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The Efficacy of Motivational Interviewing with Offenders: An Outcome and Process Evaluation

A thesis presented in partial fulfilment of the requirements for the
Degree of Master of Arts in Psychology at Massey University,
New Zealand

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2008

ABSTRACT

This research comprised an evaluation of a motivational interviewing programme, the Short Motivational Programme (SMP), delivered by the Department of Corrections and adapted for use with incarcerated offenders. The evaluation consisted of two components: outcome and process.

Outcome

Results indicated that offenders' motivation to change significantly increased from pre to post the SMP (eta squared = .19, $p < .05$), and a sub-group of offenders demonstrated that motivation to change was maintained at follow-up. This result, given the sample's risk of recidivism demographic, provided evidence for the SMP's efficacy with high risk offenders.

Process

On a measure of motivational interviewing skills, psychologists demonstrated full competence only in the use of direction, although global clinician ratings, percent open questions, evocation, collaboration, autonomy and empathy approached competence. Other than, "rolling with resistance", offenders reported strongly experiencing motivational interviewing principles during the SMP. Lastly, offenders who experienced the motivational interviewing principles to the greater extent did not demonstrate any greater increases in motivation to change from pre to post the SMP and at follow-up.

These findings are discussed and recommendations are made for further research.

ACKNOWLEDGEMENTS

I would like to express sincere thanks to my parents, Dave and Trish, and my sister Clare for your unconditional support, humour and belief in my potential.

My deepest appreciation and thanks go to my partner Sarka. This thesis would not have been possible without your incredible patience and encouragement. I am especially indebted to you for your continued support despite my sometimes irritable moods.

My sincere thanks go to my supervisor, Dr Mei Williams, for your patience, advice and ability to stay calm when I was panicking. I always looked forward to our meetings, even though I did not always like what I heard. This thesis would not be what it is today without your guidance.

My thanks go to Dr Llewellyn Richards-Ward and Principal Psychologist Glen Kilgour for your considerable assistance in helping this project get off the ground. Also, my thanks go to the Department of Corrections for feedback on the original proposal.

Although there are too many to name, I would like to thank all my friends and colleagues for your encouragement and support. I appreciated your continued visits, phone calls and invites out, despite rarely having the time to reciprocate.

Finally, I would like to thank the participants of this research. Without you this study would not have been possible. I sincerely appreciated your time and your courage to take part. I hope that this study will play some role in helping offenders make positive change.

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CHAPTER I

LITERATURE REVIEW

Introduction

The behaviour change literature has highlighted the importance of motivation as a predictor of change across multiple areas and disciplines. To briefly illustrate, motivation has predicted outcomes in alleviating problems such as eating disorders, alcohol abuse, cigarette use and adherence to medication (Burke, Arkowitz, & Menchola, 2003). Particularly within the last decade, motivation has also been identified as a significant factor in the success, or otherwise, of correctional rehabilitation programmes (Anstiss, 2005; Ginsburg, Mann, Rotgers, & Weekes, 2002; Harper & Hardy, 2000; Levesque, 1998; McMurrin, 2002; McMurrin, Tyler, Hogue, Cooper, Dunseath, & McDaid, 1998; Murphy & Baxter, 1998).

Recent interest in offender motivation has evolved within the wider context of correctional rehabilitation. Correctional rehabilitation was generally supported by correctional professionals through the first seven decades of the 20th century. This support shifted after Martinson (1974) found there was little empirical support for the use of correctional rehabilitation in reducing recidivism. However, since the writings of Martinson (1974), there has been a gradual shift by correctional professionals to the view that rehabilitation can, under *appropriate conditions*, reduce recidivism (Cullen & Gendreau, 2000). The focus, as with other forms of behaviour change, has moved towards explicating the requisite conditions for optimal therapeutic outcomes (Andrews & Bonta, 2006; Lambert & Ogles, 2004).

The model that has been demonstrated to be most effective in correctional rehabilitation is a set of principles known as the “risk, need and responsivity model” (Andrews & Bonta, 2006). The risk principle states that high risk offenders (those most likely to re-offend) are less likely to re-offend following intensive, highly resourced interventions, while low risk offenders are less likely to re-offend following minimal intervention. Needs are a component of an offender’s risk of recidivism; they are malleable and can be either rehabilitative (predictive of offending) or not rehabilitative. The responsivity principle pertains to those aspects of an offender’s rehabilitation that will either facilitate or obstruct the effectiveness of treatment and these can be either specific to the offender or their environment (Andrews & Bonta, 2006).

