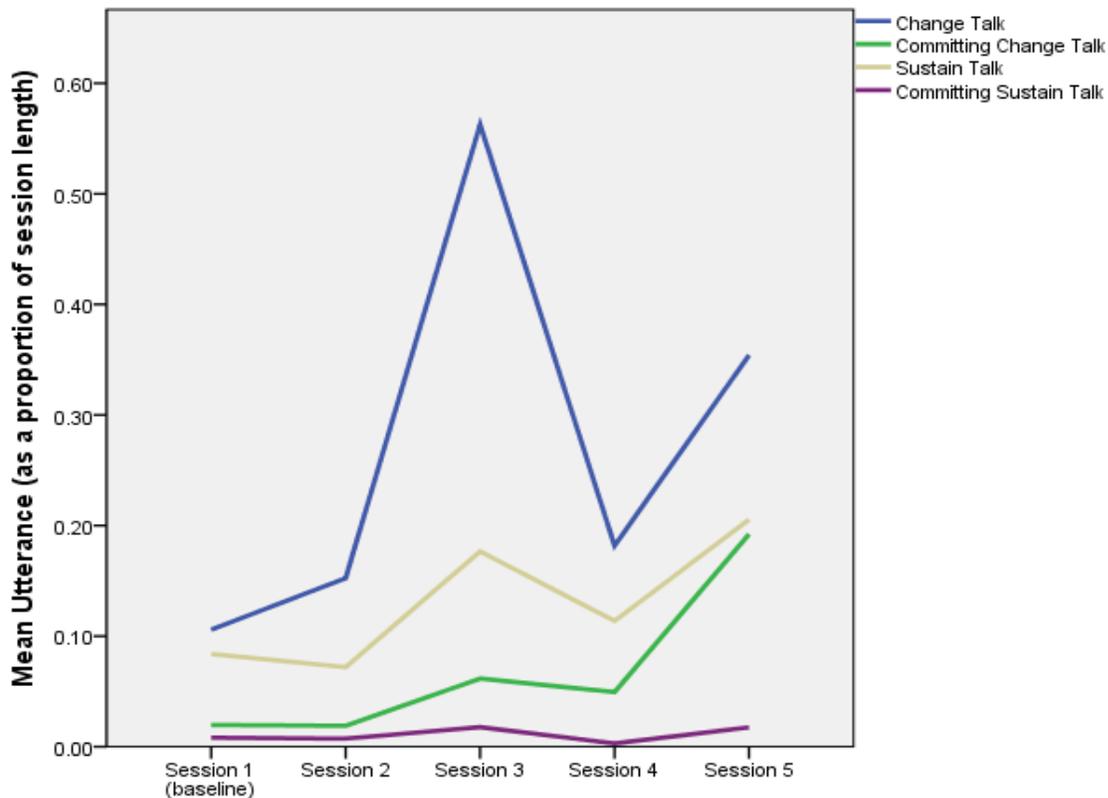


Figure 6. Change and sustain talk categories across SMP sessions

Hypothesis 3.2

Offender change and committing change talk will increase and offender sustain and committing sustain talk will decrease at sessions without cognitive behavioural content.

Based on Table 15 and inspection of Figure 6, offenders' change and committing change talk was markedly higher at sessions without cognitive behavioural content (sessions three and five) compared to sessions with cognitive behavioural content (sessions two and four). This supported the first part of hypothesis 3.2. However, the second part of hypothesis 3.2 was not supported due to increases in offenders' sustain and committing sustain talk at sessions without cognitive behavioural content.

Seven facilitators provided more than a single set of SMP DVDs. Therefore, offenders' change and sustain talk scores were not strictly independent of each other. Independence of observations is one of the assumptions common to most inferential statistics (Pallant, 2007). Violation of the independence of observations assumption is considered to be very serious (Stevens, 2002) because dependent data can inflate the alpha level and

subsequently the risk of making a Type One error (Spicer, 2005). Therefore, inferential statistics were not used to test the difference in offenders' change and sustain talk between sessions with and without cognitive behavioural content.

Hypothesis 3.3

Offender change and committing change talk will increase and offender sustain and committing sustain talk will decrease within sessions two to five.

To answer hypothesis 3.3, offender change and committing change talk and sustain and committing sustain talk were investigated within each session at the group-level. Session one is primarily an assessment session and therefore acted as a baseline. In Table 16 and Figure 7 change talk decreased during session one until the fourth segment, increased at the fifth segment and remained relatively stable until the end of the session with an overall decrease. Committing change talk decreased from segment one to four and then increased until the final segment but remained relatively low during session one. Sustain talk decreased during session one, notwithstanding small increases at the third and sixth segment. Committing sustain talk decreased from segments one and two to segment three and remained low throughout the remainder of session one.

Table 16

MISC 2.1 Segment Totals for Change and Sustain Talk within Session One

Scale or Category	Mean (SD)					
	Seg. 1	Seg. 2	Seg. 3	Seg. 4	Seg. 5	Seg. 6
Change Talk	0.29 (0.44)	0.13 (0.25)	0.07 (0.13)	0.03 (0.06)	0.09 (0.15)	0.08 (0.16)
Committing Change Talk	0.04 (0.09)	0.01 (0.05)	0.01 (0.03)	0.00 (0.00)	0.01 (0.03)	0.03 (0.08)
Sustain Talk	0.11 (0.30)	0.09 (0.20)	0.12 (0.29)	0.06 (0.19)	0.06 (0.19)	0.10 (0.26)
Committing Sustain Talk	0.02 (0.07)	0.03 (0.08)	0.00 (0.00)	0.00 (0.02)	0.00 (0.00)	0.00 (0.00)

Note. Change and Sustain Talk = Combined categories of Reason, Desire, Ability and Need; Seg. = Session Segment

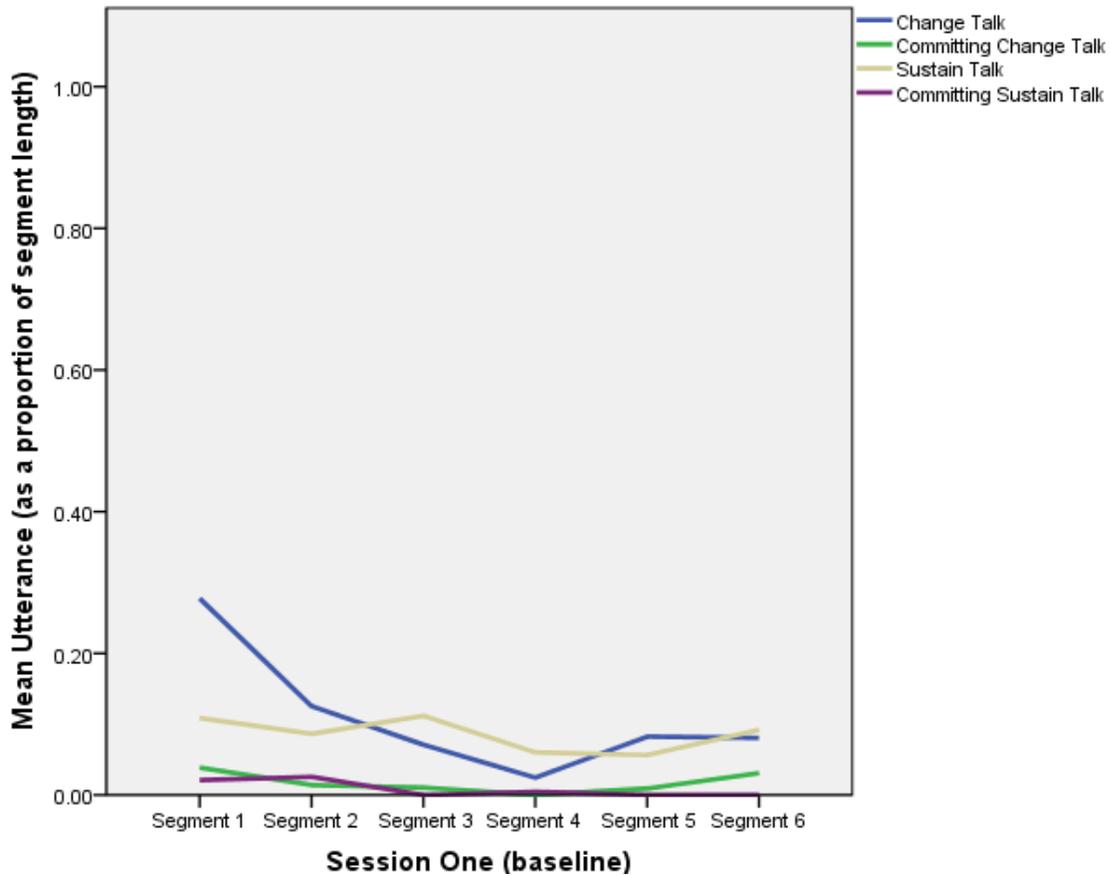


Figure 7. Change and sustain talk categories within session one (baseline)

In Table 17 and Figure 8 change talk increased from the first to second segment of session two. Change talk remained relatively stable throughout session two until the fourth segment and then increased until the end of the session. This increase was steepest from the fifth to the sixth segment. Committing change talk increased from segment one to two before decreasing again at segment three. Committing change talk remained low during segments three to five and increased during segment six. Sustain talk dropped from the first to the second segment and peaked steeply in the third segment. This peak quickly dissipated in the fourth segment and was followed by a slight increase during the fifth and sixth segments. Committing sustain talk remained low until the last segment and then increased.

Table 17

MISC 2.1 Segment Totals for Change and Sustain Talk within Session Two

Scale or Category	Mean (SD)					
	Seg. 1	Seg. 2	Seg. 3	Seg. 4	Seg. 5	Seg. 6
Change Talk	0.06 (0.17)	0.12 (0.30)	0.13 (0.44)	0.12 (0.26)	0.14 (0.26)	0.22 (0.28)
Committing Change Talk	0.01 (0.03)	0.05 (0.10)	0.01 (0.03)	0.00 (0.02)	0.01 (0.02)	0.07 (0.13)
Sustain Talk	0.09 (0.21)	0.02 (0.10)	0.18 (0.24)	0.03 (0.09)	0.05 (0.13)	0.07 (0.18)
Committing Sustain Talk	0.00 (0.02)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.04 (0.19)

Note. Change and Sustain Talk = Combined categories of Reason, Desire, Ability and Need; Seg. = Session Segment

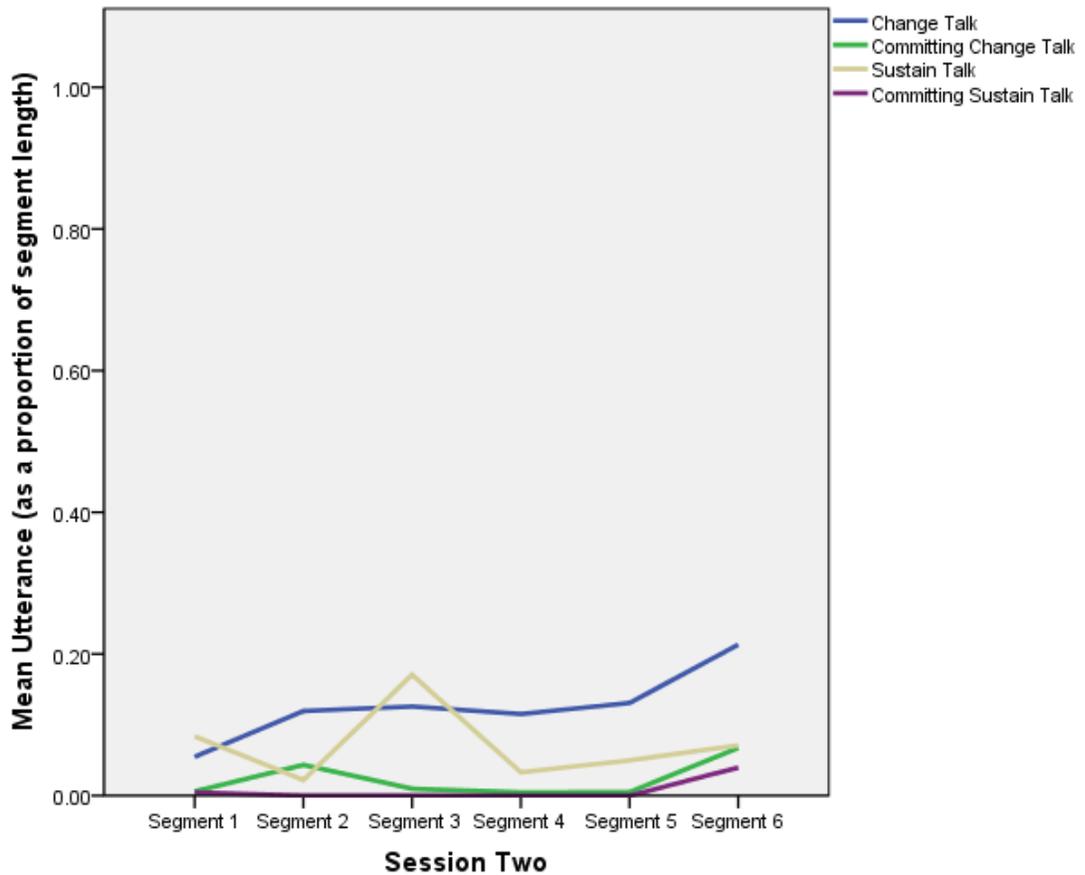


Figure 8. Change and sustain talk categories within session two

In Table 18 and Figure 9 change talk increased from the first to the second segment of session three, remained relatively stable until the fourth segment before dropping at the fifth segment, and remained low in the last segment. Committing change talk remained stable and low across the first two segments, was higher at the third to the fifth segment and increased in the final segment. Session three, despite a decrease from segment two to three, demonstrated a slight increase in sustain talk. Committing sustain talk remained low throughout with a slight increase at segment five.

Table 18

MISC 2.1 Segment Totals for Change and Sustain Talk within Session Three

Scale or Category	Mean (SD)					
	Seg. 1	Seg. 2	Seg. 3	Seg. 4	Seg. 5	Seg. 6
Change Talk	0.28 (0.55)	0.62 (0.62)	0.68 (0.65)	0.64 (0.56)	0.49 (0.41)	0.53 (0.45)
Committing Change Talk	0.02 (0.04)	0.02 (0.05)	0.10 (0.17)	0.07 (0.11)	0.06 (0.12)	0.12 (0.27)
Sustain Talk	0.11 (0.24)	0.21 (0.29)	0.16 (0.22)	0.16 (0.20)	0.23 (0.29)	0.23 (0.38)
Committing Sustain Talk	0.01 (0.06)	0.01 (0.04)	0.01 (0.03)	0.02 (0.06)	0.04 (0.09)	0.00 (0.02)

Note. Change and Sustain Talk = Combined categories of Reason, Desire, Ability and Need; Seg. = Session Segment

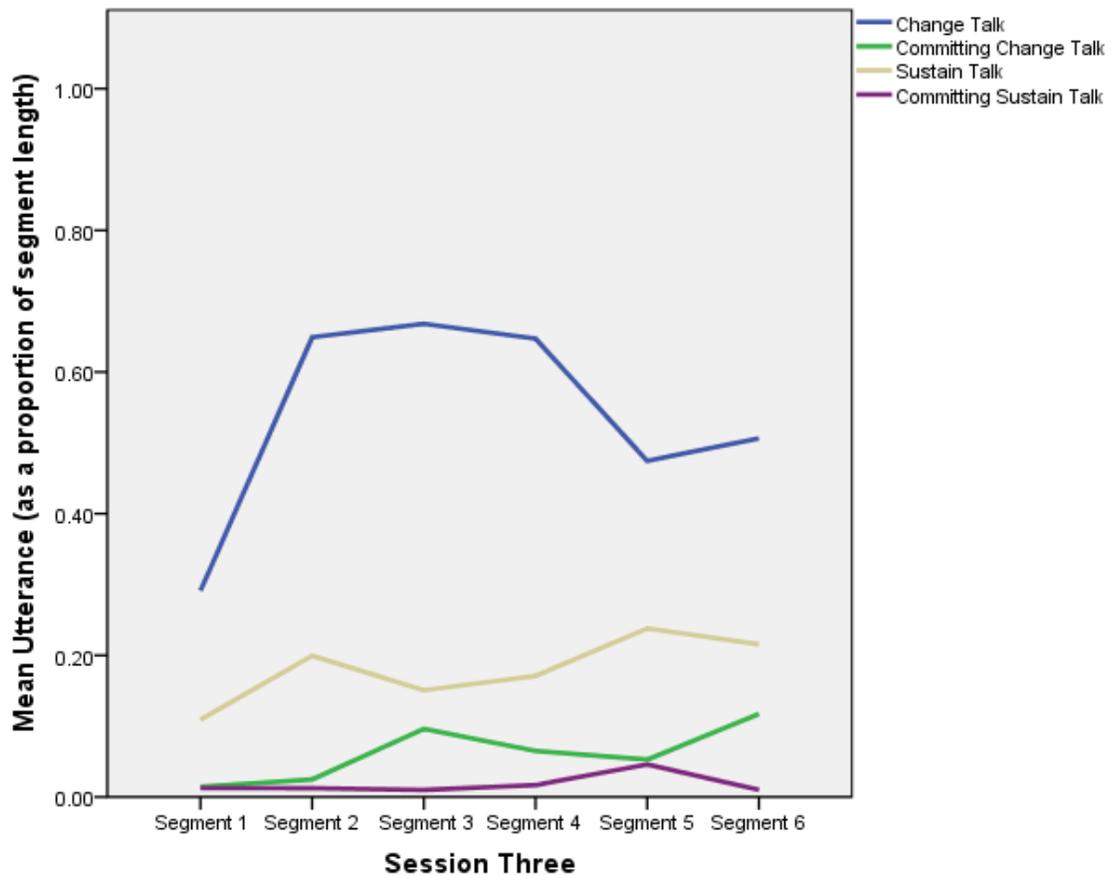


Figure 9. Change and sustain talk categories within session three

In Table 19 and Figure 10, change talk decreased from the first to the second segment of session four and slightly increased from the third to the fifth segments before dropping again in the final segment. Committing change talk slightly dropped from the first to the second segment of session four and slightly increased throughout the remainder of the session. During session four sustain talk dropped to a low level at the third segment and increased slightly during the remainder of the session. Committing sustain talk remained low throughout session four.

Table 19

MISC 2.1 Segment Totals for Change and Sustain Talk within Session Four

Scale or Category	Mean (SD)					
	Seg. 1	Seg. 2	Seg. 3	Seg. 4	Seg. 5	Seg. 6
Change Talk	0.47 (0.49)	0.09 (0.19)	0.10 (0.20)	0.12 (0.25)	0.20 (0.31)	0.13 (0.17)
Committing Change Talk	0.05 (0.10)	0.02 (0.06)	0.03 (0.08)	0.03 (0.08)	0.04 (0.10)	0.09 (0.19)
Sustain Talk	0.15 (0.22)	0.05 (0.12)	0.01 (0.04)	0.10 (0.27)	0.15 (0.41)	0.16 (0.26)
Committing Sustain Talk	0.00 (0.00)	0.01 (0.03)	0.01 (0.03)	0.00 (0.00)	0.00 (0.00)	0.01 (0.03)

Note. Change and Sustain Talk = Combined categories of Reason, Desire, Ability and Need; Seg. = Session Segment

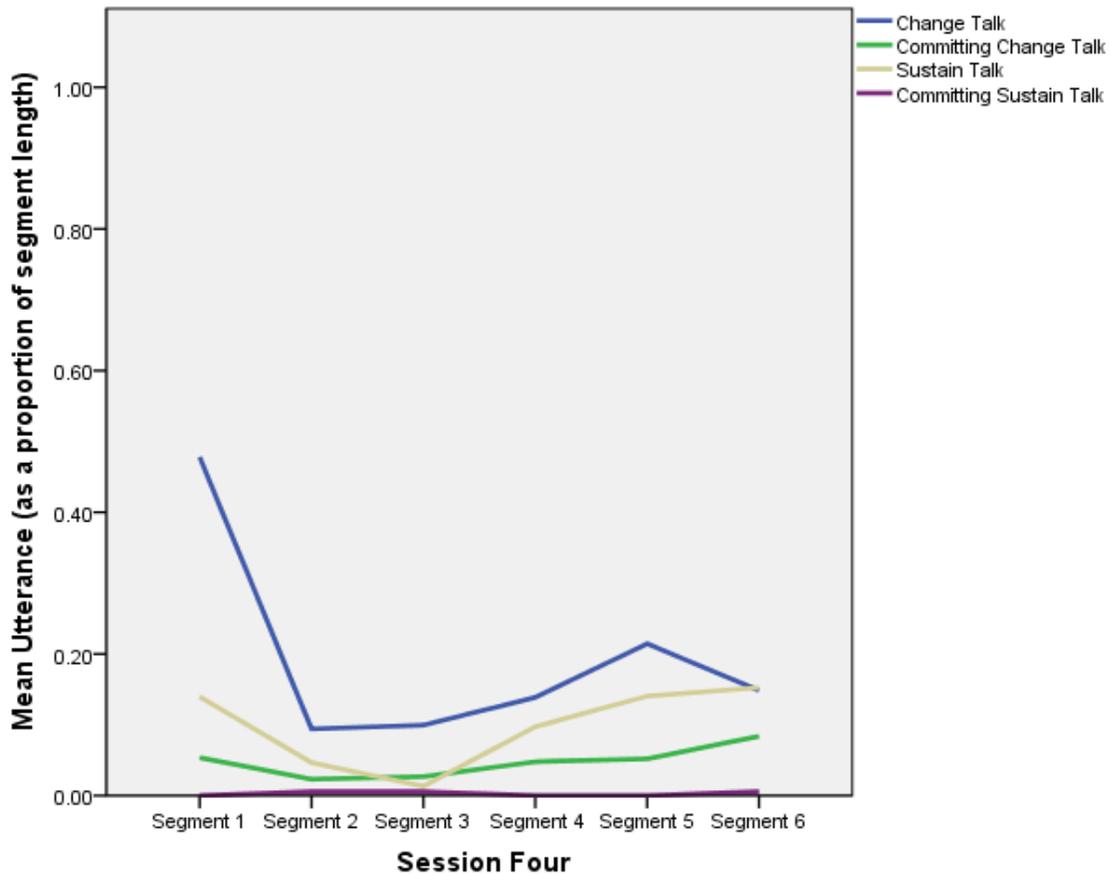


Figure 10. Change and sustain talk categories within session four

In Table 20 and Figure 11 change talk increased steeply from segments one to two of the fifth session, dropped from the third to the fourth segments and slightly increased again from the fifth to the sixth segment. Committing change talk started at a high rate compared to the other sessions and remained at a similar level throughout session five with small fluctuations at segments two and four. Sustain talk started low in the fifth session but increased at the second segment at the same trajectory as Change talk. Sustain talk dropped during the third and fourth segment and then increased during the fifth segment with a slight decrease during the final segment. Committing sustain talk was low throughout session five.

Table 20

MISC 2.1 Segment Totals for Change and Sustain Talk within Session Five

Scale or Category	Mean (SD)					
	Seg. 1	Seg. 2	Seg. 3	Seg. 4	Seg. 5	Seg. 6
Change Talk	0.19 (0.35)	0.47 (0.66)	0.42 (0.42)	0.36 (0.39)	0.38 (0.34)	0.40 (0.41)
Committing Change Talk	0.19 (0.27)	0.24 (0.31)	0.26 (0.40)	0.17 (0.17)	0.19 (0.23)	0.21 (0.33)
Sustain Talk	0.06 (0.12)	0.32 (0.57)	0.29 (0.47)	0.14 (0.25)	0.24 (0.43)	0.21 (0.29)
Committing Sustain Talk	0.03 (0.08)	0.01 (0.03)	0.01 (0.03)	0.03 (0.07)	0.02 (0.06)	0.02 (0.04)

Note. Change and Sustain Talk = Combined categories of Reason, Desire, Ability and Need; Seg. = Session Segment

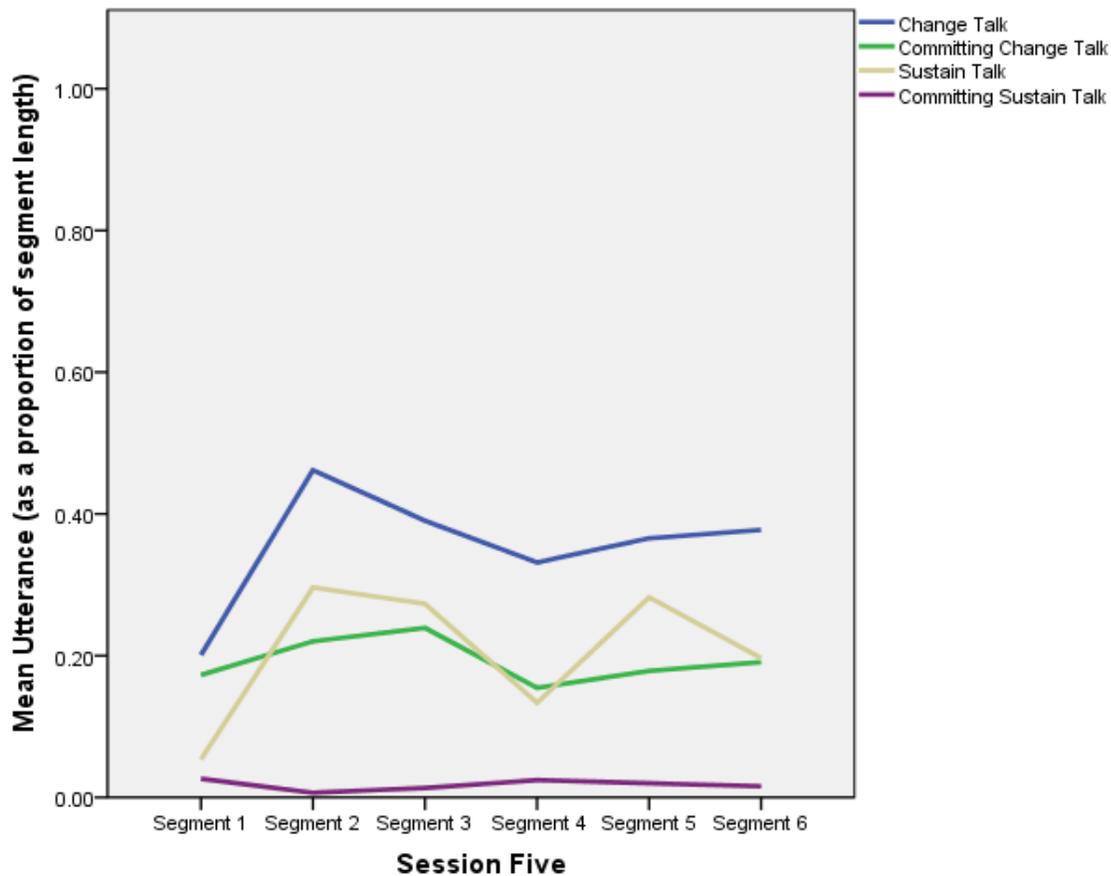


Figure 11. Change and sustain talk categories within session five

The pattern of change talk within each of the five sessions was mixed but sessions two, three and five demonstrated a general increase. Session one and four demonstrated early decreases in change talk that remained low. This pattern of change talk within sessions provided some, albeit mixed, support for hypothesis 3.3. Committing change talk varied substantially within sessions one, two and five. There was a general trend for committing change talk to increase within sessions three and four, which provided only limited support for hypothesis 3.3. Sustain talk demonstrated a general decrease during session one, but an otherwise mixed course within sessions two to four, and an increase in session five. Committing sustain talk tended to remain low throughout the sessions. As such, there is some limited support for the first part of hypothesis 3.3 that offenders' change and committing change talk will increase within sessions. However, there was little support for the second part that offenders' sustain and committing sustain talk will decrease within sessions.

Hypothesis 3.4

Offender change and committing change talk will increase and offender sustain and committing sustain talk will decrease more within sessions without cognitive behavioural content.

This was investigated by comparing the within session trajectory of change and committing change talk and sustain and committing sustain talk in sessions three and five (Tables 18 and 21; Figures 9 and 11) without cognitive behavioural content and comparing these patterns to sessions two and four (Tables 17 and 19; Figures 8 and 10) with cognitive behavioural content. Change talk increased during sessions three and five (see Tables 18 and 20; Figures 9 and 11) compared to session four (Table 19 and Figure 10) but not compared to session two (Table 17 and Figure 8). Committing change talk increased during session three (Table 18 and Figure 9) but not during session five (Table 20 and Figure 11), although the mean level of committing change talk was at its highest at session five. This contrasted with a somewhat mixed trajectory of committing change talk during sessions two and four (Tables 17 and 19; Figures 8 and 10). Sustain talk increased during session three and five (Tables 18 and 20; Figures 9 and 11) and demonstrated a mixed pattern during sessions two and four (Tables 17 and 19; Figures 8 and 10). While committing sustain talk tended to remain low during all sessions, it also slightly increased during sessions three and five (Tables 18 and 20; Figures 9 and 11).

Therefore, hypothesis 3.4 was somewhat supported by a positive trajectory in change talk during sessions three and five that contrasted to the pattern of change talk during session four. However, session two, which contained cognitive behavioural content, also demonstrated a positive trajectory of change talk. There was a positive trajectory of committing change talk during session three but not during session five. Also, session four, which included cognitive behavioural content, demonstrated a positive trajectory of committing change talk. These patterns, other than the patterns of change talk in session two and committing change talk in sessions four and five, supported hypothesis 3.4. However, there was no decrease in sustain talk and committing sustain talk during sessions three and five. As such, there is some, albeit mixed, support for hypothesis 3.4.

Hypothesis 3.5

Offenders who experience more committing change talk in the final session (session five) will experience a higher rate of change talk and a lower rate of sustain talk during sessions one to four.

This was investigated by identifying five offenders with the *highest committing change talk* scores and five offenders with *the lowest committing change talk* scores at session five. Their respective change and sustain talk scores were graphed across sessions.

Group membership was calculated by subtracting each offender's total committing sustain talk score from their total committing change talk score at session five. A similar approach was employed by Campbell et al. (2010). Two offenders in the group with high committing change talk scores and two offenders in the group with low committing change talk scores shared the same facilitator. Therefore, these offenders' change and sustain talk scores are not independent of each other. Independence of observations is one of the assumptions that needs to be met prior to conducting inferential statistics (Pallant, 2007). Violation of the independence of observations assumption is considered to be very serious (Stevens, 2002) because dependent data can inflate the alpha level and subsequently the risk of making a Type One error (Spicer, 2005). Therefore, inferential statistics were not used to test the significance of the differences between groups in offenders' committing change talk at session five. As such, it is not possible to definitively conclude that any differences found in their change and sustain talk are related to significant differences in group membership (high versus low committing change talk at session five).

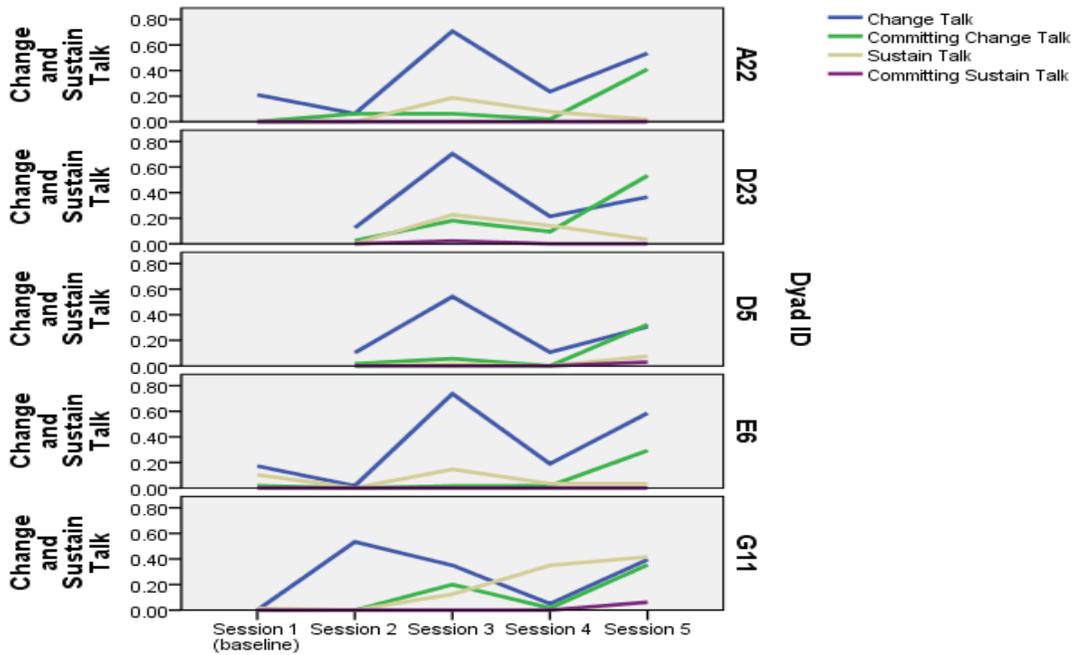


Figure 12. Change and sustain talk categories across sessions for offenders with high committing change talk at session five

Note. Offenders D23 and D5 completed session one but these were not successfully video-recorded and therefore unable to be coded.

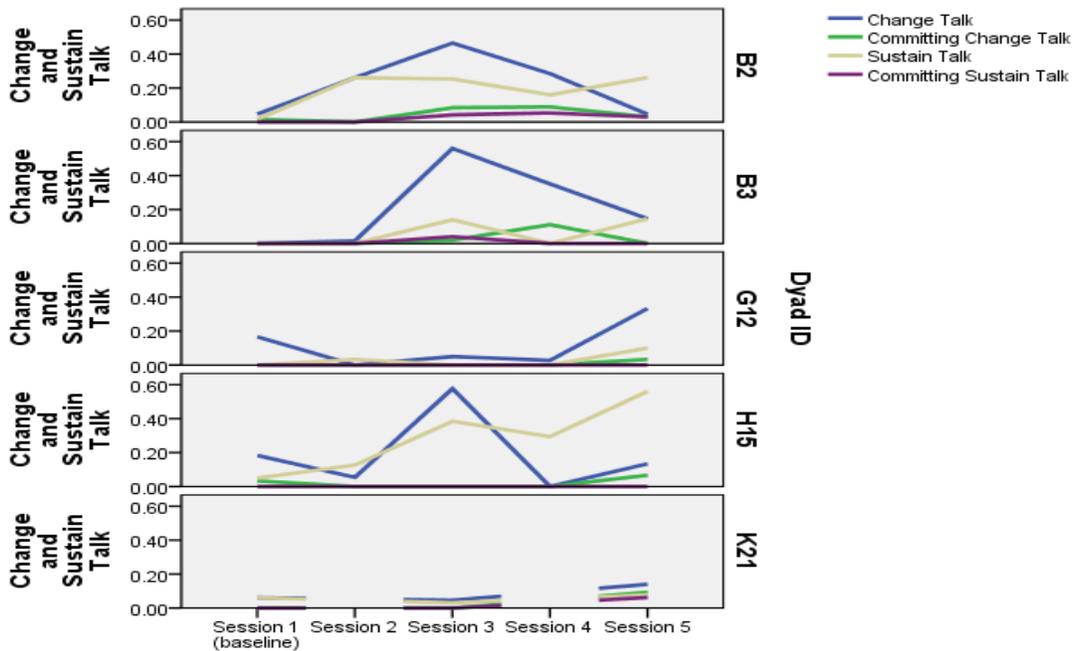


Figure 13. Change and sustain talk across sessions for offenders with low committing change talk at session five.

Note. Offender K21 completed sessions two and four but these were not successfully video-recorded and therefore unable to be coded.

In Figure 12, offenders who experienced higher rates of committing change talk in the final session tended to experience higher rates of change talk during session three. With the exception of offender G11, those offenders who experienced more committing change talk in session five also experienced a low and decreasing rate of sustain talk from sessions three to five. Notably, the offenders with high rates of committing change talk at session five demonstrated a greater difference in their rates of change and sustain talk in previous sessions. In Figure 13, offenders B2 and H15 in the group that experienced a low rate of committing change talk in the final session, experienced a high rate of sustain talk during sessions two to five. However, the rates of sustain talk were no different for offenders B3, G12 and K21 compared to offenders in the group who experienced high rates of committing change talk. In Figure 13, in the group that experienced a low rate of committing change talk in the final session, offenders generally experienced lower rates of change talk in the final session. The one exception was offender G12. Rates of change talk during session one and four were similarly low for both groups. Both groups demonstrated a low rate of committing sustain talk across sessions. Offenders with higher rates of committing change talk in session five tended to experience more change talk, particularly during sessions three and five, with a positive trajectory from session four to five and less sustain talk during earlier sessions. This finding generally supported hypothesis 3.5.

Hypothesis 3.6

Offenders with a higher rate of committing change talk during session five will demonstrate a higher rate of change talk and a lower rate of sustain talk within *preceding segments of session five*.

Session five was used because the aim was to finish SMP with the offender demonstrating a high degree of commitment to change their offending. The offenders with the *five highest versus the five lowest committing change talk* scores were graphed, as illustrated in Figures 14 and 15, respectively. These represented the same offenders in the prior hypothesis but analysed within session five only. As established in the prior hypothesis, the difference between the committing change talk scores between these two groups (high versus low committing change talk) could not be established using inferential statistics. Therefore, it is not possible to definitively conclude that any differences found in the

dependent variable (change and sustain talk within session five) are due to differences in group membership (high versus low committing change talk).

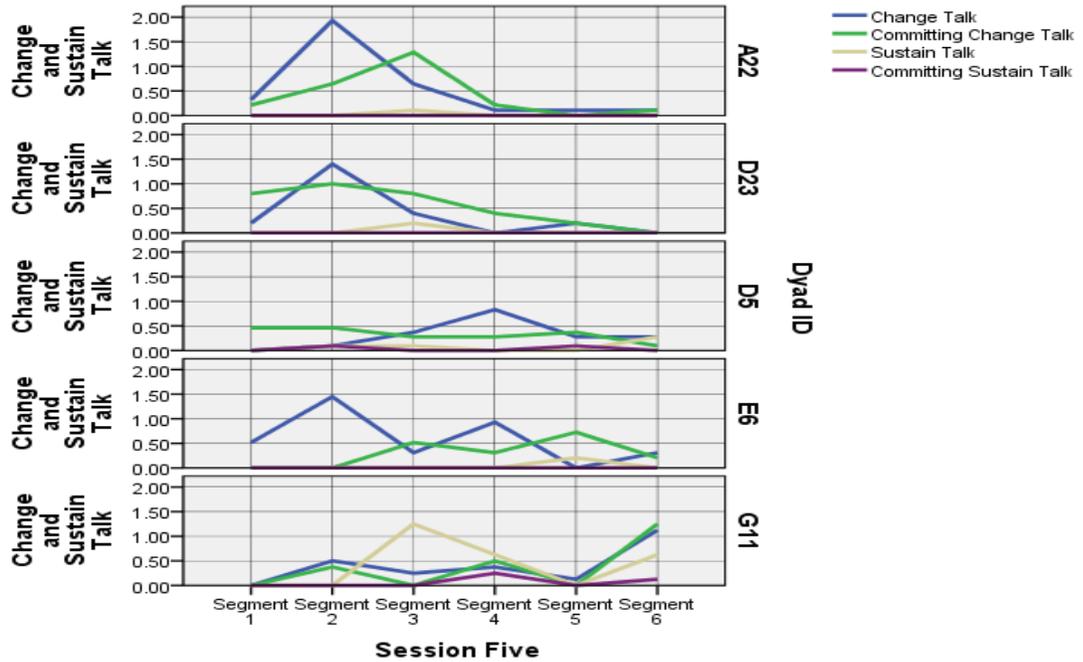


Figure 14. Within session change and sustain talk for offenders with high committing change talk in session five

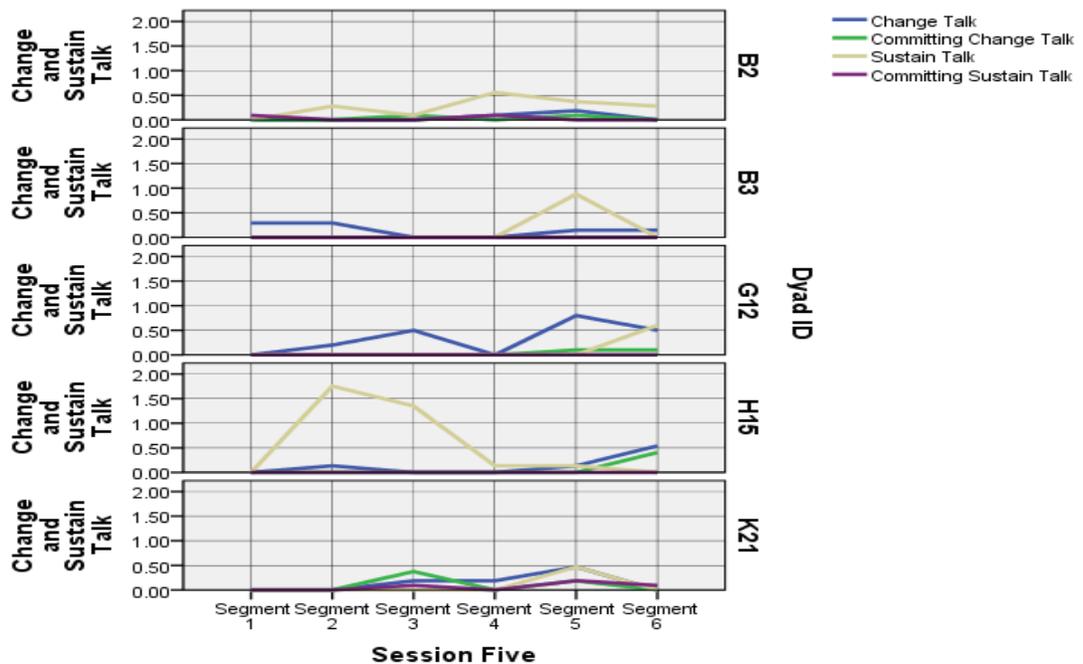


Figure 15. Within session change and sustain talk for offenders with low committing change talk in session five

Offenders who experienced higher rates of committing change talk within session five (Figure 14) experienced higher rates of change talk and lower rates of sustain talk, generally, with the exception of offender G11. Change talk preceded committing change talk for offenders A22 and E6 within session five. This trend was not, however, demonstrated by offenders D23, D5 and G11. In contrast, offenders with lower rates of committing change talk within session five experienced an associated lower rate of change talk and a higher rate of sustain talk. However, change talk did not consistently precede committing change talk, and therefore there is mixed support for hypothesis 3.6.

Summary of hypotheses 3.1 to 3.6

Across sessions, offender change and committing change talk increased and committing sustain talk remained low. Unexpectedly, sustain talk also increased across sessions and change and sustain talk coalesced. Change and committing change talk markedly increased at sessions without cognitive behavioural content, as expected, but so did sustain talk. Within sessions, there was little support for the predicted increase in offenders' change and committing change talk and decrease in offenders' sustain and committing sustain talk. Instead, change and sustain talk fluctuated within sessions.

As predicted, there was a positive trajectory of change talk within sessions three and five. However, session two, which contained cognitive behavioural content, also demonstrated a positive within session trajectory of change talk. This contrasted to the negative trajectory of change talk within session four, which also contained cognitive behavioural content. There was a positive trajectory in committing change talk within session three, as predicted, but not within session five. Nevertheless, session five had the highest mean level of committing change talk. This contrasted with a mixed pattern of committing change talk in sessions two and four. Unexpectedly, sustain talk and committing sustain talk did not demonstrate a negative trajectory within sessions three and five compared to sessions two and four.

Offenders with higher rates of committing change talk in session five experienced more change talk at session three and less sustain talk at earlier sessions. These offenders' also experienced higher rates of change talk and lower rates of sustain talk within session five.

However, increases in committing change talk were not consistently preceded by increases in change talk within session five.

4. What is the relationship between facilitators' use of MI with offenders' self-exploration, and change and sustain talk during SMP?

Hypothesis 4.1

Facilitator global scores will be positively related to offender self-exploration *across* sessions.

The relationships between facilitator global scores and offender self-exploration were investigated at the single-case level. Offenders were separated into the five facilitators with the *highest mean global scores* (Figure 16) versus the five facilitators with the *lowest mean global scores* (Figure 17). This was done by summing facilitators' mean global scores across acceptance, empathy and MI spirit. Some offenders shared the same facilitator and therefore the data was not independent. It was therefore not possible to conduct inferential statistics to ascertain if group differences were statistically significant because this would violate the independence of observations assumption (Spicer, 2005; Stevens, 2002). Therefore, it is difficult to conclude whether the mean global scores between groups are different at a statistically significant level. As such, caution is warranted in suggesting that differences in offenders' self-exploration are a function of group membership (high versus low facilitator global scores). Bar graphs were used because three offenders completed only one session before exiting the SMP.

Other than offender A22, the offenders in the group of facilitators with high global scores (Figure 16) tended to receive self-exploration score of four or above across sessions. Offender A22 demonstrated a fall in self-exploration at the second and fourth sessions. In the group of facilitators with low global scores (Figure 17), two offenders (G25 and H25) scored particularly low. The remaining offenders did not score any lower in self-exploration than in the group of facilitators with high global scores. Therefore, there was only mixed support for hypothesis 4.1. However, while there was not a marked difference in offender self-exploration between the two groups, four offenders (C4, G19, G25 and H25) in the group of facilitators with low global scores did not complete the SMP. In contrast, while SMP DVDs were not available for the fifth session for offender I18, all the offenders constituted by facilitators with high global scores completed the SMP.

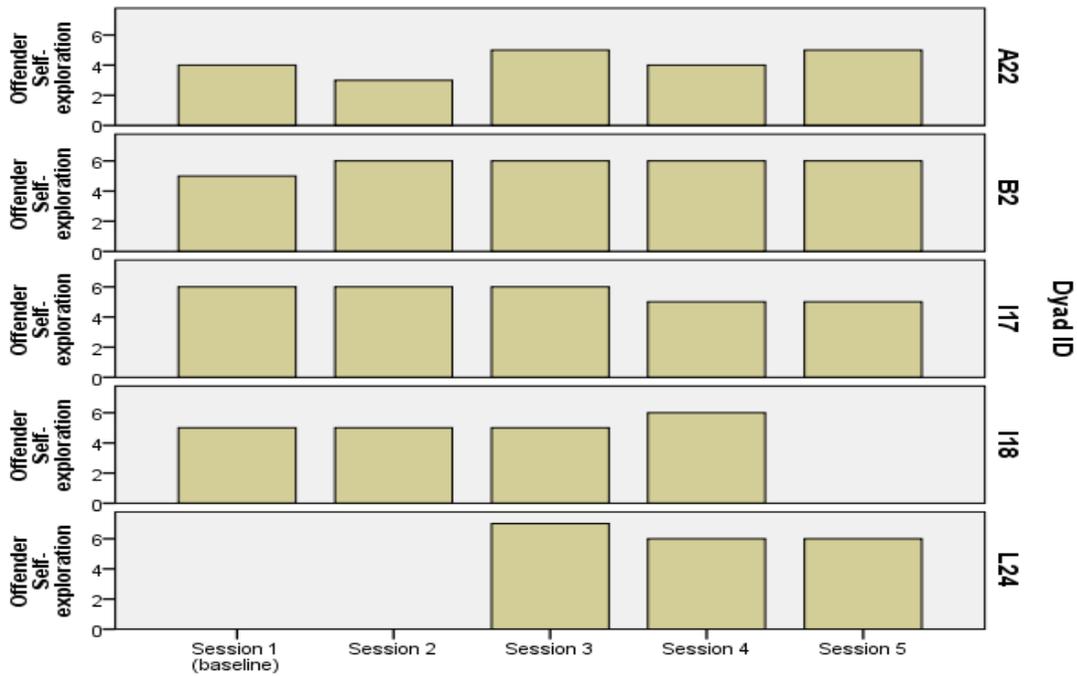


Figure 16. Offender self-exploration when facilitators have high global scores

Note. Offender I18 completed SMP but session five was not successfully video-recorded and therefore unable to be coded. Offender L24 completed sessions one and two but these were not successfully video-recorded and therefore unable to be coded

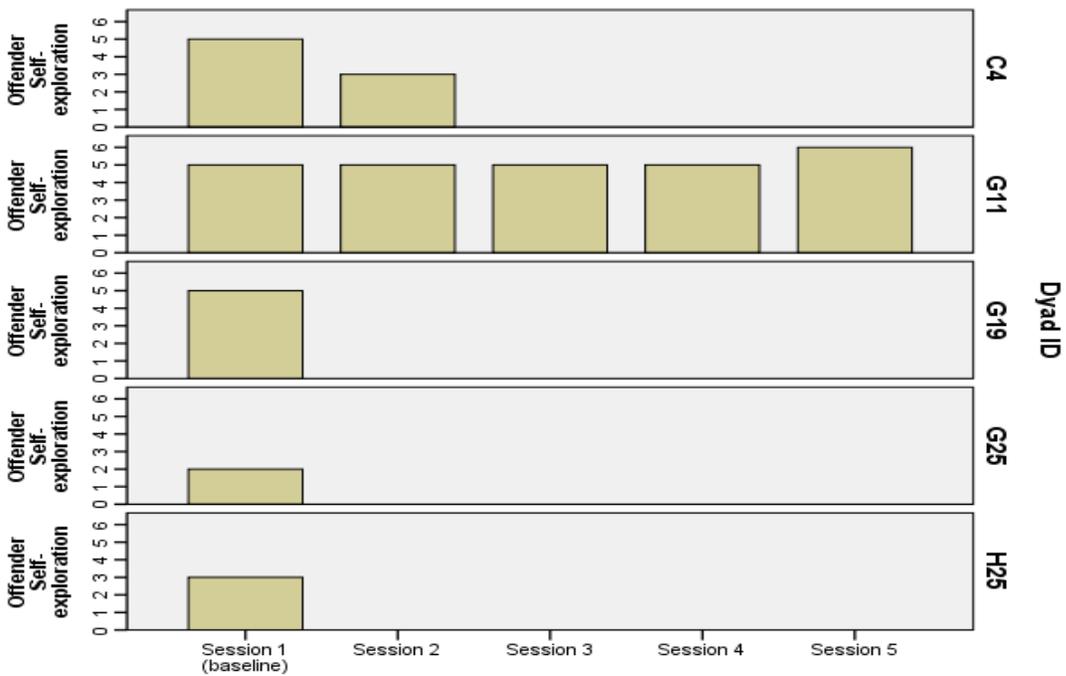


Figure 17. Offender self-exploration when facilitators have low global scores

Note. Offender C4 exited SMP after session two and Offenders G19, G25 and H25 exited SMP after session one.