Offender motivation to change is considered as an element of treatment responsivity (Andrews & Bonta, 2006; Farr & Draycott, 2007). Taft, Murphy, King, Musser, and DeDeyn (2003) demonstrated that, in a correctional setting, motivation to change is the strongest predictor of the therapeutic alliance. Not only is motivation to change a therapeutic target, it is also used to decide which offenders to place on rehabilitative programmes (Sellen, McMurrin, Cox, Theodosi, & Klinger, 2006). An area of research with potential to enhance offender motivation to change is the adaptation of motivational interviewing, espoused by Miller and Rollnick (2002).

Motivational interviewing was explicated by Miller and Rollnick (2002) in the late 1970s and early 1980s, as a brief intervention to assist individuals or groups to overcome ambivalence and foster motivation to change. Motivational interviewing is underpinned by the constructs of autonomy, evocation and collaboration, known as

the spirit of motivational interviewing. It is characterised by a Rogerian (1951) client-centered approach but can also be directive. Interactions between the clinician and client are best described as a collaborative effort, whereby the clinician subtly leads the client (Miller & Rollnick, 2002). Although motivational interviewing holds considerable face validity, research investigating its efficacy with offenders is scarce (Anstiss, 2005; Farr & Draycott, 2007). For this reason the current thesis explores the efficacy of an adaptation of motivational interviewing, the Short Motivational Programme, for use with offenders.

This literature review will introduce and examine definitions and theories of motivation. This will be followed by an exposition of therapeutic models of change which explain the relationship between motivation and behaviour change. The efficacy of motivational interviewing will then be explicated, followed by a more specific discussion of correctional rehabilitation and motivational interviewing with offenders. The literature review will conclude with an outline of the research questions and hypotheses examined in this thesis.

What is Motivation?

The term 'motivation' can imply a range of meanings, not only in lay contexts but also in specialist areas, such as correctional psychology, where consensus might be expected. Draycott (2007) described the term motivation used within correctional psychology to describe a state, trait and an interpersonal process.

Defining Motivation

Colman (2006) defined motivation as "A driving force or forces responsible for the initiation, persistence, direction and vigour of goal directed behaviour" (p. 479). This definition postulates that the "forces" of motivation manifest as behaviour that is focused on achieving a goal. Colman's definition also identified motivation as responsible for the initiation of goal directed behaviour, the length of time spent pursuing the identified goal, the path chosen and the strength of pursuit.

VandenBos (2007) defined motivation as:

The impetus that gives purpose or direction to human or animal behaviour and operates at a conscious or unconscious level. Motives are frequently divided into (a) physiological, primary, or organic, such as hunger, thirst and need for sleep and (b) personal, social, or secondary, such as affiliation, competition and individual interests and goals (p. 594).

The term "impetus" is comparable with Colman's (2006, p.479) term "forces". Like Colman, VandenBos suggested that motivation manifests itself as behaviour. Unlike Colman, VandenBos divided the construct of motivation into two discrete components. The first is concerned with biological processes and homeostasis, known in the literature as the "regulatory approach". The second is concerned with

cognitively mediated goal directed behaviour, known in the literature as the “purposive approach” (Weiner, 1972). Although definitions vary in their level of detail, central to most is the concept that motivation consists of forces, also known as motives. These motives may either be part of a biological process or cognitively mediated, and they produce an effect on behaviour (Lefrancois, 2000).

Definitions and descriptions of motivation such as those put forward by Colman (2006), VandenBos (2007) and Weiner (1972), suggest that the construct of motivation is broad and potentially nebulous. To arrive at a conceptual understanding of motivation, there is value in discussing its theoretical progression.

Theories of Motivation

Charles Darwin was one of the earliest motivational theorists, as incorporated in his *The Origin of Species* in 1859. Darwin’s view of motivation was based on a biological framework of instincts, and the premise that instincts aid survival (Madsen, 1974).

From strictly instinct-based paradigms two schools of motivational thought emerged: learning psychology and personality psychology. These were later followed by the development of cognitive theories (Madsen, 1974). An example from learning psychology (drive theory) will be discussed here first, followed by an example from personality psychology (psychoanalytic theory), and lastly an example of a cognitive paradigm (dissonance theory) which stemmed from social psychology.