Hypothesis 4.2

Facilitator global scores will be positively related to offender change and committing change talk and inversely related to offender sustain and committing sustain talk *across* sessions.

The relationships between facilitator global scores with offender change and committing change talk and sustain and committing sustain talk were investigated at the single-case level. Offenders were separated into two groups based on: The five facilitators with the *highest mean global scores* (Figure 18) versus the five facilitators with the *lowest mean global scores* (Figure 19). Therefore, these represented the same offenders used to test the prior hypothesis. As previously, some offenders shared the same facilitator within each of the groups and therefore the data is not independent. As such, it was not possible to conduct inferential statistics to test if group differences were statistically significant because this would violate the independence of observations assumption (Spicer, 2005; Stevens, 2002). Therefore, caution is warranted in definitively concluding that changes in the dependent variable (change and sustain talk) are due to group membership (high versus low facilitator global scores). Bar graphs were used because three offenders completed only one session before exiting the SMP.

The offenders A22, I17 and L24 (Figure 18) uttered higher rates of change talk across SMP sessions compared to offenders in the group of facilitators with low global scores, with the exception of offender G11 (Figure 19). However, offenders B2, I17 and I18, in the group of facilitators with high global scores, also uttered high rates of sustain talk across sessions. For offenders constituted by facilitators with high global scores, committing change talk tended to be low at session one, increased slightly at session two, remained stable at session three (with the exception of offender I18 who demonstrated very little committing change talk at session two), dropped at session four for offender L24 and increased at session five for offenders A22, I17 and L24. The group with high global scores tended to experience a smaller drop in committing change talk at session four compared to the one offender who completed session four in the group constituted by facilitators with low global scores. The offenders in the group of facilitators with high global scores demonstrated a low rate of committing sustain talk.

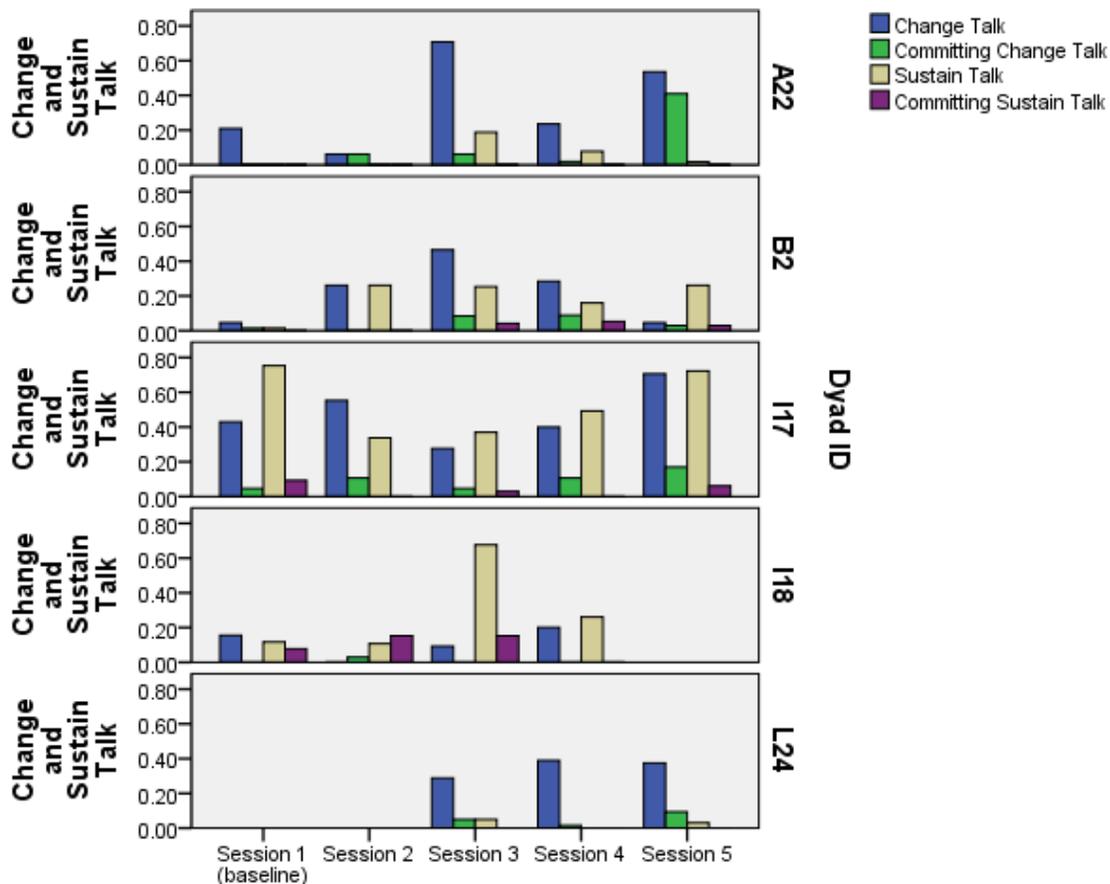


Figure 18. Offender change and sustain talk when facilitators have high global scores

Note. Offender I18 completed session five and Offender L24 completed sessions one and two but these were not successfully video-recorded and therefore unable to be coded.

For one offender (G11) in the group of facilitators with low global scores (Figure 19), change talk increased markedly at session two, although this was not replicated by the other offender (C4) in this group that completed session two. Change talk then decreased at sessions three and four and increased sharply at session five for the offender G11 who completed all sessions. This offender also demonstrated a marked increase in committing change talk in the final session. Sustain talk increased from session three to five for the offender G11 to the extent that sustain talk exceeded change talk at sessions four and five. These results provided mixed support for hypothesis 4.2 that facilitator global scores will be positively related to offender change and committing change talk and inversely related to offender sustain and committing sustain talk across sessions. However, as noted, offenders constituted by facilitators with low global scores were related to premature exit from the SMP

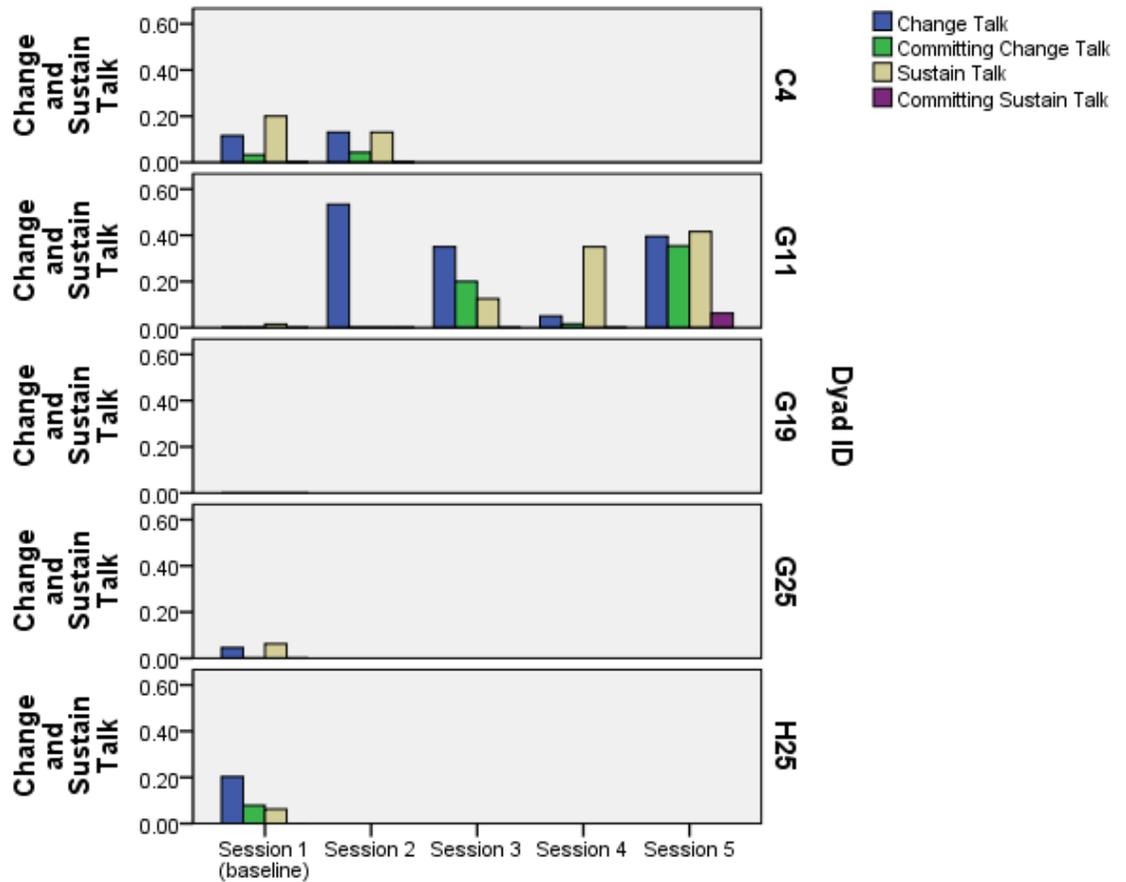


Figure 19. Offender change and sustain talk when facilitators have low global scores

Note. Offender C4 exited SMP after session two and Offenders G19, G25 and H25 exited SMP after session one

Hypothesis 4.3

Facilitator MI skills will be positively related to offender change and committing change talk and inversely related to offender sustain and committing sustain talk *across* sessions.

The relationships between facilitators' MI skills with offender change and committing change talk and sustain and committing sustain talk were investigated at the single-case level across sessions. This was conducted by splitting offenders into four groups: Five facilitators with the highest versus the lowest *MI consistent mean scores* and; the five facilitators with the highest versus the lowest *MI inconsistent mean scores* across SMP sessions. This was done by calculating facilitators' mean MI consistent and MI inconsistent scores across sessions and calculating the five highest versus the five lowest overall mean scores on each scale. Some offenders shared the same facilitator within each

of the groups and consequently the data is not independent. It was therefore not possible to conduct inferential statistics to ascertain if group differences were statistically significant because this would violate the independence of observations assumption (Spicer, 2005; Stevens, 2002). Therefore, it is difficult to definitively conclude whether the groups are significantly different. As such, caution is warranted in concluding that differences in offenders' change and sustain talk are a function of group membership (high or low MI consistent and MI inconsistent scores). Bar graphs were used because four offenders completed only one SMP session.

Offenders constituted by facilitators who scored high in MI consistent methods

Offenders in this group (Figure 20) tended to experience a low level of change talk in sessions one and two that was followed by a marked increase at session three (with the exception of I18). Change talk decreased at session four and increased at session five, although not to the same rate as achieved at session three, and was only based on two offenders (A22 and J20) for whom data was available. Offenders tended to experience minimal or no committing change talk at sessions one and two, which slightly increased at sessions three and four for three offenders and session five for two offenders. Offenders in this group tended to experience an increase in sustain talk at session three but this gradually decreased over sessions four and five. Offenders tended to experience no or low rates of committing sustain talk from session one to five. All offenders in this group completed the SMP, but the final session was unsuccessfully recorded for offenders G9, I16 and I18.

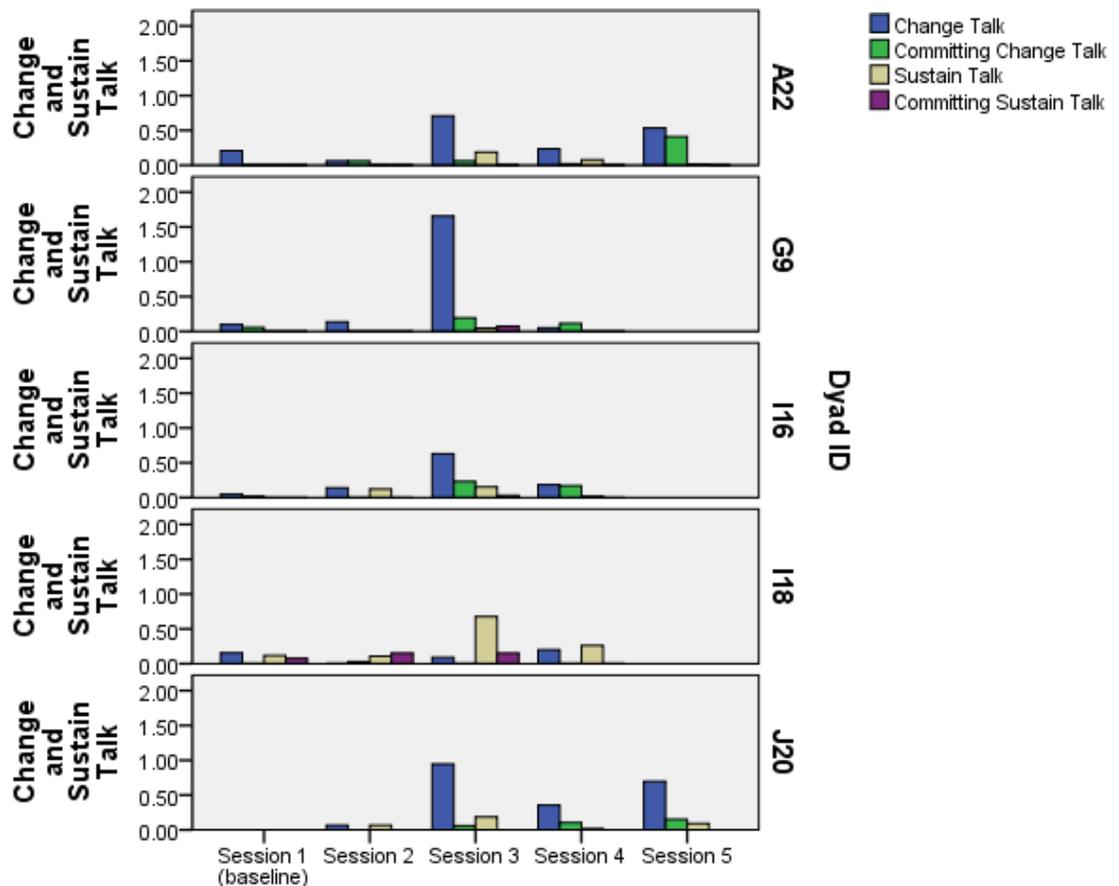


Figure 20. Offender change and sustain talk across SMP sessions when facilitators have high rates of MI consistent methods

Note. Offenders G9, I16 and I18 completed SMP but session five for each was not successfully video-recorded and therefore unable to be coded

Offenders constituted by facilitators who scored low in MI inconsistent methods

Offenders in this group (Figure 21) demonstrated lower rates of change talk during the third (other than offender G9) and final sessions. Offenders also experienced a similar pattern of offender committing change talk to the group with high rates of MI consistent methods but the increase in committing change talk during the final session was less. Similar patterns of generally low offender sustain and committing sustain talk, with some increase at the second and third sessions, was present in this group. These offenders, like the offenders in the group with high MI consistent methods, experienced constantly low rates of committing sustain talk. All offenders in this group completed the SMP but session five data was not available for offenders G9 and I18.

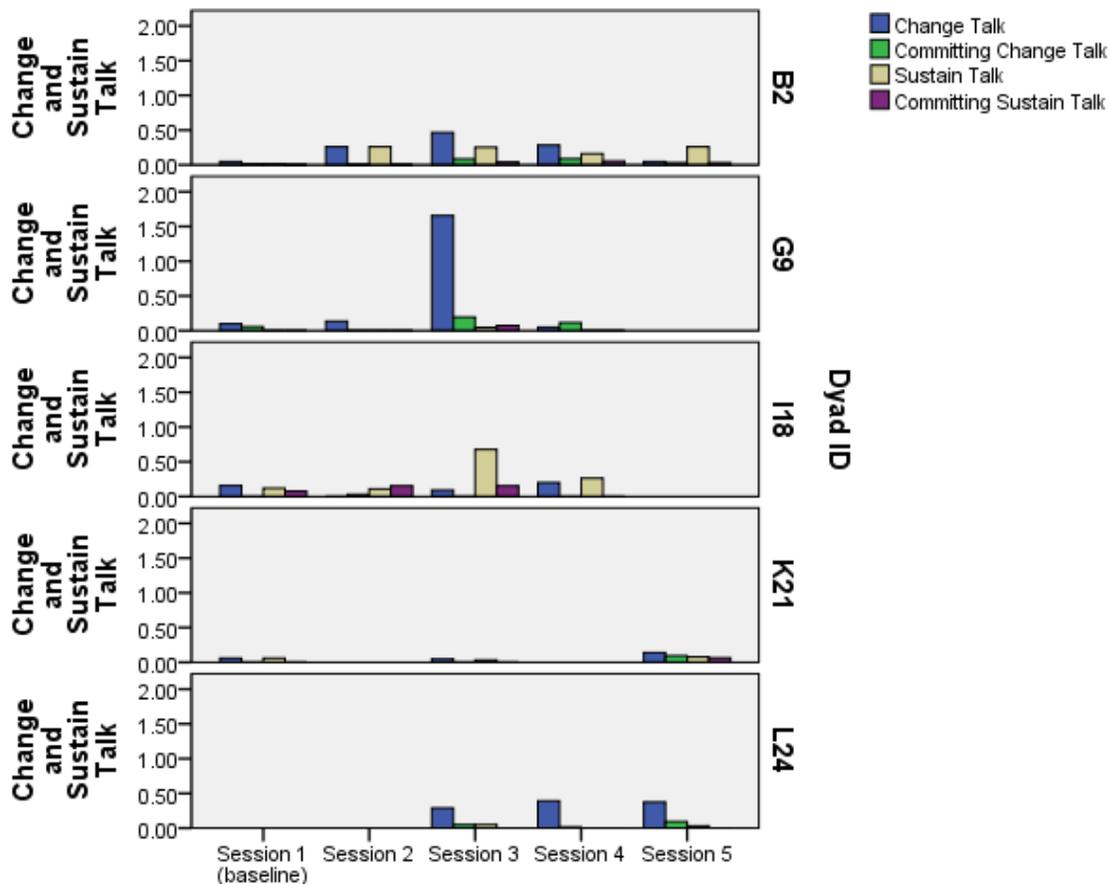


Figure 21. Offender change and sustain talk across SMP sessions when facilitators have low rates of MI inconsistent methods

Note. Offenders G9 and I18 completed session five but this was not successfully recorded and therefore unable to be coded. Offender K21 completed sessions two and four and Offender L24 completed sessions one and two but these were not successfully video-recorded and therefore unable to be coded.

Offenders constituted by facilitators who scored low in MI consistent methods

Offenders in this group (Figure 22) demonstrated slightly more change talk at session two. However, for two (B2 and H15) of the three offenders that completed all sessions, change talk markedly reduced in the final session with a concomitant increase in sustain talk. Offenders in this group generally demonstrated a low rate of committing change talk across sessions with some indication of an increase in the fifth session. Offenders generally experienced greater rates of sustain talk from session one to four and, sustain talk for two (B2 and H15) of the three offenders that completed session five in this group, experienced more sustain talk than change talk in the final session. Offenders demonstrated no or low rates of committing sustain talk across sessions. This was similar to offenders in the groups of facilitators with high MI consistent methods and low MI

inconsistent methods. More offenders in this group ($n = 2$), compared to the offenders constituted by facilitators who scored high on MI consistent and low on MI inconsistent methods ($n = 0$), exited the SMP prematurely.

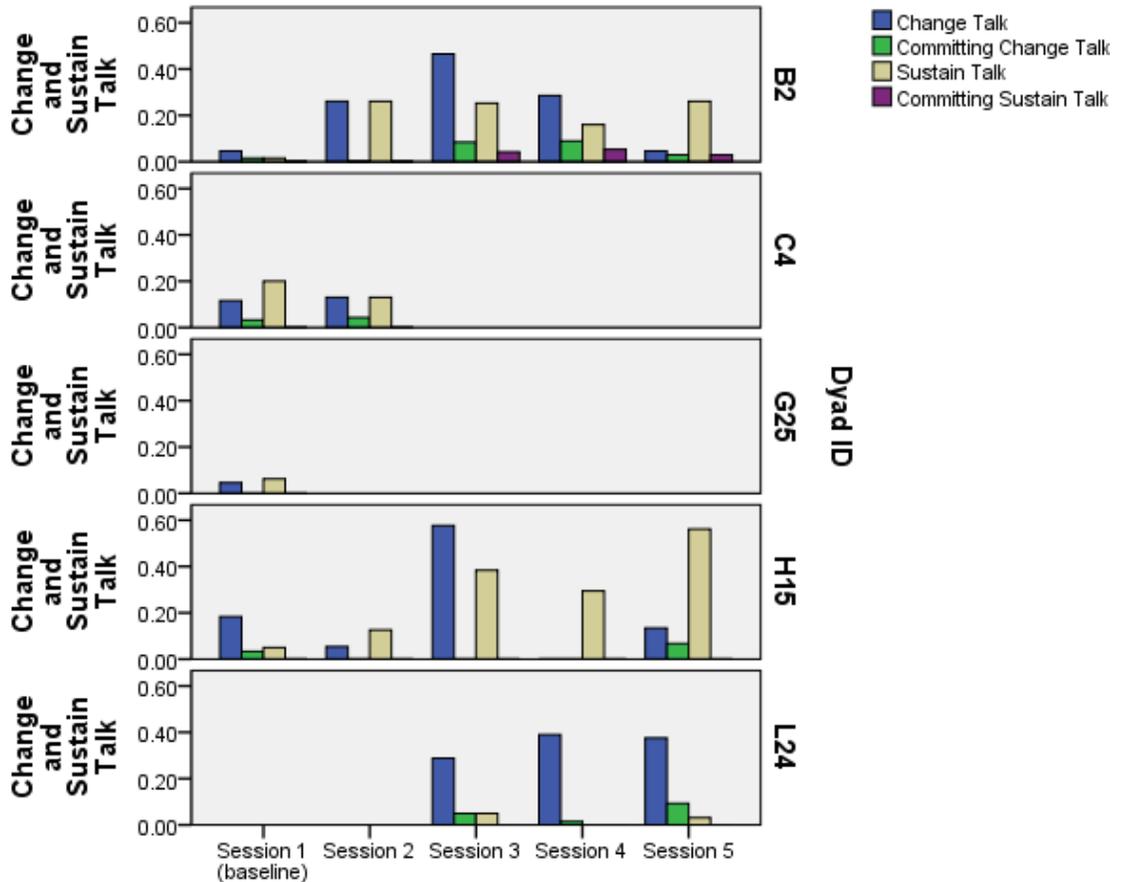


Figure 22. Offender change and sustain talk across SMP sessions when facilitators have low rates of MI consistent methods

Note. Offenders C4 and G25 exited SMP after session two and one, respectively. Offender L24 completed session one and two but these were not successfully video-recorded and therefore unable to be coded.

Offenders constituted by facilitators who scored high in MI inconsistent methods

One offender (G11) in this group (Figure 23) demonstrated high rates of change talk at sessions two, three and five and another (I16) also demonstrated a high rate of change talk at session three. However, this decreased at the fourth session for the two offenders (G11 and I16) that completed session four. Offender change talk increased again in the final session for the offender G11 but this was less in comparison to the offenders in the group of facilitators high in MI consistent methods and was accompanied by high rates of

sustain talk. Offenders G11 and I16 demonstrated an increase in offender committing change talk at session three and committing change talk increased again at the fifth session for the offender G11. This was, however, only based on the one offender who completed session five and for whom data was available, and was accompanied by high rates of sustain talk. Sustain talk demonstrated a mixed pattern. For one (G11) of the two offenders that completed the SMP from this group, sustain talk markedly increased from session three to four and remained high at session five. Lastly, the two offenders that completed sessions three and five (I16 and G11, respectively) demonstrated a slight increase in committing sustain talk. Three offenders (C4, G19 and G25) in this group did not complete the SMP. This contrasted to the groups with high MI consistent methods and low MI inconsistent methods where all of the offenders completed the SMP.

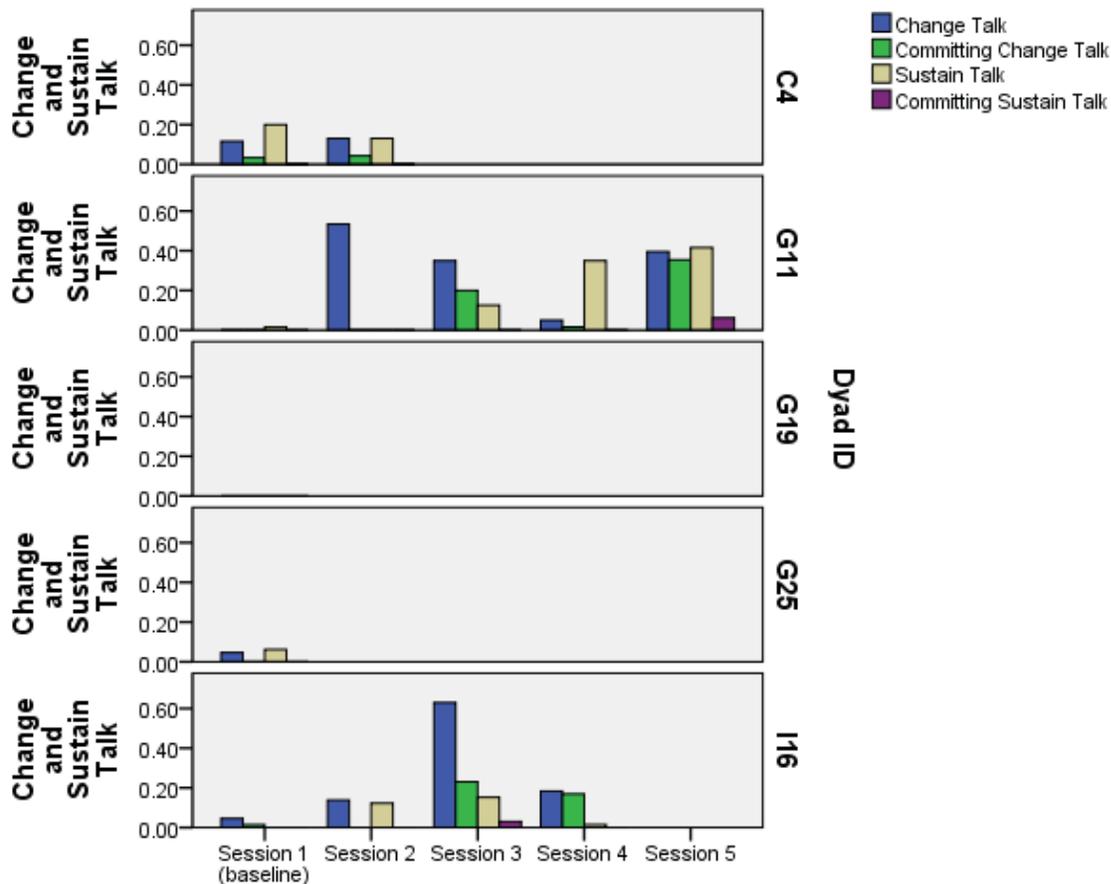


Figure 23. Offender change and sustain talk across SMP sessions when facilitators have high rates of MI inconsistent methods

Note. Offender C4 exited SMP after session two and Offenders G19 and G25 exited SMP after session one. Offender I16 completed the SMP but sessions five was unsuccessfully video-recorded and therefore unable to be coded.

These results provided tentative support for hypothesis 4.3 in that offenders in the group of facilitators with high MI consistent scores generally experienced higher rates of change talk and comparatively lower rates of sustain and committing sustain talk across sessions. Offenders in the groups of facilitators with low MI consistent scores and high MI inconsistent scores, tended to experience higher rates of ambivalence (concurrent change and sustain talk) compared to offenders in the groups with facilitators with high MI consistent and low MI inconsistent scores. Most notably, facilitators with low rates of MI consistent methods and high rates of MI inconsistent methods were associated with offenders who prematurely exited the SMP.

Hypothesis 4.4

Facilitator MI skills will be positively related to offender change and committing change talk and inversely related to offender sustain and committing sustain talk *within* sessions.

These relationships were investigated at the single-case level. Facilitator-offender dyads were split into the same four groups used for hypothesis 4.3: Five facilitators with the highest *MI consistent mean scores* versus five facilitators with the lowest *MI consistent mean scores* and five facilitators with highest mean *MI inconsistent* methods versus five facilitators with the lowest mean *MI inconsistent* methods. As highlighted earlier, due to the related nature of the data (Spicer, 2005; Stevens, 2002), inferential testing was not able to be performed to test if these groups were significantly different from one another. Line graphs were generated for each offender within all five SMP sessions.

Offenders constituted by facilitators with high MI consistent methods

All offenders in this group completed the SMP. Offenders G9, I16 and I18 were unable to video-record their final sessions and so these are not depicted on their respective graphs (Figure 24). Offenders change talk remained low within sessions one and two. The offender A22 demonstrated an increase in change talk at segment five and six of the first session and offenders A22, G9 and J20 demonstrated small increases in change talk at the end of session two. Other than offender I18, offenders demonstrated a considerable increase in change talk during the first half of session three but this represented a fluctuating course for offenders A22 and I16. Other than offender I18, change talk fluctuated within the latter half of session three with a tendency for change talk to

decrease toward the end of the session. Offenders change talk sharply dropped in the second segment of session four and remained low. For the two offenders for which video-recordings were available, both experienced a steep increase in change talk in the first half of session five which dissipated from the third segment.

Committing change talk generally remained low within sessions one and two. There were very small increases in committing change talk within session three for offenders G9 and I16. Committing change talk remained low within session four across offenders. There was a small increase in committing change talk in the final segment of session four for offenders G9 and I16. For the two offenders for which video-recordings were obtained for session five, offender committing change talk increased in the first half of the session for one offender (A22) and then decreased and remained low, with a small increase at the fifth segment, for the other offender (J20).

Sustain talk remained low within sessions one and two with some increase in the beginning and end of session one and half way through and at the end of session two for one offender (I18). Sustain talk tended to increase within session three but this included random fluctuation across offenders within the session. Sustain talk remained low through the remainder of sessions four and five. However, offender I18 demonstrated an increase in sustain talk toward the end of session four.

Committing sustain talk generally remained low throughout sessions one, four and five. Committing sustain talk increased in the final segment of session two for offender I18. All offenders experienced little or no committing sustain talk within session three.

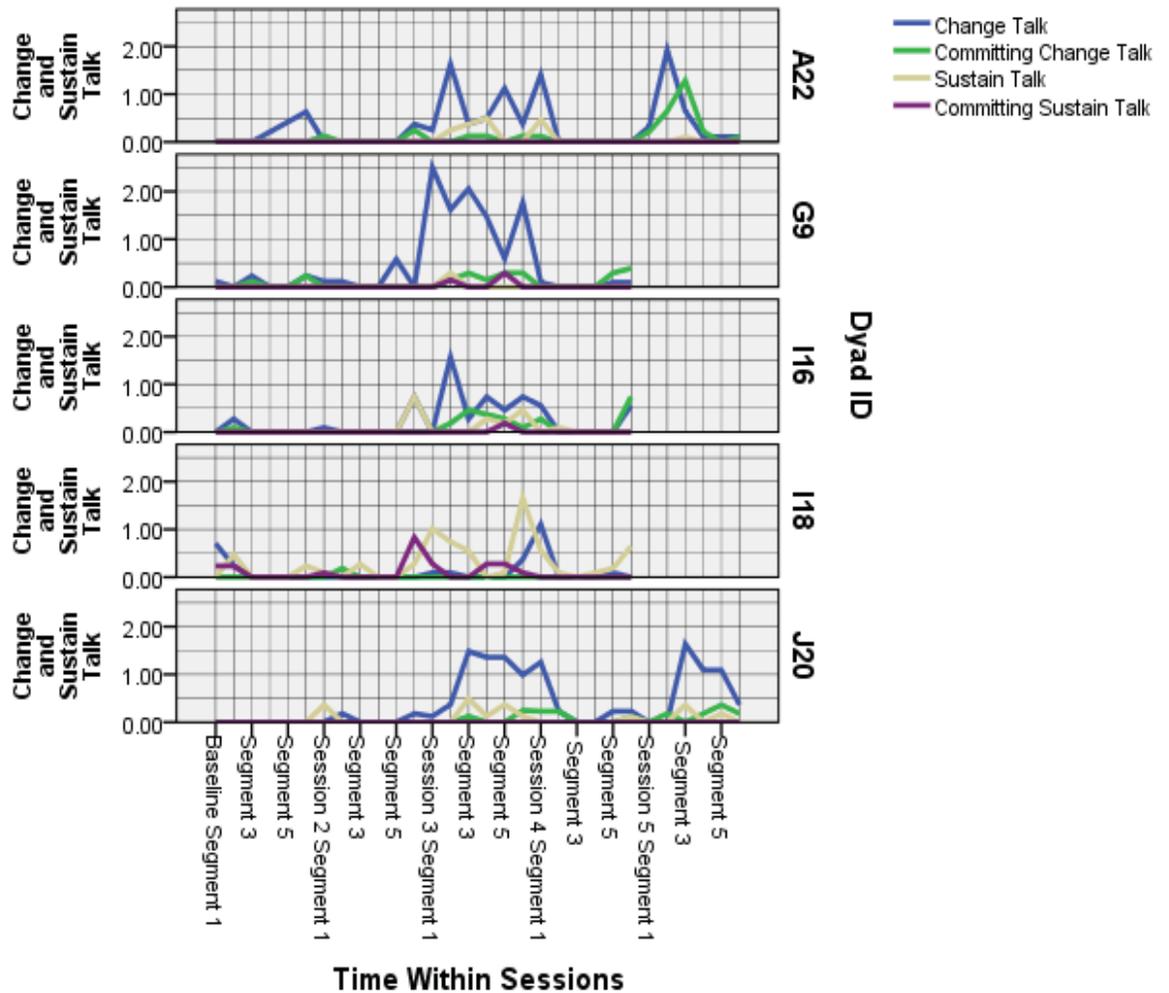


Figure 24. Offender change and sustain talk within SMP sessions when facilitators have high rates of MI consistent methods

Note. Offenders G9, I16 and I18 completed SMP but session five was not successfully video-recorded for either and therefore unable to be coded.

Offenders constituted by facilitators who scored low in MI inconsistent methods

All offenders in this group completed the SMP. The final session was not able to be video-recorded for offenders G9 and I18 and so these are not depicted on their respective graphs (Figure 25). Offenders in the group constituted by facilitators low in MI inconsistent methods followed a broadly similar pattern of within session change talk to offenders constituted by facilitators high in MI consistent methods. However, the peaks in change talk, particularly in the third and fifth session were not as high.

Committing change talk fluctuated at a low level within sessions one and two for offenders G9 and I18. The remaining offenders did not experience any committing change talk until the third session. Offenders B2 and G9 demonstrated a small increase in committing change talk during session three that fluctuated at a low rate. Offender G9 also experienced an increase in committing change talk during segment five and six of session four. The three offenders for which video-recording were available for session five (B2, K21 and L24), demonstrated a fluctuating, albeit low, course of committing change talk within session five. The offenders in the group of facilitators with high MI consistent methods experienced slightly higher rates of committing change talk, generally, particularly in sessions three and five.

Offender B2 demonstrated a fluctuating rate of sustain talk from session two to five that exceeded their rate of change talk in the fifth session. Offender I18 demonstrated a marked increase in sustain talk within session three. This consisted of within session fluctuations that averaged out to a general increase in sustain talk from the first to the last segment of session three. Otherwise, offenders demonstrated a fluctuating low rate of sustain talk within sessions. Offender K21 demonstrated an increase in sustain talk during the second half of session five. This pattern of sustain talk is similar to that demonstrated in the group constituted by facilitators with high MI consistent methods.

Committing sustain talk generally remained low within sessions. However, offender I18 demonstrated an increase in committing sustain talk toward the end of session two and half way through session three. Offender K21 experienced an increase in committing sustain talk toward the end of session five. The pattern of committing sustain talk for this group, notwithstanding the one offender that experienced an increase within the final session, was similar to that demonstrated by offenders in the group of facilitators with high MI consistent methods.

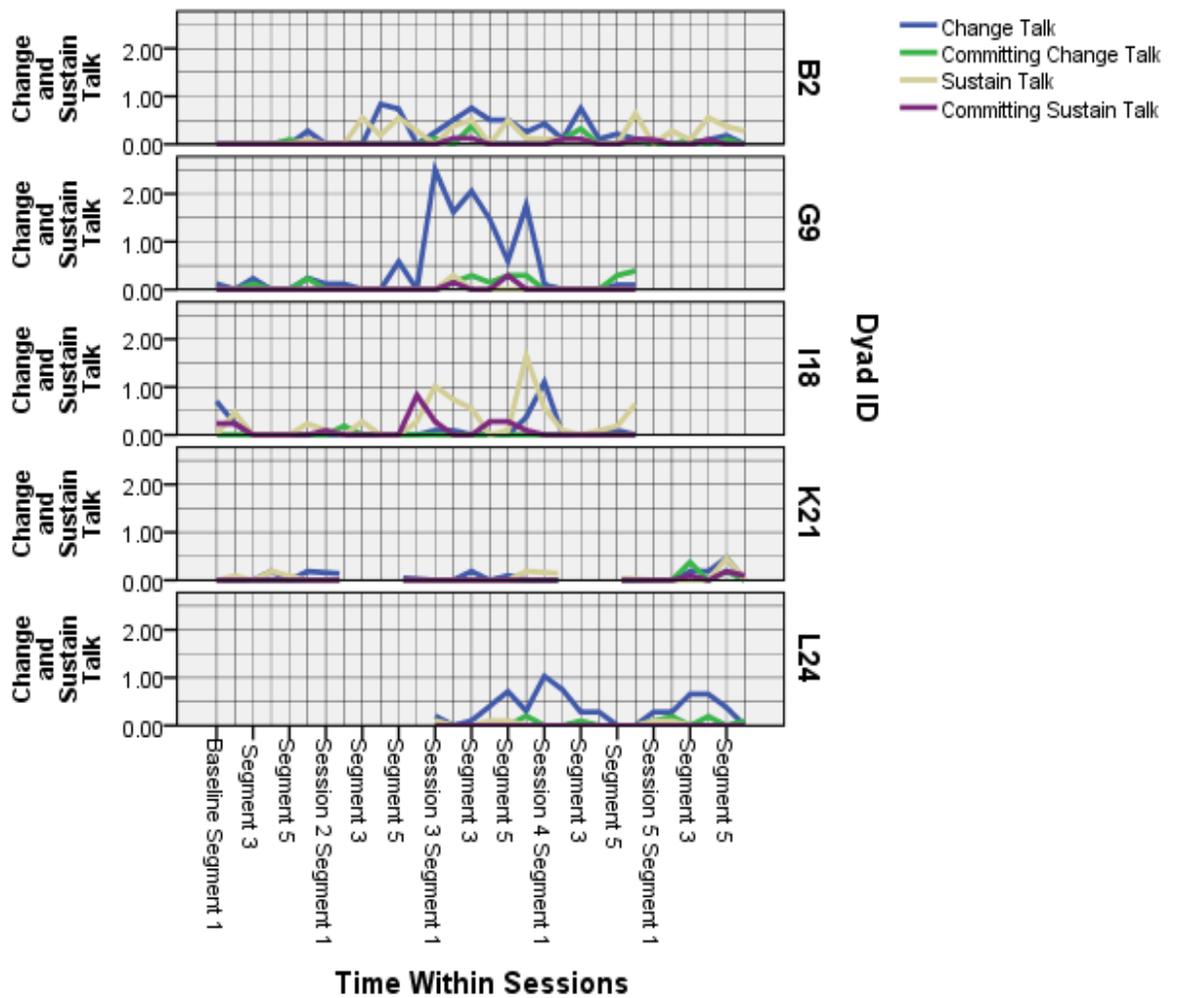


Figure 25. Offender change and sustain talk within SMP sessions when facilitators have low rates of MI inconsistent methods

Note. Offenders G9 and I18 completed SMP but session five was not successfully video-recorded for either and therefore unable to be coded. Sessions two and four were not successfully video-recorded for Offender K21 and sessions one and two were also not successfully video-recorded for Offender L24 and therefore unable to be coded

Offenders constituted by facilitators who scored low in MI consistent methods

Three offenders (B2, H15 and L24) in this group completed the SMP. Sessions one and two for offender L24 were unable to be video-recorded and so these were not depicted on their graph (Figure 26). Offenders in this group demonstrated a fluctuating, albeit comparatively low, rate of change talk during the first session. One offender (H15) started with a high rate of change talk but this quickly reduced at the second segment. The second session similarly fluctuated with no particular pattern between offenders. The third session demonstrated a general increase in change talk across offenders that spiked

halfway through session three for offenders B2 and H15 and toward the end of session three for offender L24 and then decreased. Change talk dropped considerably at the end of session three compared to offenders in the groups constituted by facilitators with high MI consistent and low MI inconsistent methods, both of which maintained relatively high levels of change talk throughout session three. Within session four change talk for offender B2 increased in the middle of the session and then decreased, remained low for offender H15 and decreased during the session for offender L24. For offender B2, change talk fluctuated at a very low rate during session five. For offender H15, change talk was low in the beginning of session five and increased toward the end. For offender L24 change talk increased during the early to mid segments and then decreased in the later segments of session five.

Committing change talk fluctuated at a relatively low level within sessions without any discernible pattern. This contrasted with the other two groups (offenders with facilitators high in MI consistent methods and low in MI inconsistent methods), which tended to demonstrate higher and somewhat more consistent rates of committing change talk within sessions.

Sustain talk demonstrated a fluctuating course within all of the sessions, with steep increases half way through session two for offenders B2, C4 and H15 and in the beginning of session three for offender B2. Offender H15 demonstrated an increase in sustain talk in the beginning and end of session three and a marked increase in the beginning of session five. Other than the marked increase within session five for one offender, this pattern was similar to that demonstrated by offenders with facilitators with high MI consistent methods and low MI inconsistent methods.

Committing sustain talk remained low throughout all the sessions across offenders. One offender (B2) demonstrated some increase in offender committing sustain talk during the start of sessions three and four, and the end of session four but this was minimal. This pattern of committing sustain talk within sessions is similar to that demonstrated by offenders in the groups with facilitators with high MI consistent methods and low MI inconsistent methods.

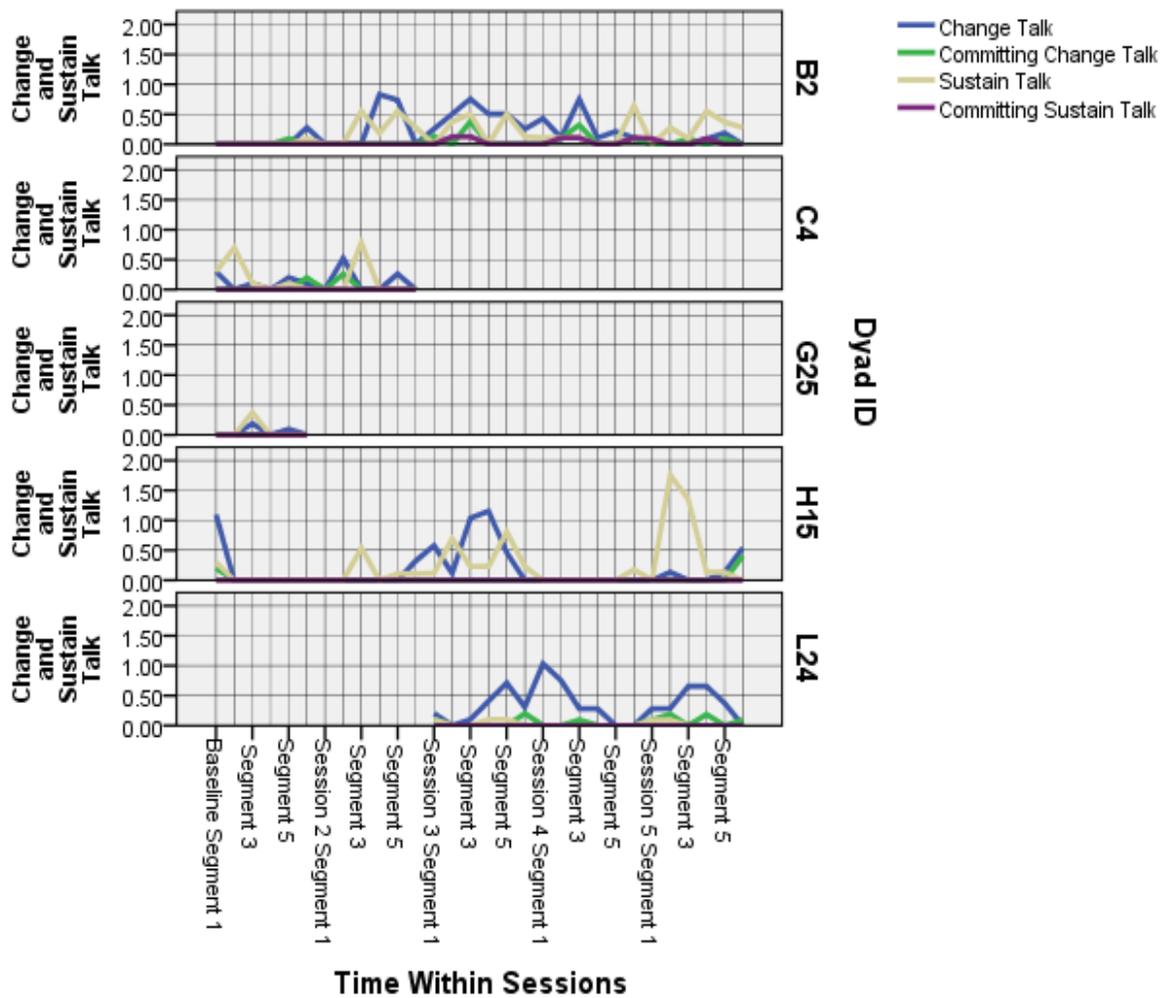


Figure 26. Offender change and sustain talk within SMP sessions when facilitators have low rates of MI consistent methods

Note. Offenders C4 and G25 exited SMP after sessions two and one, respectively. Offender L24 completed sessions one and two but these were not successfully video-recorded and therefore unable to be coded.

Offenders constituted by facilitators who scored high in MI inconsistent methods

Two (G11 and I17) of the five offenders in this group completed the SMP (Figure 27). This contrasted with the offenders constituted by facilitators with high MI consistent and low MI inconsistent methods in that all offenders in these groups completed the SMP. Offenders in this group demonstrated either no change talk or a decrease in change talk during session one. Offender C4 demonstrated an early- to mid-session increase in change talk within session two that subsequently decreased. Of the two offenders that completed session three (G11 and I16), both demonstrated an increase in change talk within session three that dissipated in the final segment for G11 and decreased to a moderate level for

I16. These two offenders (G11 and I16) demonstrated a low rate of change talk in the beginning of session four, which quickly dissipated. One offender (G11), for which the video-recording was available, demonstrated an increase in change talk within session five but this was accompanied by high rates of sustain talk. In comparison to the other groups, offenders in this group demonstrated a smaller peak of change talk in the third session. Rather, change talk remained at a low to moderate level and fluctuated considerably within sessions. In contrast to the other groups, offender G11 demonstrated a positive trajectory of change talk in session five but this was accompanied by concomitant sustain talk.

Offenders in this group demonstrated a generally low, but fluctuating, level of committing change talk. Offender G11 demonstrated a marked increase in committing change talk in the sixth segment of sessions three and five. Offender I16 also demonstrated an increase in committing change talk, albeit less than G11, from the third to the fifth segment of session three and the sixth segment of session four.

Sustain talk fluctuated within sessions without a discernible pattern. Further, sustain talk for the other groups tended to peak in the third session whereas sustain talk for this group peaked in the fourth session, then again in the fifth session and remained high until the end of the fifth session for one (G11) of the two offenders that completed the SMP in this group. For this group, sustain talk commonly exceeded change talk during the first, fourth and fifth sessions as illustrated by offenders C4 and G11, with the exception of offender I17. In contrast, change talk rates were consistently higher than sustain talk rates for offenders constituted by facilitators with high MI consistent methods, with the exception of offender I18 (Figure 24). Further, offenders in the group of facilitators with high MI consistent methods tended to experience a lower peak of sustain talk late in the third session that dissipated during sessions four and five.

Committing sustain talk tended to remain low, with some minor fluctuations throughout sessions one to four for offenders constituted by facilitators with high MI inconsistent methods. Offenders G11 and I16 demonstrated a slight, albeit fluctuating, increase in committing sustain talk during sessions five and three, respectively. This contrasted to the offenders constituted by facilitators with high MI consistent methods, whom tended to

experience a low fluctuating level of committing sustain talk that slightly peaked and then ceased by the end of session three.

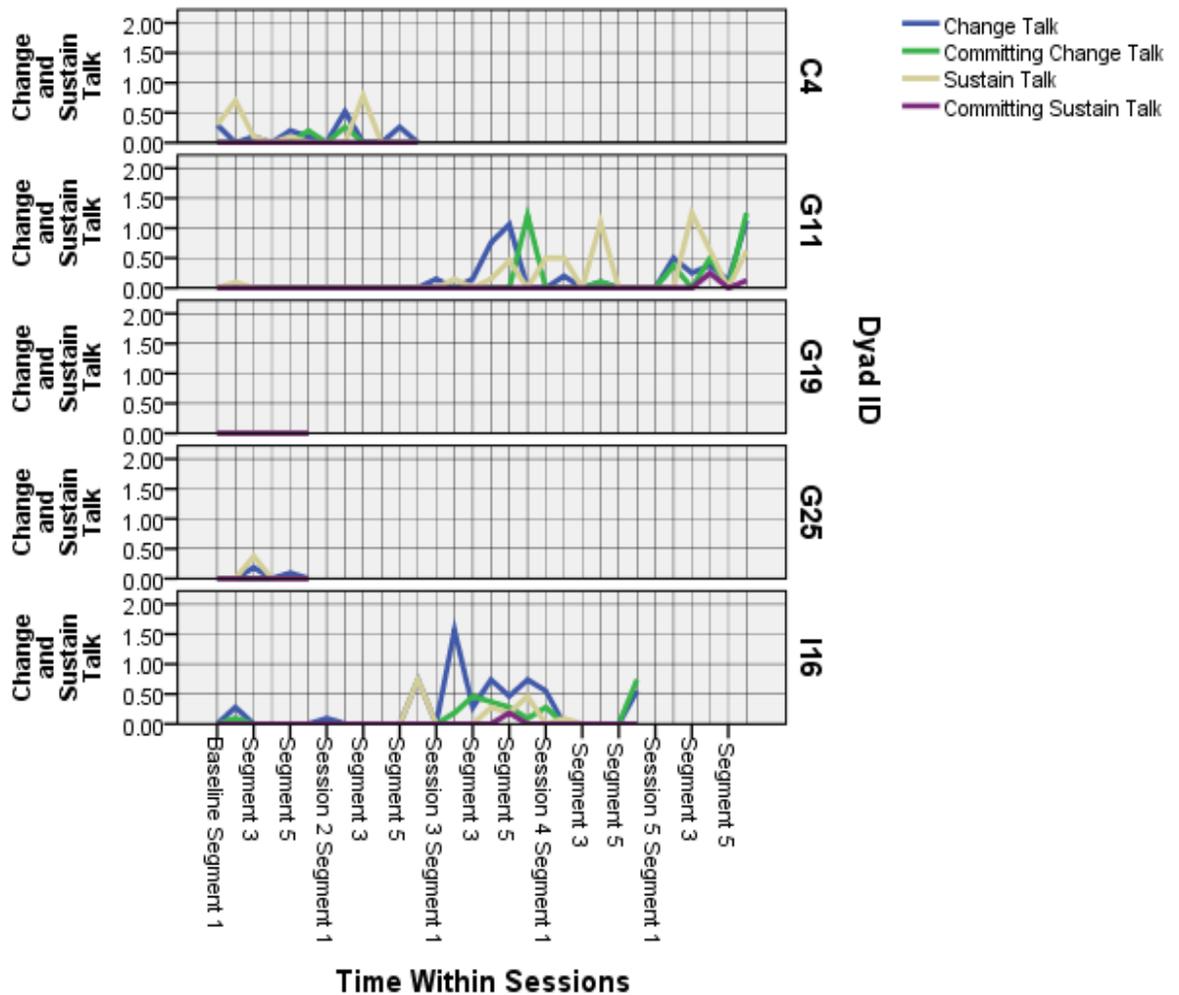


Figure 27. Offender change and sustain talk within SMP sessions when facilitators have high rates of MI inconsistent methods

Note. Offenders C4, G19 and G25 exited SMP after sessions two, one and one, respectively. Offender I16 completed the SMP but there fifth session was not successfully video-recorded and therefore unable to be coded.

As such, these findings provided tentative support for hypothesis 4.4 that facilitator MI skills will be positively related to offender change and committing change talk and inversely related to offender sustain and committing sustain talk within sessions. The use of MI consistent methods appeared to be related to higher and more consistent rates of change and committing change talk and lower rates of sustain and committing sustain talk. The use of MI inconsistent methods were related to greater ambivalence (concurrent change and sustain talk) within sessions. Offenders were *more likely to complete the SMP*

in the groups of facilitators with *high rates of MI consistent methods and low rates of MI inconsistent methods* compared to the groups of facilitators with *high rates of MI inconsistent methods and low rates of MI consistent methods*.

Summary of hypotheses 4.1 to 4.4

There was little support for a relationship between facilitators' global scores and offenders' self-exploration. There was some, albeit mixed, support for a positive relationship between facilitators' global scores with offenders' change and committing change talk and an inverse relationship to offenders' sustain and committing sustain talk across sessions. Most notably, four offenders in the group constituted by facilitators with lower global scores did not complete the SMP. In contrast, all offenders constituted by facilitators with high global scores completed the SMP.

There was some evidence that MI consistent methods were positively related to offender change talk. Offenders in the group constituted by facilitators with high MI consistent scores tended to demonstrate more change talk and change talk occurred more consistently. Also, offenders in the group constituted by high MI consistent scores tended to experience comparatively less sustain and committing sustain talk. However, there was little difference in sustain and committing sustain talk between the offenders constituted by high MI consistent methods versus low MI consistent methods. Offenders in the groups constituted by low MI consistent methods and high MI inconsistent methods demonstrated a greater degree of ambivalence about behaviour change as demonstrated by comparatively similar rates of change and sustain talk within sessions.

Most notably, only two offenders in the group constituted by high MI inconsistent methods completed the SMP. A similar pattern of attrition occurred for offenders in the group constituted by facilitators with low MI consistent scores. This contrasted with the offenders constituted by facilitators with high MI consistent and low MI inconsistent scores whereby all of these offenders completed the SMP.

CHAPTER 9: DISCUSSION

The following chapter reviews the major findings and discusses these in reference to the literature. The implications of these for clinical practice are examined. The strengths and limitations of the current study are highlighted and recommendations are made for future research. This chapter concludes with an account of the key findings and their implications for clinical practice.

Evidence has accrued to support the effectiveness of MI for a range of problems, but these studies have produced heterogeneous effects across and within problem domains (Lundahl et al., 2010). Consequently, researchers focused on explicating process variables to explain how MI effects motivational and behavioural change (Aharonovich et al., 2008; Amrhein et al., 2003, 2004; Campbell et al., 2010; Hodgins et al., 2009; Moyers & Martin, 2006; Moyers et al., 2009). The key findings of these studies were recently synthesised by Miller and Rose (2009) into a theory of MI. This theory provides a basis for conducting further process studies. It also allows adaptations of MI to be studied in terms how these alterations affect process variables linked to motivational and behavioural outcomes. Further, a measure of MI process, the MISC 2.1 (Miller et al., 2008), has been developed to quantify the variables in Miller and Rose's (2009) theory of MI.

Outcome studies have provided tentative support for the effectiveness of MI for offenders (Anstiss et al., 2011; Austin et al., 2011; Farbring & Johnson, 2008; McMurrin, 2009). Based on the 'what works' literature of correctional rehabilitation, (Andrews & Bonta, 2010), MI has been adapted for offenders by including cognitive behavioural content. The SMP represents one such adaptation of MI used with medium risk offenders. However, these adaptations have been made with little understanding of the effect of cognitive behavioural content on the process of MI. It is therefore important to understand if and how cognitive behavioural content affects the MI process variables which have been linked to client outcomes. As such, based on Miller and Rose's (2009) theory of MI, the MISC 2.1 (Miller et al., 2008) was used to investigate the process of MI when combined with cognitive behavioural content for medium risk offenders.

Findings for the Current Study

Research questions for the current study centred on: the inter-rater agreement between the researcher and a second coder in rating SMP sessions with the MISC 2.1 (Miller et al., 2008); facilitators' use of MI; offenders' change and sustain talk during the SMP, and; the relationship between facilitators' use of MI and offenders' self-exploration, change and sustain talk.

What is the level of inter-rater agreement between the researcher and second coder when using the MISC 2.1 to rate SMP sessions?

An initial investigation into the inter-rater agreement between the researcher and a second coder was conducted to establish the likely generality of the MISC 2.1 data prior to testing the subsequent hypotheses. It was hypothesised that good levels of inter-rater agreement (Cicchetti, 1994) would be achieved for those scales and categories that reflect Miller and Rose's (2009) theory of MI.

Excellent levels of inter-rater agreement were achieved for facilitator global scales, MI consistent methods, MI inconsistent methods and change and sustain talk. The self-exploration scale closely approached moderate inter-rater agreement based on Cohen's Kappa. On average, committing change and committing sustain talk achieved a good level of inter-rater agreement. Because they approached or achieved a good or better level of inter-rater agreement (Cicchetti, 1994), and given their pertinence within the emergent theory of MI (Miller & Rose, 2009), these constructs were retained for subsequent hypothesis testing. Because the global self-exploration scale and committing change and committing sustain talk categories were not consistently rated at a good level of inter-rater agreement, some caution was warranted in the interpretation of these data.

Many of the single categories that made up the facilitator MI consistent and MI inconsistent methods and offender change and sustain talk scales were unable to be coded reliably. Some coding categories, such as advise with permission, emphasise control, reframe and sustain talk (taking steps), were rarely coded. The low base rates of these categories may have made it difficult to establish adequate inter-rater agreement. These were managed by not including single behaviour counts (other than committing change and committing sustain talk) in subsequent analyses. It is recommended that for future studies additional training on recognising infrequently occurring coding categories is

carried out to increase the likelihood of them being rated reliability. This could include additional detail and examples within the manual (Miller et al., 2008).

Based on findings by Amrhein et al. (2003) into the relationship between committing change talk strength and behaviour change, it was planned that categories of change and sustain talk strength would be included in subsequent analyses. However, only poor to fair inter-rater agreement were achieved for low and high strength ratings of offender change and sustain talk categories, which included committing change and committing sustain talk. As such, change and sustain talk strength ratings were not included in subsequent analyses.

Low and high strength ratings were rarely assigned to offender change and sustain talk categories. Therefore, the low level of inter-rater agreement may have been partly due to the low base rates associated with low and high strength ratings. These low base rates may have occurred due to an inability to discriminate between differing levels of change and sustain talk strength. Therefore, better inter-rater agreement might be achieved with a greater focus in the training phase on accurately discriminating between change and sustain talk strength. It is also possible that offenders were less likely to utter change and sustain talk that was particularly weak or particularly strong. Previous inter-rater reliability studies have not investigated change and sustain talk strength ratings (de Jonge et al., 2005; Moyers et al., 2003; Tappin et al., 2000). A recent study by Moyers et al. (2009) was unable to achieve adequate inter-rater agreement for the strength of change and sustain talk sub-categories. Dr Moyers reported that it has been difficult to achieve adequate inter-rater agreement between change and sustain talk strength ratings despite thorough training and supervision (T. B. Moyers, personal communication, August 1, 2011). Therefore, additional work in defining and describing what constitutes a low, medium and high strength rating is warranted if strength ratings are to be included in further MI process studies.

There were no reliability studies of the MISC based on an offender population (de Jonge et al., 2005; Moyers et al., 2003). Therefore, decision rules were created for content that was idiosyncratic to the SMP. While the MISC 2.1 lacked psychometric data, it had been simplified to remove the less reliable and unnecessary coding categories from the previous version (Miller et al., 2008). Further, a thorough training process was undertaken

for the current study that included external consultation and ongoing supervision. As such, while this study did not focus on establishing the inter-rater reliability of the MISC 2.1 with an offender sample, the inter-rater agreement findings suggested that the MISC 2.1 can be reliably used in a correctional setting.

Subsequent to the inter-rater agreement analysis, hypotheses were based on Miller and Rose's (2009) theory of MI. This explains how MI training, therapist empathy and MI spirit and therapist use of MI consistent methods interact with client ambivalence (change and sustain talk) and client commitment to change during MI sessions to effect motivational and behavioural change. These relationships are depicted in Figure 28 below.

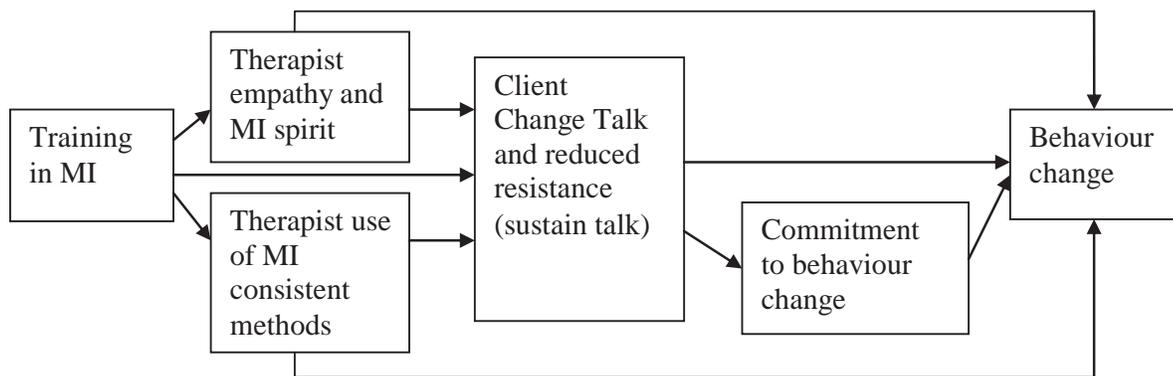


Figure 28. Hypothesised relationships among process and outcome variables in MI
Adapted from Miller and Rose (2009)

Session one was a structured assessment session and therefore provided a baseline assessment for the current study. Sessions two and four of the SMP contained cognitive behavioural content but the interpersonal interaction within these sessions was based on MI principles and methods (Anstiss, 2003; Steyn & Devereux, 2006). In contrast, sessions three and five of the SMP were constituted by MI sessions free of cognitive behavioural content. Facilitators' use of MI and offenders' change and sustain talk and committing change and committing sustain talk were therefore studied in the context of MI sessions with and without cognitive behavioural content. A single-case design approach was supplemented with descriptive group-level statistics and, when appropriate, inferential statistics.

What is the nature of facilitators' use of MI during the SMP?

Hypotheses for this question predicted that facilitators would demonstrate competency in MI with greater competency in sessions without cognitive behavioural content.

The relational component

On average, facilitators' did not demonstrate competence in the relational component of MI. Miller and Rollnick (2002) suggested that the relational component of MI has better predicted outcomes than the use of MI specific methods. Furthermore, studies have demonstrated that the ability to form a strong therapeutic relationship is related to outcomes across a range of therapies and clinical problems (Martin et al., 2000; Norcross & Wampold, 2011), including CBT (Ford, 1978; Scott & Beck, 2008). As such, the relational component would be expected to be an important predictor of outcome across sessions that included and excluded cognitive behavioural content. However, the cut-off scores used to denote beginning proficiency and competency in MI composite measures were generated by expert opinion. The cut-off scores for the global clinician rating and the global measures were calculated by the researcher, based on the MITI (Moyers et al., 2010). Because these were generated by the researcher, they should not be interpreted as gold standards, and do not represent norms. Furthermore, there is no research to suggest that these thresholds need to be met to effect motivational or behavioural change. It is possible that SMP facilitators are and were able to be effective without achieving these standards and this would need to be explored with further research (Dr Eileen Britt, personal communication, July 6, 2012). Therefore, any suggested implications based on the demonstrated level of competency in MI need to be treated with caution. Nevertheless, research does suggest that greater competency is associated with better results (Miller and Rollnick, 2002).

Based on graphical inspection, there was a negligible difference in facilitators' global scores between SMP sessions, with some indication of higher scores during session three. This suggested that the inclusion of cognitive behavioural content did not compromise facilitators' ability to adhere to MI's relational component.

A treatment manual was used throughout the SMP and treatment manuals have been criticised for fostering an undue focus on techniques to the detriment of the therapeutic relationship (Henry, Schacht, et al., 1993; Henry, Strupp, et al., 1993). Similarly, larger

effect sizes have been found when MI was not guided by a manual (Hettema et al., 2005; Lundahl et al., 2010). The finding that facilitators were unable to consistently communicate the relational aspect of MI suggested that the SMP manual may have adversely affected the relational component of MI across the SMP sessions. However, because all facilitators used a manual it was not possible to know if the relational component might have been stronger without the inclusion of a manual. It is also possible that some facilitators are better able to use a manual without compromising the therapeutic relationship than others. Furthermore, there are other constructs related to the therapeutic relationship that may not be fully captured by the MISC 2.1, such as the working alliance (Horvath & Symonds, 1991). These therapeutic relationship measures were not included in the current study due to its limited, but focused, scope.

MI methods

On average, facilitators demonstrated competence on the index of percent complex reflections, with a marked increase during sessions three and five. This suggested that sessions which included cognitive behavioural content may have compromised the ability of facilitators to use complex reflections. Complex reflections were significantly higher during session three. This indicated that the decisional balance exercise, in particular, may have facilitated the use of complex reflections. Catley et al. (2006) and Moyers et al. (2009) found reflective listening was particularly related to the likelihood that clients would go on to express change talk. Similar trends were found in the current study and these are discussed below. Studies have demonstrated that complex reflections during MI are also particularly predictive of behaviour change (Moyers et al., 2009; Tollison et al., 2008).

On average, facilitators did not demonstrate competence on the reflection to question ratio index. Based on visual inspection, there were more reflections versus questions during session three compared to the other sessions, although this was not found to be statistically significant. This suggested that the content of session three, rather than the exclusion of cognitive behavioural content per se, may have assisted facilitators to balance their use of reflections and questions. Miller and Rollnick (2009) emphasised in an article outlining misconceptions of MI that MI is not tantamount to a decisional balance exercise. Nevertheless, the use of a decisional balance exercise in session three of the SMP may have assisted facilitators to balance their use of reflections and questions in

a way that is consistent with a MI approach. Intertwining questions and reflections allows the MI clinician to introduce some direction through Socratic questioning while using reflections to reinforce change talk and demonstrate understanding (Miller & Rollnick, 2002). Moyers, Martin, et al. (2005) suggested that a ratio of two reflections to every question is optimal to foster engagement and behaviour change. Naar-King and Suarez (2011) suggested that counter-balancing questions with reflections prevents a sense, particularly in young people, that they are being interrogated. Similarly, the overuse of questioning might be perceived by offenders as akin to the investigative process used by the Police, which may in turn engender suspiciousness about a facilitator's motives.

On average, facilitators did not reach competence in the percent of open- versus closed-ended questions. The use of open-ended questions was particularly low during session one. Session one was an assessment session, which acted as a baseline in the present study, and is highly structured to ensure that rehabilitative needs are screened. The structure imposed by the manual may have discouraged facilitators from using open-ended questions. Furthermore, the global scores were at their lowest during session one. The MI spirit, which is constituted by evocation, collaboration and autonomy-support, was the lowest of the three global scores. The low rate of open-ended questions may have prevented facilitators from evoking the clients own thoughts and solutions for change. Closed-ended questions may also communicate a less collaborative approach and less support for the client's autonomy. Closed-ended questions have a tendency to elicit restricted responses and this inhibits the client's active participation in the session (Naar-King & Suarez, 2011). Fewer open-ended questions also risks missing potentially important information due to a premature focus. A premature focus occurs when a MI clinician focuses too early on what they deem is important while disregarding what the client deems should be the focus of therapy, compromising the client's autonomy (Miller & Rollnick, 2002). While facilitators demonstrated less open-ended questions in the first session, there was no pattern in facilitators' use of open-ended questions between sessions with and without cognitive behavioural content.

On average, facilitators did not reach competence in the percent of MI consistent versus MI inconsistent methods. Research has suggested that MI inconsistent methods have predicted in-session resistance (Miller et al., 1993; Patterson & Forgatch, 1985) and poor outcomes (Gaume et al., 2009). A similar pattern was found here where the use of MI

inconsistent methods was related to increased ambivalence and premature exit. A pattern of negligible difference between sessions with and without cognitive behavioural content was found for facilitators' use of MI inconsistent methods. This suggested that the content of SMP sessions did not relate to the likelihood of facilitators using MI inconsistent methods. While MI inconsistent methods were related to increased ambivalence in this and in previous studies (Miller et al., 1993; Patterson & Forgatch, 1985), Moyers, Miller, et al. (2005) demonstrated that the negative effects of MI inconsistent methods was attenuated when used in the context of a strong therapeutic relationship. Moyers, Miller, et al. (2005) suggested that genuineness or authenticity, one of the necessary and sufficient conditions of change highlighted by Rogers (1959), may have allowed clinicians to use MI inconsistent methods to positive effect. Indeed, Moyers, Miller, et al. (2005) found that MI inconsistent methods increased client involvement in sessions when used in the context of a strong therapeutic relationship. Unfortunately, the sub-optimal mean levels of acceptance, empathy and MI spirit ratings found in this study were unlikely to have assuaged the negative effects of MI inconsistent methods. There was some evidence, at the single-case level, to suggest that the negative effects of MI inconsistent methods were attenuated when conducted within a strong therapeutic relationship. There was however, no evidence to suggest that MI inconsistent methods when used in the context of a strong therapeutic relationship, increased offenders' involvement in sessions.

These findings suggested that, other than facilitators' use of complex reflections, the inclusion of cognitive behavioural content did not impact on facilitators' use of MI methods or those methods proscribed in an MI approach. However, the decisional balance exercise may have assisted facilitators to balance reflections with questions. As such, facilitators might be assisted to use MI methods by structuring content that supports this, such as the decisional balance exercise. Alternatively, further training may assist facilitators to better use MI methods while covering content which does not explicitly support the use of MI. Further, a less prescribed approach, with the appropriate level of training and skills, may allow facilitators to better adhere to the relational component of MI while using MI methods to elicit change talk and reduce sustain talk. However, as discussed next, offenders change talk was substantially higher in sessions without cognitive behavioural content. Therefore, it is possible that the use of complex reflections (the one MI skill which was consistently used more in sessions without cognitive

behavioural content), was related to increased rates of change talk among offenders. This would be consistent with findings by Moyers et al. (2009) where the use of reflections predicted client change talk, while MI consistent methods more generally, demonstrated little predictive power.

What is the nature of offenders' change and sustain talk?

Hypotheses for this question predicted that change talk would be positively related to committing change talk whereas change and committing change talk would be inversely related to sustain and committing sustain talk. It was predicted that change and committing change talk would increase across and within sessions whereas sustain and committing sustain talk would decrease across and within sessions. It was also predicted that the greatest increases in change and committing change talk and the greatest decrease in sustain and committing sustain talk would occur during sessions without cognitive behavioural content. Lastly, it was predicted that offenders with a greater rate of committing change talk in session five (the final SMP session) would experience more change talk in sessions one to four and in earlier segments of session five.

The relationship between change and sustain talk

Offender change and committing change talk tended to coalesce between and within SMP sessions. There was some evidence to suggest that sustain and committing sustain talk were also positively related across and within SMP sessions. These relationships were in the expected direction. Unexpectedly, change and committing change talk coalesced with sustain talk at sessions three, four and five. To a lesser degree, change and committing change talk also coalesced with committing sustain talk across sessions.

Moyers and Martin (2006) found that clients presenting for substance abuse treatment tended to talk concurrently about changing and not changing. They suggested that concurrent change and sustain talk reflected ambivalence about behaviour change and that this represented a normal part of the change process. Similarly, using a sequential behaviour coding system, Moyers et al. (2009) found that clients did not proceed uniformly from sustain to change talk and finally commitment to a change plan. Instead, Moyers et al. (2009, p.1121) colloquially described a "change talk sandwich" where clients expressed change talk but typically qualified this with two sustain talk statements on either side. The current study indicated that the early pattern of ambivalence about

behaviour change in an offender group was similar to that found by Moyers et al. (2009) in a substance abuse population. Moyers et al. (2009) posited that rather than expecting change talk to simply occur in increasing amounts and for sustain talk to spontaneously dissipate, it was necessary for MI clinicians to differentially reinforce change talk through the strategic use of MI methods, such as simple and complex reflections. Based on this, it would be expected that change and sustain talk might coalesce during early SMP sessions. It would be expected however, that as the SMP progressed, change talk would continue to increase and sustain talk would decrease due to the reinforcement of change talk and the subjugation of sustain talk.

As expected, change talk increased across SMP sessions with marked increases during sessions three and five. Committing change talk demonstrated a gradual increase across sessions with a marked increase at session five. However, while sustain talk decreased from session one to two and from session three to four, the mean trend was for sustain talk to increase across sessions. One possible explanation is that facilitators were unable to use MI methods, such as reflections, to strategically reinforce change talk without inadvertently reflecting, and therefore reinforcing, sustain talk. This might be due to a lack of knowledge about the strategic use of MI methods or because the structure of the SMP restricted their ability to exercise these skills. Nevertheless, the trajectory of change and committing change talk across SMP sessions was steeper than the trajectory of sustain and committing sustain talk. As such, the ratio of change to sustain talk increased in favour of more change talk.

There was some limited support to suggest that offenders' change and committing change talk increased within sessions. Offenders demonstrated a positive trajectory in change talk during sessions two, three and five and a positive trajectory in committing change talk during sessions three and four. While session five did not demonstrate a positive within session trajectory of committing change talk, the mean rate of committing change talk was higher during session five than earlier sessions. There was little evidence to support a consistent within session negative trajectory in offenders' sustain and committing sustain talk. Instead offenders' sustain talk tended to increase across sessions and fluctuate within sessions. This positive trajectory of sustain talk across SMP sessions is of potential concern given findings by Baer et al. (2008) that decreases in sustain talk, rather than increases in change talk, have predicted behaviour change. However, this was based on an

adolescent substance abuse population. Therefore, the increases in sustain talk across SMP sessions might indicate that offenders were unlikely to change, although this was not supported by a recent outcome study of the SMP (Anstiss et al., 2011).

In contrast, Amrhein et al.'s (2003) findings suggested that a within session trajectory of committing change talk strength was the best predictor of behaviour change. The strength of change and sustain talk was not analysed in the current study due to a lack of inter-rater agreement (see Table 11). Committing change talk tended to increase across sessions and within sessions three and four in the current study. Based on Amrhein et al.'s (2003) findings with an elicited substance abusing population, this would predict an increased likelihood of behaviour change. However, Amrhein et al.'s (2003) findings were based on the strength, not the frequency, of committing change talk. Nevertheless, it remains unclear in the literature about what form of change talk (change talk per se or committing change talk specifically), what metric (mean frequency, trajectory, strength), with what client groups, most strongly predicts behaviour change. The current study would need to be extended to understand the relationship between change and sustain talk with risk of recidivism to understand this relationship more fully. Nevertheless, the majority of studies have found that change talk, in some form, plays a role in increasing a client's committing change talk and subsequent behaviour change (Miller & Rose, 2009; Moyers, Martin, Christopher, et al., 2007).

Change and sustain talk during sessions with and without cognitive behavioural content

Change talk was particularly high during sessions three and five. Further, committing change talk, while demonstrating a gradual increase across sessions, demonstrated the greatest increase at session five. While sustain talk and committing sustain talk also increased during sessions three and five, the increases were less than the increases in change and committing change talk. In contrast, the rates of change and sustain talk were closest during sessions one, two and four. In the final segments of sessions one and four, offenders' sustain talk exceeded their change talk. Facilitators' use of complex reflections, which have been related to change talk and behavioural change in substance abuse populations (Catley et al., 2006; Moyers et al., 2009), were also less during sessions one, two and four. As posited above, the lack of complex reflections may have thwarted offenders' change and committing change talk during sessions with cognitive behavioural

content. The aim of the SMP is to enhance offenders' motivation to change offending behaviour. It is not deemed to be a rehabilitative programme per se in that it does not explicitly aim to reduce recidivism (Devereux, 2009). The pattern of change and sustain talk during sessions two and four suggested that the inclusion of cognitive behavioural content did not contribute toward the aim of enhancing motivation. However, it is possible that these sessions contributed in other ways, such as providing offenders with insights into factors related to their offending risk. However, it would be reasonable to expect that offenders' change and sustain talk during these sessions might indicate a reticence on the part of offenders to act on any such acquired knowledge or skills.

The aim of the final session is to promote offenders' commitment to a change plan and results for the current study, at the group level, indicated that this was achieved. This is a promising finding in that studies have demonstrated a relationship between committing change talk and subsequent behaviour change (Aharonovich et al., 2008; Amrhein et al., 2003; Campbell et al., 2010; Hodgins et al., 2009). In the current study, based on change and sustain talk rates, offenders' ambivalence increased in the fourth session. Miller and Rose's (2009) theory of MI suggests that commitment to change behaviour is most likely to occur once ambivalence has been resolved. Therefore, while offenders' committing change talk increased in the fifth and final session, this might have been larger if offenders' ambivalence was better resolved in the fourth session. The increased level of ambivalence in the fourth session may have made it more difficult for facilitators to elicit and strengthen offenders' commitment to a change plan in the fifth and final session

The relationship between change talk and committing change talk

It was hypothesised that offenders who experienced more committing change talk in the final session would experience more change talk and less sustain talk in earlier sessions and in earlier segments of session five. This hypothesis was based on Miller and Rose's (2009) theory of MI, which suggested increased change talk and reduced sustain talk (i.e. resolved ambivalence about behaviour change), predicts clients' commitment to change behaviour. A high level of inter-rater agreement was not consistently achieved for committing change and committing sustain talk and therefore the results need to be treated with caution. Nevertheless, the results indicated that offenders who experienced higher rates of committing change talk in the final session tended to experience higher rates of change talk during sessions three and five. There was some evidence to suggest

these offenders also experienced more change talk during session four. Furthermore, offenders who experienced more committing change talk in session five, with the exception of one offender, experienced a low and decreasing rate of sustain talk from session three to five.

This supported the previous contention that, while offenders on average experienced a marked increase in committing change talk at session five, this might have been enhanced if offenders' sustain talk had been better assuaged at session four. This is consistent with Baer et al.'s (2008) findings where reductions in sustain talk, rather than increases in change talk, predicted behaviour change. The limited scope of the current study did not allow any direct comparisons with Baer et al.'s (2008) results in terms of the relationship between reduced sustain talk and behaviour change. Nevertheless, these findings suggested that reductions in sustain talk were related to greater commitment to a change plan, which has been related to behaviour change in prior studies, albeit with different presenting problems (Aharonovich et al., 2008; Amrhein et al., 2003; Campbell et al., 2010; Hodgins et al., 2009). Therefore, these results provided some support for the hypothesis that change talk in sessions one to four would be associated with committing change talk in session five. Further, the results provided some support for a relationship between reduced sustain talk during sessions one to four and increased committing change talk in the final session.

Increases in change talk and reductions in sustain talk did not consistently precede an increase in committing change talk within session five. However, there was very little sustain talk within session five among offenders with higher rates of committing change talk. As such, prior to session five, these offenders may have adequately resolved their ambivalence about behaviour change. Alternatively, they may have been generally less ambivalent about behaviour change. Conversely, these results demonstrated that offenders who experienced lower rates of committing change talk at session five had not resolved their ambivalence to behaviour change and therefore voiced this through continued sustain talk within session five. This might indicate that these offenders were encouraged to complete a change plan before they had resolved their ambivalence about behaviour change.

These findings are consistent with what Miller and Rollnick (2002) described as the two phases of MI. The first phase focuses on reducing ambivalence about behaviour change and fostering motivation to change and the second phase focuses on building commitment to change behaviour. Miller and Rollnick (2002) suggested that if ambivalence to change has not been adequately resolved, the client will be unable to commit to a plan of change. Any subsequent pressure to commit to change behaviour will only strengthen their resolve to resist change. This may be due to more initial ambivalence about change among these offenders or due to facilitators' difficulties using MI methods to resolve ambivalence, or both.

What is the relationship between facilitators' use of MI with offenders' self-exploration, and offenders' change and sustain talk during the SMP?

Hypotheses for this question predicted facilitators' competence in MI to be positively related to offenders' self-exploration and change and committing change talk.

The relationship between facilitators' global scores and offenders' self-exploration

There was only mixed support, at best, for a relationship between facilitator global scores and offender self-exploration. A high level of inter-rater agreement was not consistently achieved for the self-exploration scale and therefore the results need to be treated with caution. Nevertheless, results from the current study would suggest that the relational component of MI is not related to offenders' level of self-exploration. However, the sample represented a restricted range of facilitator global scores and only one offender in the group of facilitators with low global scores completed the SMP, which limited the ability to draw conclusions.

While a clear relationship between facilitator global scores and offender self-exploration was not found, four of the five offenders in the group that consisted of facilitators with low global scores did not complete the SMP. In contrast, all the offenders in the group that consisted of facilitators with high global scores completed the SMP. As such, the ability of facilitators to enact the relational component of MI was related to offenders' retention in the SMP. Studies outside of the MI field have demonstrated related findings (Tracey, 1986), although it remains unclear what part of the therapeutic relationship (e.g. working alliance, positive regard, acceptance) is most linked with early termination

(Beutler et al., 2004). An alternative explanation is that offenders who prematurely withdrew from the SMP elicited an interactional style from facilitators that was less accepting and empathic, and contra to the MI spirit. Nevertheless, Miller and Rollnick (2002) have suggested that working with resistant clients requires a greater focus on the relational component of MI to circumvent client resistance. This approach is also advocated within the SMP manual (Anstiss, 2003; Steyn & Devereux, 2006).

The relationship between facilitators' global scores with offenders' change and sustain talk

Findings at the single-case level provided tentative support for a positive relationship between facilitator global scores and offender change and committing change talk and a negative relationship between facilitator global scores and offender sustain and committing sustain talk across sessions.

Although offender change and sustain talk is not strictly an outcome, increased change talk and decreased sustain talk has predicted client outcomes (Baer et al., 2008; Moyers et al., 2009). Further, there is considerable evidence to suggest that the therapeutic relationship is strongly related to treatment outcome across therapeutic modalities (Barber et al., 2009; Norcross & Wampold, 2011), although demonstrating causation has remained difficult (Tang & DeRubeis, 1999; Zuroff & Blatt, 2006). As such, the tentative finding that facilitators' global scores were positively related to offenders' change and committing change talk, and negatively related of offenders' sustain talk, suggests that the relational component of MI may be related to outcomes.

The relationship between facilitators' MI consistent and MI inconsistent methods and offenders' change and sustain talk

There was some evidence that offenders in the group of facilitators high in MI consistent methods demonstrated higher rates of change and committing change talk. Further, the change talk for offenders in this group tended to occur more consistently within sessions. Previous studies demonstrated a strong relationship between MI consistent methods and change talk (Moyers & Martin, 2006; Moyers, Martin, Christopher, et al., 2007). The lack of a clear relationship here might have been due to facilitators' difficulties in differentially employing MI methods to reinforce, and therefore foster, change talk. It is

also possible that facilitators were unable to adequately demonstrate the relational aspect of MI and that this subsequently inhibited the effects of MI consistent methods.

Offenders in the group of facilitators with low rates of MI consistent methods and high rates of MI inconsistent methods tended to demonstrate greater ambivalence (concurrent change and sustain talk). Lastly, only three out of ten offenders completed the SMP across these two groups (low MI consistent methods and high MI inconsistent methods) while all the offenders in the two groups constituted by facilitators high in MI consistent and low in MI inconsistent methods completed the SMP. These findings suggested that it may be important for facilitators to focus on using MI consistent methods and avoid using MI inconsistent methods to reduce the risk of premature exit. These contraindicated methods include warning the offender, raising concerns without permission, providing advice without permission, directing the offender what he or she should or must do and confronting the offender. In contrast, facilitators are more likely to resolve ambivalence by adhering to MI consistent methods, such as providing advice with permission, emphasising personal control, reframing, supporting and affirming the offender, and using open-ended questions and reflections.

In a study by Moyers et al. (2009) the rates of MI inconsistent methods predicted client change and sustain talk. Similarly, Gaume et al. (2009) found that MI inconsistent methods predicted substance abuse outcomes. Further, studies by Campbell et al., 2010, Moyers, Martin, Christopher, et al. (2007), and Moyers et al. (2009) demonstrated a link between change and sustain talk with substance abuse outcomes. Furthermore, when facilitators demonstrated low rates of MI consistent methods and high rates of MI inconsistent methods, this was associated with a higher attrition rate. McMurrin and Theodosi (2007) demonstrated that offenders who prematurely exited treatment re-offended at a higher rate than matched offenders who did not commence treatment. Therefore, results from the current study would suggest that a lack of MI consistent methods and the presence of MI inconsistent methods may be associated with continued offending. This hypothesised link between change and sustain talk, treatment completion and risk of recidivism would need to be confirmed by further research. In contrast, a recent study by Magill et al. (2010) with a substance abuse population suggested that MI inconsistent methods did not predict change plan completion. However, this was only the case when MI inconsistent methods were used within a strong therapeutic relationship,

which may have attenuated the adverse effects in the context of a relationship that reflects Rogers (1959) necessary and sufficient conditions for change.

These findings provided tentative support for the in-session component of Miller and Rose's (2009) theory of MI. The relational component of MI was positively related to whether offenders completed the SMP. Methods consistent with an MI approach were tentatively related to the likelihood that offenders would express increased rates of change talk and decreased rates of sustain talk. Also, when facilitators demonstrated low rates of MI consistent methods and high rates of MI inconsistent methods, this was associated with a higher attrition rate. Offenders who completed the SMP with higher rates of committing change talk experienced more change talk and less sustain talk during earlier SMP sessions. These findings have important implications for the practice of MI with offenders.

Implications for Clinical Practice

Results from the current study have potential implications for the practice of MI with offenders. These implications are most pertinent when MI is adapted for offenders to include cognitive behavioural content.

Acceptance, empathy and MI spirit

Britt (2009) posited that a correctional setting, with its implicit if not explicit mandate of behaviour change, contradicts MI's focus on supporting clients' autonomy about changing behaviour. She suggested that the Good Lives Model (Ward et al., 2007) of correctional rehabilitation might create a rehabilitative focus that was more consistent with the spirit and principles of MI. The good lives model contends that offender rehabilitation is more effective when offenders are provided with the means to live more fulfilling lives rather than solely managing risk (Ward & Brown, 2004). Ward and Brown (2004) posited that correctional rehabilitation by risk management, as described by Andrews and Bonta (2010), is necessary but not sufficient. Ward and Brown (2004) therefore recommended that offenders would be better motivated to change their offending behaviour if their deeply held values and goals were attended to first and made the focus of treatment. This resonates with Ryan and Deci's (2000) self-determination theory, which suggests that deeply held values or goals are intrinsically motivating. Consistent with self-determination theory, Vansteenkiste and Sheldon (2006) proposed that clients will not actively engage in MI because it is intrinsically pleasing, but because the reasons for engaging in MI are consistent with strongly held values.

Due to the structure of the SMP, identifying goals and developing discrepancy between these goals and current behaviour is not covered until session three. Prior to this, session one focuses on eliciting the offender's rehabilitative needs and session two focuses on developing their offence chain. Offenders' ambivalence to change might be more rapidly resolved, and motivation to change fostered, if the focus in sessions one and two was on offenders' goals and values. These goals and values could be contrasted with offending behaviour once ambivalence has been resolved to foster their motivation to change offending.

The current early focus on rehabilitative needs reflects what Miller and Rollnick (2002, p.62) have described as a "premature focus trap". This occurs when the client's priorities

(such as their goals and values) are discounted due to an early focus on what the MI clinician deems to be important (such as eliciting a list of rehabilitative needs) rather than what may be of importance to the offender. In a related vein, Miller and Rollnick (2002, p.60) also described an “expert trap” where the clinician communicates the impression of having the answers to the client’s problems. The current initial focus on how rehabilitative needs have caused offending may communicate to the offender that the facilitator holds the knowledge about how he or she might, and perhaps should, change their behaviour. This reflects a cognitive behavioural approach, inconsistent with MI, where the offender is deemed to be lacking something and the clinician is in a position to correct this (Miller & Rollnick, 2009). Once a high level of motivation to change has been established, in terms of a discrepancy between values and offending behaviour, offenders might be more ready and willing to engage in cognitive behavioural methods. Therefore, the SMP might be more effective if the initial session(s) focuses solely on identifying the offenders’ goals and values, when appropriate, contrasting these with offending behaviour. Once their ambivalence about change has been resolved, offenders’ might more readily engage with the content currently included in sessions one and two and subsequent cognitive behavioural content.

Motivational interviewing methods and offenders’ change and sustain talk

Facilitators’ use of open-ended questions was particularly low in the first session, which acts as an assessment to inform subsequent sessions. Open-ended questions are typically encouraged during assessment sessions to garner a greater breadth of information. This approach also provides information about the client that would be missed with the structure provided by closed-ended questions (Groth-Marnat, 2009) and communicates a willingness to collaborate with the client (Miller & Rollnick, 2002). Similarly, open-ended questions are encouraged during cognitive behavioural approaches (J. S. Beck, 1995). Concurrently, offenders demonstrated a particularly low rate of change talk during session one. One explanation for this is that offenders, in this early stage of the SMP, remained ambivalent about changing behaviour. It is also possible that the over-use of closed-ended questions stifled offenders’ change talk. This is of some concern because the single-case data in this study suggested that commitment to change in the final session, which has predicted behaviour change in other studies (Aharonovich et al., 2008; Amrhein et al., 2003; Hodgins et al., 2009), was associated with higher rates of change talk and lower rates of sustain talk in earlier sessions. One explanation is that the structure

imposed by the SMP manual impeded facilitators' use of open-ended questions. A less structured approach may encourage facilitators to use more open-ended questions while still eliciting the required information about the offender's rehabilitative needs. This would concurrently allow facilitators to avoid the early focus and expert traps outlined by Miller and Rollnick (2002). This might be achieved by replacing session one with the approach taken in session three of the SMP. This would, based on results from this study, encourage facilitators to use more open-ended questions and reflections and lead to a marked increase in offenders' change talk.

Facilitators demonstrated a greater use of complex reflections during sessions without cognitive behavioural content. Concurrently, the gap between change and sustain talk was largest during these sessions. Complex reflections are a specific MI skill that has been related to positive client outcomes in previous MI studies (Catley et al., 2006; Moyers et al., 2009). As such, facilitators' use of reflections might be fostered through two approaches. Firstly, providing a structure during the SMP sessions that encourages the use of reflections, such as the decisional balance exercise in session three; or providing facilitators with specific training in using reflections during sessions that include cognitive behavioural content. It is possible that including cognitive behavioural content in MI sessions will impede facilitators' use of reflections irrespective of judicious training and this would warrant further study. However, while the cognitive behavioural content may have curtailed offenders' motivation to change, it may have had other benefits not elucidated in this study. For example, the cognitive behavioural content may have assisted offenders to develop greater insight into the precipitating and perpetuating factors related to their offending. This may have assisted them to change their offending behaviour, which would be consistent with the principles of effective correctional rehabilitation (Andrews & Bonta, 2010), and findings by Anstiss et al. (2011).

In the current study, MI inconsistent methods and a lack of MI consistent methods were related to premature exit from the SMP. In contrast, the use of MI consistent methods was related to increased rates of change talk and SMP completion. This is clinically important given findings by Baer et al. (2008) that MI inconsistent methods have predicted a lack of behaviour change, albeit in an adolescent substance abuse population. The use of MI inconsistent methods was not related to any one session. Therefore, reducing the use of these might be achieved through a greater awareness of those methods that contravene the

MI approach and alternative MI consistent options. It is therefore essential to minimise the use of warning, advising and raising concern without permission, directing and confronting offenders, especially while the therapeutic relationship remains weak. Instead, facilitators are more likely to reduce sustain talk and early treatment termination through the use of advice with permission, emphasising control, reframing, support, affirming, open-ended questions and reflections. Based on findings for the current study this would have the additive effect of increasing the likelihood of offenders completing a change plan and an increased likelihood of behaviour change (Baer et al., 2008; Gaume et al., 2008, 2009).

It would be expected that as offenders' ambivalence about behaviour change resolved, there would be a subsequent reduction in their sustain talk in later SMP sessions. In contrast, offenders' sustain talk continued to increase in the final session. One possible explanation is that facilitators were unable to strategically employ MI methods to elicit and reinforce change talk without inadvertently reinforcing sustain talk (Moyers et al., 2009), although this assertion would need to be empirically tested. This might be remedied with further training in two key areas. Firstly, it is important that facilitators are able to recognise the presence of change and sustain talk. Secondly, facilitators need to be able to differentially employ MI methods, such as reflections, and do so in a way that elicits and reinforces change talk without inadvertently reinforcing sustain talk. It is also possible that the resolution of ambivalence presents differently in an offending group. Offenders, unlike the substance abuse populations upon which the MI process research has been conducted, may have more entrenched patterns of thinking. To illustrate, pro-criminal attitudes and an antisocial personality, particularly antisocial personality disorder, are strong predictors of criminal recidivism (Andrews & Bonta, 2010). As such, in order for offenders to consider change, they may need to overcome an attitudinal and personality pattern that has developed over many years and is therefore particularly intransigent to change. This may be particularly true when this pattern of thinking and behaving is reinforced by antisocial peers, another strong predictor of recidivism (Andrews & Bonta, 2010). The problem areas targeted in the SMP do not relate to a single behaviour, such as alcohol abuse, but to a range of behaviours and thinking (rehabilitative needs) that are in turn related to their offending. Further, based on the research into resistance (Miller et al., 1993; Patterson & Forgatch, 1985), the coercive and

punitive environment associated with prison (and perhaps the justice system more generally) is likely to perpetuate offenders' resistance to change.

Offenders finished with a higher rate of sustain talk than change talk and a negative trajectory of change talk within session four of the SMP. As such, session four may have assisted offenders to recognise and respond differently to offence-related cognitive distortions, but it concurrently increased offenders' ambivalence about changing their offending behaviour. In the subsequent session, offenders' committing change talk markedly increased despite their ambivalence in the fourth session. However, had offenders not experienced an increased level of ambivalence in the fourth session, they may have experienced greater increases in committing change talk in the final session. This is supported by the single-case data where offenders who experienced greater committing change talk in the final session demonstrated less sustain talk and more change talk in earlier sessions. This is important given findings from previous studies that reduced sustain talk (Baer et al., 2008) and increased commitment to change (Amrhein et al., 2003), have predicted behaviour change. This highlights the importance of considering the effect of goals associated with a single session (such as changing offence-related cognitions during session four) on the goals associated with a subsequent session (such as fostering commitment to a change plan in session five). It would be prudent that the goals of one session support the goals of the subsequent session. Rather, greater commitment to a change plan might be achieved in the final session if this is not preceded by a cognitive behavioural task in the fourth session.

Combining MI and cognitive behavioural content

Findings indicated that offenders used more sustain talk during sessions that included cognitive behavioural content. The current study, due to its limited scope, did not allow other possible contributions from the inclusion of cognitive behavioural content to be investigated. It is possible that the offence mapping exercise in session two provided offenders with an understanding of the cognitive model and important insights into how rehabilitative needs contributed toward their offending. Similarly, the work on cognitive distortions in session four may have assisted offenders to understand how thought processes can be managed to reduce risk of recidivism. Indeed, outcome studies have demonstrated that the SMP reduces offender's risk of recidivism (Anstiss et al., 2011). Nevertheless, the findings in the current study suggested that offenders' ambivalence

about changing offending behaviour increased during sessions with cognitive behavioural content.

In an article describing the nature and aim of the SMP, Devereux (2009, p.12) suggested that “the SMP should be viewed as being a motivation enhancer, not treatment per se” and therefore should act as a prelude to rehabilitative programmes. Findings from this study suggested that sessions with cognitive behavioural content elicited responses from offenders that are inconsistent with the aim of the SMP. This might be resolved by excluding cognitive behavioural content until ambivalence has been resolved and commitment to behaviour change established. Cognitive behavioural content, such as that included in sessions two and four, might be included in later sessions once the requisite motivation to change is achieved. In this way cognitive behavioural content could be introduced as a component of an offender’s change plan and included as distinct extension to the SMP. These later sessions would reflect a shift in the SMP’s aim from enhancing motivation to reducing recidivism.

This approach would allow a pure form of MI, without the associated complications of integrating cognitive behavioural content, to be used to enhance motivation to change offending behaviour. This would be consistent with the aim of the SMP (Devereux, 2009). A subsequent extension to the SMP, in keeping with the literature of ‘what works’ to reduce recidivism (Andrews & Bonta, 2010), would utilise cognitive behavioural methods to reduce offenders’ risk of recidivism. One limitation of this approach is that offenders may find it difficult to transition from a client-centred style to a more directive action-oriented style. However, in a qualitative study of clients who received a pre-treatment of MI and a subsequent course of CBT for generalised anxiety disorder, clients reported the MI pre-treatment approach as complimentary to subsequent CBT (Kertes et al., 2011). These clients described a more collaborative approach to CBT when MI was used as a pre-treatment and saw MI as a means of preparation for subsequent CBT. Clients who received CBT without a pre-treatment of MI described their therapist as more compliance-oriented. Treatment engagement is vitally important in offender rehabilitation given findings that offenders who do not complete treatment re-offend at a higher rate than matched offenders who do not commence treatment (McMurrin & Theodosi, 2007).

Alternatively, further research might be conducted to understand whether additional training assists facilitators to apply MI methods to cognitive behavioural content to effectively reduce risk of recidivism. Such a study might more definitively demonstrate whether MI and cognitive behavioural content can be integrated in a way that enhances motivation to change while reducing risk of recidivism. If MI and cognitive behavioural content cannot be effectively combined, which would be consistent with the findings of the current study, using MI (without cognitive behavioural content) as a prelude to an extension programme that included cognitive behavioural content might more effectively achieve the two goals of enhancing motivation and reducing risk of recidivism.

Strengths and Limitations of the Current Study

The findings need to be considered in light of the study's limitations. The study's strengths and limitations are discussed below and explanations are provided for how these limitations were managed.

Strengths

The use of a single-case design allowed individuals to be studied at the level of detail that is rarely possible during group studies (Kazdin, 2011). It also allowed many data points to be collected to elucidate change over time. Previously, MI process studies investigated process variables within a single MI session (Moyers et al., 2009). This study added to the research base by studying the process of MI with offenders across multiple sessions. The alternating treatments approach, where MI sessions alternated between those with and without cognitive behavioural content, allowed temporal comparisons to be made between these conditions. Because this was replicated across a number of participants, all commencing SMP at different times, it was possible to identify consistent patterns that were likely to be due to SMP sessions rather than history effects. Further, because the SMP is a relatively short programme, maturation effects were less likely.

The use of a manual in the current study added to its internal validity, an important methodological consideration during single-case designs (Kazdin, 2011), by increasing the likelihood of a consistent approach across facilitators.

A thorough training process in the coding instrument, MISC 2.1, was undertaken. This included external consultation and ongoing training and supervision. The inter-rater agreement study, based on a 22% sample, demonstrated a good to excellent level of inter-rater agreement across and within sessions for the categories used in this study. The three exceptions were the across sessions committing change talk and within sessions committing sustain talk categories which received fair ratings and the offender self-exploration scale which received a below moderate rating. Further, while the new version of the MISC 2.1 lacked psychometric data, it had been simplified to remove some of the less reliable coding categories associated with the previous version (Miller et al., 2008). Also, using an observational measure allowed actual behaviour to be sampled rather than relying on self-report measures and therefore erroneous testing effects were avoided.

Due to the exploratory nature of this study (no other studies have investigated the process of MI with offenders) the current approach provided useful information that could be followed up with methodological and statistical approaches suited for establishing causation.

Limitations

The sample size was small and restricted to trained facilitators working with medium risk predominantly male offenders serving short fixed-term sentences. It is therefore difficult to generalize findings to clinicians outside of the Department of Corrections and to higher risk offenders serving longer sentences and female offenders. However, it addressed a specific gap in the research on the process of MI with medium risk offenders and provided preliminary findings that need to be followed up with further research.

Offenders serving different types of sentences were not partitioned into different groups and therefore any moderating effects associated with sentence type were not accounted for. One of the principles of MI, supporting autonomy, may have a differential effect on offenders based on whether they are serving a prison or community sentence. Some offenders had completed rehabilitative programmes during previous sentences and it is plausible that outcomes from these interacted with the SMP as a confounding variable. However, excluding these offenders from the study would have reduced the number of available participants. Instead, the inclusion of offenders with a range of previous rehabilitative experiences added to the generalisability of findings. A larger sample size would be required to understand if the setting (prison versus community) and offenders' previous involvement in correctional programmes have a moderating effect on the variables investigated in this study.

It was not possible to draw clear conclusions about causation in the current study. Nevertheless, the alternating treatments design allowed for some confidence that changes in the SMP sessions influenced facilitators' use of MI and offenders' change and sustain talk. Due to the dyadic nature of the data, it is possible that offenders also elicited particular responses from facilitators. However, this approach provided useful information that could be followed up with methodological and statistical designs suited for testing causation, such as sequential analysis (Bakeman & Gottman, 1997).

Furthermore, it would have been useful to link the process variables with a behavioural outcome, such as engagement in subsequent rehabilitative programmes or recidivism.

Because this study was based on a pre-existing programme, it was not possible to establish a long baseline, a typical hall-mark of single-case designs (Kazdin, 2011; Mitchell & Jolley, 2001). Because SMP sessions were always introduced in the same order, due to the applied nature of the study, it was difficult to identify carry-over effects between the conditions (Kazdin, 2011). Further, the two MI sessions with cognitive behavioural content varied. Similarly, sessions without cognitive behavioural content varied in the exact application of MI methods. It was however possible to establish, through systematic replication across participants, whether similar patterns emerged across MI sessions with and without cognitive behavioural content.

Demand characteristics possibly affected the way SMP facilitators performed when being video-recorded, and facilitators may not have passed on recordings that they perceived as unfavourable. To mitigate this, facilitators were reassured that their video-recordings were confidential. Further, it is standard practice for facilitators to video-record all SMP sessions and so any demand characteristics were likely to be minimal. Each SMP session could have been personally observed but the time required to do this was not available to the researcher. Such an approach may also have caused undue anxiety and encouraged facilitators and offenders to withhold consent.

Facilitators were encouraged to forward SMP DVDs even when all the sessions were not completed or were unable to be successfully video-recorded. As such, the current study included an incomplete dataset. Deleting these cases from the analysis would have drastically reduced the sample size and so they were retained. Many offenders, such as those in the group constituted by facilitators with low global scores (Figure 17) and high rates of MI inconsistent methods (Figure 23), prematurely exited the SMP. As such, the conclusions that could be drawn about the relationships between MI methods and change and sustain talk was limited. However, this provided important data about the relationship between MI methods and the likelihood of offenders completing the SMP.

Unfortunately, a consistently high degree of inter-rater agreement could not be achieved for the self-exploration scale and the committing change and committing sustain talk

scales. Therefore, results involving these scales needed to be interpreted with caution. The MISC 2.1 disproportionately samples the principles of MI (de Jonge et al., 2005). For example, there is little in the MISC 2.1 to measure the degree to which MI clinicians develop discrepancy between clients' goals and values and their current behaviour (de Jonge et al., 2005). This might be one of the more important of the four MI principles when adapting MI for use with offenders (Britt, 2009). Further, there is little information gathered with the MISC 2.1 to evaluate whether a clinician has avoided the premature focus trap (de Jonge et al., 2005), although this was inferred in the current study by the use of closed-ended questions and the question to reflection ratio. Future studies might better quantify the MI principles and traps of MI by specifically measuring them through an additional instrument or qualitative analysis.

The cut-off scores used to denote beginning proficiency and competency in MI composite measures were generated by expert opinion. Further, the cut-off scores for the global clinician rating and the global measures were calculated by the researcher. Because these were generated by the researcher, based on the MITI, they should not be interpreted as gold standards and do not represent norms. Furthermore, it is possible that SMP facilitators are able to be effective without achieving these standards, and this would need to be tested with further research (Dr Eileen Britt, personal communication, July 6, 2012).

In assigning facilitator behaviour counts for MI consistent and inconsistent methods, it was not possible to indicate whether the therapist had used a MI skill in a particularly adept way. This is a weakness associated with relying on behaviour counts to describe the quality of an interpersonal exchange and an inherent weakness of this form of measurement. This was somewhat mitigated by the use of global scores to indicate how well the facilitator used MI to foster a change-conducive therapeutic relationship. Nevertheless, the clinical effect of therapists' use of MI consistent and inconsistent methods might be enhanced if these behaviour counts can be further judged in terms of their general skilfulness. This would, however, add complexity to an instrument that is already very complex (de Jonge et al., 2005). Qualitative methods, such as those used by Kertes et al. (2011), might be gainfully employed in future research to mitigate the inherent weaknesses of measuring therapeutic exchanges through behaviour counts. Preferably, the constructs measured by the global scales would have also been assessed from the perspective of the facilitator and the offender. This could be done by using

different versions of the global measures in a similar way to how the client's and the therapist's perspective is measured using the Working Alliance Inventory (Horvath & Greenberg, 1989).

Ideally, the researcher and second coder would have been blind to which SMP sessions were used to measure inter-rater agreement. It is therefore recommended for future studies that both coders rate all sessions with a random selection used to measure inter-rater agreement. Also, the use of two or more raters to randomly code the entire sample may protect against rater drift by using the average across raters for the final data set. Lastly, due to the researcher's awareness of the a priori hypotheses, it is possible that the researcher was more attuned to instances of change talk that followed MI consistent methods and sustain talk that followed MI inconsistent methods. Therefore, it is recommended that coders are blind to the study's hypotheses in future studies, although this might be practically difficult to execute.

While there are a number of limitations associated with the current study, the single-case design approach, supplemented with group-level descriptive and inferential statistics, allowed facilitator and offender language to be studied in detail within and between SMP sessions. Findings from the current study, limitations notwithstanding, demonstrated that MI consistent methods are associated with increased rates of change talk. These findings are similar to those found in other groups, such as substance abuse populations (Aharonovich et al., 2008; Amrhein, 2004; Miller & Rose, 2009; Moyers et al., 2009), where there is a substantial evidence base to support the effectiveness of MI (Lundahl et al., 2010). The introduction of cognitive behavioural content appears to have a marked effect on offenders change and sustain talk, although this content may have other benefits not explored in the current study. Combining MI and cognitive behavioural content is a growing trend (Arkowitz & Miller, 2008; Burke, 2011; Flynn, 2011; Geller & Dunn, 2011; Heather, 2011; Moyers & Houck, 2011) and therefore these findings suggest that further research is needed to understand the unique contributions of each approach. This includes understanding how they can be effectively combined so the strengths and goals of one approach compliment those of the other. To this end, a number of recommendations are made for further research.

Recommendations for Future Research

To the best of the author's knowledge, this was the first study to investigate the process of MI for offenders. Therefore, a replication of the current study would be valuable and should endeavour to reduce the limitations outlined above. A comparative group design might be carried out to compare MI as a stand-alone intervention to MI integrated with cognitive behavioural content, a cognitive behavioural programme of the same length and a no-treatment wait-list control. These different conditions might then be compared in terms of pertinent process-outcome variables. A further extension might include a dismantling design (Borkovec, 1990) where theoretically important components are systematically removed to isolate which aspects effect the greatest changes in offender motivation and behaviour.

Studies have suggested that manuals have not increased the effectiveness of MI (Hettema et al., 2005; Lundahl et al., 2010) but these have not included the application of MI with offenders. In contrast, manuals are commonly used in offender rehabilitation, possibly due to studies which support a structured approach (Andrews, 1995; Izzo & Ross, 1990; Lipsey et al., 2001; MacKenzie, 2006). However, as noted by Devereux (2009), the SMP aims to enhance motivation and is not a rehabilitative programme per se. Therefore, through a comparative study, it would be of value to investigate if a manual adds to the effectiveness of the SMP given its focus on fostering motivation to change rather than reducing recidivism.

It was not possible in the current study to fully appreciate whether facilitators' use of MI caused, in contrast to a simple association, offenders' change and sustain talk. It would be of value to elucidate the nature of this association through an appropriate methodological and statistical design. In terms of understanding how MI methods cause change and sustain talk in offenders, it would be possible to use a sequential analysis (Bakeman & Gottman, 1997), such as that conducted by Moyers and Martin (2006), to calculate transition probabilities between facilitators' MI methods and offenders' change and sustain talk categories. Multi-level modelling may also be used to manage the dependent nature of the data to better understand change over time (Singer & Willett, 2003).

It would be valuable to investigate how process variables identified in this study affect adjunctive rehabilitative programmes and recidivism. This might be broken down into a

study that investigates the use of MI as a sole intervention versus its use as a prelude to a rehabilitative programme in terms of subsequent recidivism rates. This would assist in understanding to what degree MI effects change in offender behaviour and whether this is consistent with Miller and Rose's (2009) theory of MI.

In accordance with comments by Ward et al. (2007) and Britt (2009), it would be valuable to investigate the process and outcome of MI with offenders when deeply held values and goals are focused on and contrasted with current and past behaviour. As highlighted earlier, autonomy-support might hold particular significance for offenders given the restrictions placed on their autonomy. In a related vein, it would be worthwhile to understand whether different sentence types moderate the relationship between MI process and outcome.

The majority of facilitators in the current study scored similarly in terms of their use of acceptance, empathy and MI spirit. A wider range of these global scores might more clearly elucidate the relationships between the relational component of MI and offenders' self-exploration, change and sustain talk and behaviour change. This constricted variance may reflect limitations in the MISC 2.1, or the coder, in discriminating between facilitators' use of acceptance, empathy and the spirit of MI. As such, additional measures of the therapeutic relationship might enhance future studies into the relational component of MI. Also, it was noted by Moyers, Miller, et al. (2005) that MI inconsistent methods, in the context of a strong therapeutic relationship, actually increased offenders' engagement in MI sessions. A further study might investigate if the therapeutic relationship similarly moderates the effect of MI inconsistent methods on offender engagement in the SMP.

It would also be of value to investigate the effect of training in the areas where full competence was not demonstrated and any additive effect in change and sustain talk. These areas included the use of open-ended questions, balancing questions and reflections, complex reflections and minimising the use of MI inconsistent methods. A similar approach was employed by Britt and Blampied (2009) with diabetes nurse educators.

The MISC 2.1 does not evenly reflect Miller and Rollnick's (2002) principles of MI (de Jonge et al., 2005). It would add to our understanding of MI to further investigate the

relationship between the principles of MI with offender change and sustain talk and outcome. Similarly, de Jonge et al. (2005) suggested that the traps to avoid in MI are not well quantified by the MISC 2.1. The principles and traps of MI might be further studied with additional measures or a qualitative approach.

Previous studies demonstrated a relationship between the trajectory of committing change talk strength across a single session with behaviour change (Amrhein et al., 2003). Change and sustain talk strength ratings could not be reliably coded for the current study and were therefore excluded from subsequent analyses. It is possible that with further training, greater inter-rater agreement might be achieved for strength rating, although these difficulties are not isolated to this study (T. B. Moyers, personal communication, August 1, 2011; Moyers et al., 2009). If adequate inter-rater agreement could be achieved, it would be valuable to understand whether committing change talk strength predicted outcomes for offenders in the same way that it has for substance abuse populations (Aharonovich et al., 2008; Amrhein et al., 2004; Hodgins et al., 2009).

Outcome studies have suggested that MI is particularly effective for minority groups (Lundahl et al., 2010). As evidenced in the current study, and supported by the prison census (Department of Corrections, 2003), Māori are disproportionately represented within the prison system. If MI is particularly effective with Māori, it would be of value to explore the process variables that explain this. There may be certain aspects of MI that resonate more with minority groups, such as autonomy-support, collaboration or acceptance, which therefore need to be emphasised when MI is delivered to these groups. In the first instance, future outcome studies should investigate whether MI is more effective for Māori offenders. If so, subsequent process studies should elucidate what aspects of MI are related to superior gains for Māori offenders and other minority groups.

Devereux (2009) suggested that 75% of New Zealand offenders can be characterised as ambivalent about changing their offending behaviour. Given the omnipresence of low motivation to change among offenders, and the promise of MI for offenders (Anstiss et al., 2011; Austin et al., 2011; McMurrin, 2009), there is value in conducting further research into how MI might be gainfully used and adapted for offenders.

Conclusion

The literature on the use of MI for offenders is growing but this has been largely restricted to outcome studies (McMurrin, 2009). This is consistent with other areas where the research agenda has been dominated by efforts to confirm the effectiveness and external validity of MI (Burke et al., 2003; Hettima et al., 2005; Lundahl et al., 2010). This is despite expressions for a more nuanced understanding of how MI works to effect motivational and behavioural change, generally (Allsop, 2007; Burke et al., 2002) and with offenders, specifically (McMurrin, 2009). The current study contributed toward this knowledge gap by conducting an exploratory study into the relationships between pertinent process variables (Miller & Rose, 2009) in a programme that integrates MI and cognitive behavioural content for offenders. No other studies have investigated these process variables in an offender population and therefore it makes a valuable contribution to the MI and the correctional rehabilitation literature.

The mean trend suggested that facilitators were unable to effectively communicate the relational component of MI, although there was considerable variation, and this may be linked to the use of a manual. At the mean level, this remained stable across SMP sessions with and without cognitive behavioural content. Facilitators' ability to enact the relational component of MI appeared to be more related to whether offenders completed the SMP rather than their self-exploration or change and sustain talk. Facilitators did not demonstrate competence in the specific methods of MI. This included the use of too many MI inconsistent methods, too few reflections compared to questions and too many closed-ended questions.

In the current study, MI inconsistent methods and a lack of MI consistent methods were related to offenders prematurely exiting the SMP. This is consistent with findings by Gaume et al. (2009) where MI inconsistent methods predicted poorer outcomes. McMurrin and Theodosi (2007) demonstrated that offenders who prematurely exited correctional treatment re-offended at a higher rate than matched offenders who did not enter treatment. As such, this finding is of potential clinical importance to the application of MI with offenders.

Outcomes for offenders might therefore be improved if facilitators reduced their use of MI inconsistent methods and increased their use of MI consistent methods. Results also

suggested that facilitators may have entered into a premature focus trap (Miller & Rollnick, 2002), through the over-use of closed-ended questions during session one, which is likely to elicit greater resistance to change (Miller, 1985; Miller et al., 1993).

Offenders generally continued to experience a high level of ambivalence about behaviour change at the completion of the SMP, based on increased rates of sustain talk, rather than the predicted reduction in sustain talk. This is of clinical importance in that some studies have demonstrated that reductions in sustain talk, rather than increases in change talk, have predicted behaviour change (Baer et al., 2008). In support of this, the current study's findings suggested that offenders with less sustain talk were more likely to demonstrate greater commitment to change in the final session. This continued increase in offenders' sustain talk, while smaller than the increase in their change talk, might have been due to the use of MI inconsistent methods. Further, facilitators may not have been able to strategically employ MI methods to elicit and reinforce change talk without inadvertently reinforcing further sustain talk. As such, facilitators may benefit from additional training in recognising and differentially responding to change and sustain talk by strategically employing MI methods.

Facilitators used fewer complex reflections during sessions with cognitive behavioural content. Complex reflections are a specific MI skill which has been related to positive behavioural change for non-offender groups (Catley et al., 2006; Moyers et al., 2009). There was some evidence to suggest that MI, when combined with cognitive behavioural content, was associated with less change and committing change talk. Previous studies demonstrated that change talk (Moyers, Martin, Christopher, et al., 2007) and committing change talk (Aharonovich et al., 2008; Amrhein et al., 2004; Hodgins et al., 2009) are important links between the goal directed application of MI and subsequent behaviour change. Therefore, this study suggested that including cognitive behavioural content may impede facilitators' use of complex reflections and the development of change talk, which is likely to prevent offenders from committing to a change plan and changing behaviour. This might be remedied by additional training plus further attention to the use of MI specific methods during sessions that include cognitive behavioural content.

Alternatively, MI with offenders may be more effective if initial sessions exclude cognitive behavioural content until such stage as the requisite level of motivation and

commitment to change is achieved. This approach would preserve the integrity of MI for offenders with the sole aim of enhancing motivation to change. Cognitive behavioural sessions might therefore be included in an extension to the SMP as a component of an offender's change plan. A subsequent extension to the SMP could therefore be based on the 'what works' literature of correctional rehabilitation (Andrews & Bonta, 2010) with the explicit aim of reducing risk of recidivism.

This study demonstrated that MI methods can be gainfully used by facilitators to foster change and committing change talk in offenders. Studies have demonstrated that these in-session variables predict subsequent behaviour change in substance abuse populations (Aharonovich et al., 2008; Amrhein, 2004; Magill et al., 2010; Miller & Rose, 2009; Moyers et al., 2009). While the current study did not extend to measuring a behavioural outcome, the increased rates of change and committing change talk indicate that offenders were more likely to engage in discussion about such behaviour change. Further, studies into the effectiveness of the SMP have demonstrated that it effects change in offenders' motivation (Austin et al., 2011) and risk of recidivism (Anstiss et al., 2011). As such, the use of MI with offenders represents a worthwhile approach, and deserves further attention from correctional professionals and researchers. However, the current study suggests that more thought and study is warranted into how MI and cognitive behavioural content is most effectively integrated.

This exploratory study represents an initial foray into explicating the process of MI when combined with cognitive behavioural content for offenders. However, research in this area remains scarce and would benefit from ongoing study. As such, these findings need to be replicated and followed up with further research.

Annotated Findings and Recommendations for Practice

The following three findings were identified as those with the greatest implications for the practice of MI with offenders. Suggestions are therefore provided for how the practice of MI with offenders, particularly in reference to the SMP, might be enhanced.

1. The global measures of MI were not achieved at a high level and low global scores were related to premature exit from the SMP. Miller and Rose's (2009) theory of MI outlines that the relational component provides a change-conducive environment. Therefore, it is recommended that facilitators focus on communicating acceptance, empathy and the spirit of MI (collaboration, evocation and autonomy-support). Suggestions for how to do this in a prison environment were provided by Britt (2009) and in part draw on the Good Lives Model of offender rehabilitation (Ward & Brown, 2004).
2. Facilitators sometimes used methods inconsistent with an MI approach and these have been related to poorer outcomes in previous research (Gaume et al., 2009; Moyers et al., 2009). In the current study, there was some evidence to suggest that MI inconsistent methods and a lack of MI consistent methods were related to increased ambivalence and premature exit from the SMP. It is recommended that facilitators be provided with additional training and supervision in strategically employing MI consistent methods to elicit and strengthen change talk while minimising sustain talk.
3. Findings indicated that cognitive behavioural content was associated with increased ambivalence about changing criminal behaviour. This is inconsistent with the primary aim of SMP, as "a motivation enhancer" (Devereux, 2009, p. 12). Kertes et al. (2011) circumvented this dilemma by using MI alone during early sessions to resolve ambivalence and subsequently introduced cognitive behavioural content once adequate commitment to change was established. A similar approach might be used during the SMP by postponing the cognitive behavioural content until ambivalence has been resolved and commitment to behaviour change has been established. The cognitive behavioural content could therefore be included as a subsequent component of the offender's change plan.

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Appendix A



Community Probation & Psychological Services

Short Motivational Programme Agreement Form

AGREEMENT TO DO THE SHORT MOTIVATIONAL PROGRAMME

I agree to do the Short Motivational Programme.

The Programme:

The programme involves me meeting with a programme facilitator to help me think about why I offended and what I can do to stop offending.

There are five sessions in the programme.

Each session is for one hour commencing at (*time*) on Monday, Tuesday, Wednesday, Thursday, Friday (*mark as appropriate*) fromto.....(*date*).

I understand that:

- I have to go to sessions and might have work to do outside session time.
- I have the right to leave any session or the programme altogether after discussion with the programme facilitator. I understand the consequence of this.
- The programme facilitator has the right to dismiss me from the programme if I am violent, drunk, on drugs, or my attitude and behaviour undermine the sessions.
- Sessions will be recorded (e.g. videotaped), for the purpose of programme facilitator supervision, performance management, training or monitoring the work of the programme. This may be undertaken by the Department of Corrections, or by a person appointed by the Department of Corrections. The use, storage, and erasure or destruction of the recording will be controlled by the Department of Corrections subject to its obligations under the Privacy Act 1993.
- Reports about how I am doing in the programme will go on my file, and may be used in a report to the New Zealand Parole Board or other authorised Department of Corrections' report. I have the right to read, and agree or disagree before they are sent. I shall get a copy of the report.
- I have the right to access and ask for the correction of any information collected about me during the programme in terms of Principle 7 (of the Information Privacy Principles contained in the Privacy Act 1993). If any change requested by me is not made, I have the right to request that my written statement about that information be attached to it.

- To make sure the programme is working, research will be done. Any personal details collected about me will not identify me in the report.

I understand that confidentiality cannot be agreed to in the following circumstances:

- If I say I am about to seriously harm myself or someone else (either emotionally or physically) the facilitator will take action (tell other people) immediately to prevent this.
- If I talk about **current or planned** offending the programme facilitator *might* have to pass the information on to authorities. This will usually be discussed with me first. If I talk about serious **past** offences I have not been convicted of I will be encouraged to report those offences to the appropriate authorities. If I don't report those offences, this information may be passed on to authorities but will be discussed with me first.

I agree to:

- Come to all sessions on time and take part in every session.
- Be open and honest with the facilitator.
- Turn up sober and drug free every time.
- Complete all homework.
- The sessions being recorded (e.g. videotaped) with me in it, as part of the process for facilitator supervision, performance management and training, and monitoring the programme.
- Take part in the evaluation of the programme (no personal details will identify me in the report).

If I decide to leave the programme I also agree to talk with the programme facilitator about why I am leaving before I leave.

OFFENDER TO COMPLETE

My signature below shows that I have read, understood and accept these conditions, or that I have had them explained to me, and that I accept them.

Offender.....

Date.....

Programme Facilitator.....

Date.....

Appendix B

Rehabilitative Needs

Specific targeted criminogenic needs – full definitions

Specific Targeted Criminogenic Needs (STCNs) are criminogenic needs that have a specific focus that can be targeted or addressed directly through accessing community resources. Thus, offenders who are sufficiently motivated to address these needs, should be able to access community resources/programmes that are specifically designed to target these areas. The STCNs and their identification criteria within the context of SMP are listed below:

Violence propensity (VP)

- Violence Propensity should always be identified when the index offence(s) include violent offence(s) or if any violent behaviour is linked to an index offence.
- Violence is defined as either:
 - physical violence (including destruction of property);
 - psychological violence (including threats and intimidation), or
 - sexual violence [Note: While all sexual offending can be viewed as a form of violence, sexual violence should only be identified when there is clear use of violence that could be considered a separate offence in its own right. For example: threatening a victim with a weapon; threatening a victim with physical harm if they do not comply, physically assaulting a victim to gain compliance; using restraints (e.g. rope, handcuffs etc) to obtain compliance; using force to deal with resistance etc.]

Community resources available to target this need include:

- Community Stopping Violence Programmes
- Community Anger Management Programmes

Alcohol and drugs (A&D)

- A&D should always be identified for direct alcohol related offending (e.g. Excess Breath Alcohol)

- A&D would usually be identified in cases where the effects of alcohol and/or drug usage can be clearly linked to an index offence. Links will usually be related to either reducing inhibition or to negatively affecting judgement leading to poor or impaired decisions.
- However, A&D can also be identified in situations where the index offending behaviour was primarily motivated by a desire to obtain drugs and alcohol for personal use. For example, a burglary offence is specifically committed to obtain money to purchase drugs and/or alcohol; a chemist shop is burglarised to obtain drugs (for personal use) etc.
- A&D refers to alcohol and/or other drug *usage*, - not to alcohol/drug-related offending that does not specify use (e.g. supplying alcohol to minors; possession for supply; or theft of chemicals to manufacture drugs for profit.).

Community resources available to target this need include:

- Community Alcohol and Drug Programmes
- Residential Alcohol and Drug Programmes
- Individual one-on-one Alcohol and Drug Counselling

Illicit substance using associates (ISUA)

- For the ISUA need to be identified, an offender needs to have been using illegal drugs in the company of other people who either actively or passively endorsed the offender's use of the illegal substances.
- This need can only be identified in conjunction with the Alcohol and Drug (drug) criminogenic need. This means that the active or passive support that the offender gained in relation to their illegal substance use can be linked to their level of intoxication which in turn was linked to their index offending behaviour (via the Alcohol and Drug Criminogenic Need).
- The underlying assumption contained in the ISUA need is the assumption that offenders are more likely to partake in illicit drug taking behaviour (or higher levels of illicit drug taking behaviour) when in the company of other people who either actively or passively endorse this behaviour.

Community resources available to target this need include:

- Community Alcohol and Drug Programmes
- Residential Alcohol and Drug Programmes
- Individual one-on-one Alcohol and Drug Counselling

Gambling

- Both positive and/or negative gambling related thoughts and feelings can be linked into to an index offence. For example; a theft is committed to enable gambling behaviour to take place; or a domestic assault is committed after an offender loses at gambling which causes a domestic dispute over the offenders lack of responsibility.
- No actual episode of gambling needs to have occurred leading up to the index offence for this criminogenic need to be assessed. However, a clear association between the motivation to engage in an index offence and gambling desire needs to be established.

Community resources available to target this need include:

- Community Gambling Programmes
- Individual one-on-one Gambling Counselling

Relationship difficulties

- The SMP relationships need specifically relates to domestic situations. Thus this need is concerned with relationship issues within close, interpersonal, romantic (and/or sexual) relationships with either a current partner and/or an ex-partner.
- An offender must have been involved in a romantic/sexual relationship with their partner for at least one week for an association to be considered a relationship.
- Relationships do not include casual acquaintances (e.g. irregular sexual liaisons).
- For the relationship need to be identified, negative relationship-related thoughts and feelings need to be linked to an index offence.
- The need reflects the absence of relationship skills (including the inability to helpfully manage negative relationship related thoughts and feelings).
- It exists when the offender's absence of relationship skills (in relation to a specific relationship situation) contributed to the index offending behaviour.

- No actual episode of a relationship interaction needs to have occurred in the OP for this need to be assessed.
- The relationships need should always be identified where the offender's partner/ex-partner is the victim of their offending.

Community resources available to target this need include:

- Relationship Services
- Family Therapy/Relationship Counselling

Offence related Sexual arousal (ORSA)

- ORSA should always be identified when the index offending includes a sexual offence.
- This rule is based on the assumption that every sexual offence has some degree of sexual arousal or sexual desire/excitement associated with it.
- ORSA can be assessed in the absence of a sexual conviction when offence related sexual thoughts, feelings and actions can be linked into the index offending (e.g. following a domestic burglary conviction the offender acknowledged sexual excitement at the possibility of a sexual encounter while in the house).

Community resources available to target this need include:

- STOP Programme
- SAFE Programme
- Individual one-on-one Sexual Behaviour Counselling

Mood management problems (MMP)

- For the MMP need to be identified, negative (low) mood-related thoughts and feelings need to be linked to an index offence.
- Essentially MMP reflects the presence of low mood/mood disturbance and the absence of appropriate (non-offending) mood management skills (including the inability to helpfully manage negative thoughts and feelings in a pro-social manner).
- This need exists when the offender's absence of mood management skills contributed to the index offending behaviour. For example; an offender reports

that he was feeling depressed about his situation to the degree where he had stopped caring about the consequences of his behaviour. He then stated that he decided to engage in an episode of exhibitionism in an attempt to lift his mood and to feel better.

- MMP is not to be identified in relation to primarily negative “anger” related feelings. An ability to manage angry feelings is likely to result in violence and should be identified via the Violence Propensity need.

Community resources available to target this need include:

- Mental Health Services
- GP
- Individual one-on-one Mood Management Counselling

Lifestyle choice criminogenic needs – full definitions

Lifestyle Choice Criminogenic Needs (LCCNs) are criminogenic needs that are related primarily to an offenders’ deliberate lifestyle choices. In theory, while these are things that an offender has a degree of control over (and permeate through an offenders lifestyle and general background environment), they are not specifically targeted by normal community programmes and resources. While these types of criminogenic needs are addressed to various degrees in the Department’s medium and high intensity Criminogenic Programmes, it is unlikely that an offender is going to be able to “self-refer” to a community programme that specifically targets these needs. Thus, these LCCNs need to be considered as being unique from STCNs in that there is no “easy” intervention pathway to guide offenders towards and that the essential intervention is likely to be based purely upon the motivational component contained in SMP, with a goal of having the offender decide to address these lifestyle issues internally, without necessarily accessing further outside assistance (i.e. community programmes and resources). The LCCNs and their identification criteria within the context of SMP are listed below:

Unhelpful lifestyle balance (ULB)

- ULB refers to a situation where an offender has a significant lack of purposeful, meaningful, or constructive *structure* in their daily routines; or where their usual routines involve engaging in a number of negative, unhelpful, or illegal *activities*.

- Thus, this need looks at how an offender typically uses their time. It is assumed that a lack of lifestyle balance increases an offender's pre-disposition towards offending and places them at increased risk of engaging in illegal behaviours.
- ULB occurs when where an offender's usual routine does not involve using their time in a structured, purposeful way that is self-enhancing or positive for them; or when their usual pastimes involve engaging in negative, unhelpful or illegal activities (e.g. substance abuse).
- ULB should not be automatically identified just because an offender is unemployed or on a benefit. It is what a person does with their time that is important. For example an unemployed person who gets up at a normal time and engages in positive routines (e.g. engages in exercise, works in the garden, maintains the property, actively seeks employment; attends their appointments; maintains positive social connections; belongs to a club; engages in volunteer work etc.) would not be considered to have an unhealthy lifestyle balance despite being unemployed. Conversely, an unemployed person who gets up when they wake up, engages in regular substance use, associates with other drug users, watches tv / dvds / "play-station" all day and does not seek employment would be considered to have an unhealthy lifestyle balance.

Offending supportive associates (OSA)

- OSA should always be identified when an index offence(s) involved a co-offender as this suggests that the offender's associates are offence supportive.
- OSA can also be identified if the offender acknowledges regularly associating with individuals who are involved in illegal activities (e.g. gang members; associates involved with either using or selling illegal drugs etc.)
- Focus should be on the social influence towards offending in general, but offending needs to involve more than just illicit drug (or alcohol) use. For example, an offender who has some mates who smoke cannabis together but who do not engage in any other illegal activity together (including selling drugs) should not be considered offence supportive associates. However, an offender whose cannabis smoking mates also assist with burglaries and or the distribution of stolen property (or drugs) would be considered offence supportive associates.

- Thus, OSA is primarily reserved for offending beyond the range of offending involved with recreational substance use/abuse.
- With OSA, the social influence towards committing offences can either be active (i.e. directly endorsed) or passive (not discouraged).

Offending supportive attitudes and entitlement (OSA&E)

- OSA&E reflects an general anti-social /pro-criminal attitude where engaging in illegal activity may be considered a “legitimate pathway” or as an occupation. Alternatively it may reflect individuals who simply do not consider that the law applies to them (i.e. that they are exempt from needing to following societies rules and laws.) These offenders often have a strong sense of entitlement and an egocentric perception.
- There is a general sense of an individual criminal based lifestyle choice, where the decision to engage in the illegal activity is a deliberate and often pre-planned decision.
- Offending patterns reflect recidivist offending with little concern about legal consequences or Court sentencing (i.e. Court sentences have little impact with regards to changing OSA&E and subsequent offending behaviour).
- OSA&E should be identified for individuals actively associated with organised crime (i.e. where offending is considered a business) and/or individuals actively involved with gangs. However, it could also incorporate lifestyle burglars, drug dealers, and recidivist driving offenders (including drunk drivers).

Appendix C



MASSEY UNIVERSITY
ALBANY

29 April 2010

Kevin Austin
c/- Dr M Williams & Dr D Clarke
College of Humanities and Social Sciences
Massey University
Albany

Dear Kevin

HUMAN ETHICS APPROVAL APPLICATION – MUHECN 10/030
“The Process of Motivational Interviewing with Offenders”

Thank you for your application. It has been fully considered, and approved by the Massey University Human Ethics Committee: Northern.

Approval is for three years. If this project has not been completed within three years from the date of this letter, a reapproval must be requested.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

Yours sincerely

A handwritten signature in blue ink that reads "D Gardner".

Dr Dianne Gardner
Acting Chair
Human Ethics Committee: Northern

cc: Dr M Williams & Dr D Clarke
College of Humanities and Social Sciences

Te Kōwhiri
ki Pākehura

Office of the Assistant to the Vice-Chancellor (Research Ethics)
Private Bag 102 904, North Shore City 0745, Auckland, New Zealand Telephone +64 9 414 0800 ex 9539
humanethicsnorth@massey.ac.nz

3 August 2010

Kevin Austin
School of Psychology
Massey University
Private Bag 102 904
North Shore City
AUCKLAND 0745

Dear Kevin

Approval for research proposal

I am pleased to advise that all permissions for your proposal 'The Process of Motivational Interviewing (MI) with Offenders' have been completed, and I am now able to give formal approval for your research. Please read and sign the enclosed Research Agreement, and return it in the prepaid envelope provided. A second copy is provided for your own records.

Please liaise with Sally Faisandier in Strategic Analysis and Research at the Department of Corrections to discuss any logistical or administrative issues. Sally can be contacted on 04 460 3087 or email sally.faisandier@corrections.govt.nz.

I wish you well with the research, and look forward to hearing of the outcomes.

Yours sincerely



Bronwyn Donaldson
Acting General Manager
Strategy, Policy and Planning

Enclosures Research agreement x2
 Postage paid envelope

Appendix D



Massey University

Research into Motivational Interviewing

INFORMATION SHEET

Introduction

My name is Kevin Austin and I am a Doctoral student at Massey University. I would like to investigate **how** the Short Motivational Programme (SMP) **motivates** offenders to change their criminal behaviour. This information will help the Department of Corrections to know if SMP works and how it can be delivered to achieve the best results.

I would like to invite you to take part in this research because you have facilitated SMP. If you are willing to take part in this study, the research would involve:

- *Forwarding a copy of the most recent SMP that you have facilitated and video-recorded to the Hamilton Community Probation and Psychological Services Office. This would include the five individual sessions that make up SMP or the sessions that were otherwise completed;*
- *Allowing me and a research assistant to view and code the SMP sessions; and*
- *Completing a brief demographic questionnaire, as attached.*

Data Management:

- *The information will be used for my doctoral research at Massey University and might be used for publication in an academic journal;*
- *No information that can make you known to others will be used in the report. Your data will only be available to me, my supervisors, and a research assistant;*
- *The video recordings will only be viewed in a Department of Corrections office and will be sent back to you once completed; and*
- *Any other information collected for this research will be stored in a locked cabinet and destroyed after five (5) years.*

Taking part in the research is up to you.

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- *decline to answer any particular question;*
- *withdraw your consent for me to view your tapes and ask questions about the study at any time;*
- *provide information on the understanding that your name will not be used; and*
- *be given a summary of the project findings: please provide a postal address that you can receive mail from in 18 months on the consent form.*

Project Contacts

This research is being done by Kevin Austin, a Massey University doctoral student. Dr Mei Wah Williams and Dr Dave Clarke, lecturers at Massey University, are my supervisors.

If you have any questions about the project, please contact my primary supervisor: Mei Wah Williams on 09 414 0800 Ext 41222 or m.w.williams@massey.ac.nz.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application MUHEC 10/030. If you have any concerns about the conduct of this research, please contact Dr Denise Wilson, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 Ext 9070, email humanethicsnorth@massey.ac.nz.

Appendix E



**Massey
University**

Research into Motivational Interviewing

PARTICIPANT CONSENT FORM

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree/do not agree that the researcher can view and code the most recent SMP that I have facilitated and video-recorded. This includes all five individual SMP sessions or the sessions that were otherwise completed.

I agree/do not agree to answer the questions in the attached demographic questionnaire.

I wish/do not wish to receive a summary of the findings. If you wish to receive a summary, please write down a postal address on the bottom of this form that you can receive mail from in 18 months.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signature:

Date:

.....

Full Name - printed

.....

Appendix F



Massey University

Research into Motivational Interviewing

Questionnaire for SMP Facilitators

Introduction

My name is Kevin Austin and I am a Doctoral student at Massey University. I would like to investigate **how** the Short Motivational Programme (SMP) **motivates** offenders to change their criminal behaviour. I am using this questionnaire to collect demographic information from SMP Facilitators. It will put the study into context and may help others replicate the study. The responses will be aggregated and so your specific information will not be identifiable.

Highlight your answer when indicated or type your answer below each question.

1. Are you Male or Female? (please highlight)
2. Which ethnic group do you belong to? (please highlight one you most identify with or specify)
NZ European, Māori, Samoan, Cook Island Māori, Tongan, Niuean, Chinese, Indian,
Other (please specify):
3. What is your date of birth? dd/mm/yy
4. What is your highest qualification?
5. How many years, to the nearest month, have you been a Facilitator for the Dept of Corrections?
6. What facilitator Credentials have you received from the Dept of Corrections?
7. How many SMPs have you facilitated?
8. Have you previously, before becoming an SMP Facilitator, received training in motivational interviewing? If so, please describe the nature and amount of training.

Nature of Training

Amount of Training

Once you have finished save this document and send it to kevin_austinz@yahoo.co.nz. Thank you for taking the time to fill out this questionnaire.

Appendix G



**Massey
University**

Research into Motivational Interviewing

CONFIDENTIALITY AGREEMENT

This form is to be signed by anyone who has access to participant data, other than the researcher, as a function of assisting with the above research.

I Hogan Ross Provan (Full Name - printed)

agree to keep confidential all information concerning the project 'The Process of Motivational Interviewing with Offenders'.

I will not retain or copy any information involving the project.

Signature:

A handwritten signature in black ink, appearing to read 'Hogan Ross Provan', written over a horizontal dotted line.

Date:

5-2-11

Appendix H

Rules for Coding Unique SMP Content

This sheet was developed to assist in the coding of SMP content that falls outside of the typical motivational interviewing sessions from which the MISC 2.1 was developed. Information here does not contradict the MISC 2.1 manual and is used to ensure consistent coding.

SMP URICA

- Explaining the nature of the SMP URICA is coded as Giving Information (GI) and this is differentiated from when the facilitator introduces that they will be doing a measure of motivation to change which is coded as Structure (ST). For example:
 - “In a moment we’re going to complete a measure of motivation” (ST)
 - “The measure is called the SMP URICA and it will be used to measure your motivation to change before and after SMP” (GI)
- Instructions about how to fill out SMP URICA is coded as Giving Information (GI), for example:
 - “The SMP URICA is answered by assigning a number from 1 to 5 to each of the following statements where by 1 = Strongly Disagree and 5 = Strongly Agree” (GI).
 - If the facilitator reads the SMP URICA items to the offender they are coded as closed questions (QUC).
- Offender responses are coded as change or resistance talk based on what level of agreement or disagreement they assign to each statement. This is only done if the offender reads their answers aloud. Otherwise nothing is coded.
 - Responses to items 1,2, 4, 5, 11, 13, 17, 20, 21, 22, 23, 24, 26, 28, 29, 31 and 32 are coded as Other (O)
 - Responses to items 3, 7, 10, 14, 25 and 30 are coded as Taking Steps (TS)
 - Responses to items 6, 8, 12 and 19 are coded as Reasons, sub coded desire (Rd)
 - Responses to items 9 and 18 are coded as Reasons (sub code: ability) (Ra)
 - Responses to item 15 is coded as Reasons (sub code: need) (Rn)
 - Responses to items 16 and 17 are coded as Commitment (C)

Offence Mapping

- When the facilitator reads aloud the hypothetical offence map example, this is coded as Giving Information (GI).
- When the facilitator reads aloud the hypothetical example of problem thinking (e.g. Rangi's story) it is coded as Giving Information (GI).

Change Plan

- When an offender identifies goals that are part of a change plan and these goals are linked to their rehabilitative needs, they are coded as Commitment (C) to reflect their intentions to change.

Miscellaneous

- Recapping on what an offender said in a previous session is coded as a Reflect (RE) and sub coded as complex (REC) when it is a linking summary. However, recapping on generic session content without reference to the offender's behaviour or language during the session(s) is coded as Giving Information (GI).
- In order to code identifying problem thinking as Other (O) it needs to be related to an offender's rehabilitative needs and the offender needs to pass a judgement on the desirability of the problem thinking style identified in the problem thinking. For example they may pass a judgement of the desirability of thinking styles used by Rangi in the hypothetical story in the SMP manual and this would be coded as O if it related directly to their own identified rehabilitative needs. If the offender is simply recounting events in their own lives or the events in the hypothetical then it is coded as Follow/Neutral (FN).
- The Ability sub code is used when it reflects both the offender's internal ability for change AND when it reflects their ability to change given the surrounding (environmental) circumstances.

Appendix I

Summary of Findings for SMP Facilitators



Dear [Facilitator's Name]

You participated in a study in 2011 that investigated the process of motivational interviewing (MI) with offenders. In the consent form you indicated that you would like to receive a summary of the findings and so I have provided a brief summary in this letter. If you would like more information, or a copy of the thesis, let me know and I can email you an electronic copy.

An emerging theory suggested that MI works through the combination of a relational component and the goal directed application of MI specific methods to evoke and reinforce change talk (Miller & Rose, 2009). This study investigated the SMP, in reference to Miller and Rose's emerging theory of MI, by using the Motivational Interviewing Skills Code 2.1 to rate 98 SMP sessions.

Results demonstrated that facilitators (on average) competently communicated the relational component of MI but were less able to demonstrate some of the specific methods of MI, such as open-ended questions. There was evidence that it was more difficult to use MI methods, particularly complex reflections, during SMP sessions that included cognitive behavioural content. On average, offenders continued to demonstrate ambivalence about changing offending behaviour throughout the SMP. This is not dissimilar to findings in substance abuse populations. This ambivalence was most pronounced during sessions that included cognitive behavioural content. Offenders' change talk was highest during sessions three and five, and their commitment to change was highest during the fifth session. Offenders who completed the SMP with a higher

degree of committing change talk demonstrated less sustain talk during earlier sessions and segments of the final session. Facilitators' ability to enact the relational component of MI appeared to be related to whether offenders completed the SMP. There was some evidence to support a relationship between the use of MI consistent methods and offender change talk. Most notably, however, MI inconsistent methods (methods which contradict an MI approach) were related to higher rates of offender sustain talk and premature termination from the SMP.

More information about MI can be sought from Miller and Rollnick's (2002) seminal text and a more recent text by Arkowitz et al. (2008) on MI in the treatment of psychological problems. For a more practical guide you can consult Rosengren's (2009) practitioner's workbook for building MI skills. Furthermore, there is a growing literature exploring the integration of MI and cognitive behavioural methods.

This exploratory study represents an initial foray into understanding the process of MI when combined with cognitive behavioural content for offenders. However, research in this area remains scarce and therefore ongoing study is needed. As such, these findings need to be replicated and followed up with further research.

Your participation in this study was greatly appreciated and without you the study would not have been possible. Thank you!

Yours Sincerely,

Kevin Austin
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School of Psychology
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North Shore Mail Centre
Auckland 0745
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Appendix J

Article published by the thesis author and colleagues (on a related study) while conducting the present thesis