Learning Theories of Motivation

The most influential motivational theory based on learning psychology was Hull’s (1943 as cited in Arkes & Garske, 1977) drive theory. A drive can be conceptualised

as the propensity to act to gratify a need (LeFrancios, 2000). Hull's theory is based on the premise that people have biological needs and that meeting these leads to a reinforcement effect (Arkes & Garske, 1977). Hull's theory is fundamentally influenced by Darwin but his more proximal influences, such as Pavlov, Thorndike, Watson, and the general behaviourist movement are evident in his use of reinforcement (Weiner, 1972).

Hull elaborated his drive theory of motivation by suggesting that as biological need increased, the energy expended to fulfil the need mutually increased. Hull then took the behavioural stimulus-response model further and introduced the notion of intervening variables, later refuted by radical behaviourists like Skinner (LeFrancios, 2000). Some of Hull's work approached constructs that later became the domain of cognitive psychology, such as expectancy and intention but from a behaviouristic perspective (LeFrancios, 2000). While Hull's drive theory adhered to the stimulus-response model, other behaviourists like Skinner proposed that organisms can act on their environment and therefore do not simply respond to external stimuli. In terms of research, drive theory made perhaps the greatest contribution to the study of motivation. Weiner (1972) suggested that drive theory's greatest contribution was the specific study of motivation from a mechanistic stimulus-response perspective.

However, the inability of drive theory to consider cognitive functions and its overly simplistic stimulus-response view of human behaviour are considered to be its primary weaknesses (Weiner, 1972). Despite developing complex mathematical proofs to predict behaviour, it was not possible to insert values into Hullian formulae and consistently predict behaviour across a variety of situations (LeFrancios, 2000).

For example, drive theory suggested that once an organism met a need (such as hunger) it would immediately cease the behaviour (such as looking for food) required to meet that need. However, experiments have demonstrated that animals, such as rats, do not always show reduced activity levels despite being fully satiated and may even show elevated activity (Lefrancios, 2000). Furthermore, some behaviour does not meet immediate or even delayed needs. An example of this is exploratory behaviour, which can occur in the absence of any predetermined need (Lefrancios, 2000). Mathematically, drive theory was sound, however it was not helpful in predicting behaviour and therefore its utility became questionable.

Movement away from drive theories has not rendered them redundant but it is now acknowledged that stimulus-response is mediated by thought processes, which suggests that any theory of motivation needs to take account of cognition (Weiner, 1972).

Personality Theories of Motivation

Psychoanalytic theory was the most influential of the personality theories to explain motivation, and of the psychoanalytic scholars Freud was the most prominent (Madsen, 1974). Freud also utilised the term “drive”, while using personality as a framework for motivation (Madsen, 1974). Freud’s conceptualisation of drive took two forms: “life drive” and “death drive”, whereas Hull’s (1943 as cited in Arkes & Garske, 1977) consisted only one general drive responding to many needs. The basis for the psychoanalytic theory of motivation is the proposal that behaviour is the result of instinctual wishes, labelled “id”, which manifest as urges (Weiner, 1972). This came from the observation of infant restlessness and subsequent quiescence following

breast feeding. Based on this, theoretical parallels can be drawn with Hull's drive theory and the stimulus-response conceptualisation; drive leads to a drive action, which in turn results in gratification. However, the psychoanalytic theory of motivation (following Freud's *The Problem of Anxiety*, in 1926) later introduced a level of cognition through the "ego". The ego regulates the threshold required before an instinctual (id) wish is expressed into behaviour, or changes the direction of behavioural (urge) expression. This regulation is said to manage drive when the sought object is not attainable or when a delay might lead to greater gratification (Weiner, 1972). This development addressed the concern associated with Hull's drive theory which suggested a direct link between need, drive and quiescence. For this reason the psychoanalytic theory of motivation can be considered as quasi-cognitive. However, any cognition is seen to stem from an initial stimulus or drive, which discounts the presence of autonomous thought and actions (Weiner, 1972).

A strength of personality-based theories, and specifically Freud's, is that they explain the motivations behind a wide range of behaviours. This scope encompasses overt and covert behaviours and considers past and present influences on behaviour. It is also the most complex theory of motivation and is therefore useful in explaining individual differences (Arkes & Garske, 1977).

Despite these strengths, psychoanalytic theory has received criticism under two broad headings: the restrictiveness of the motivational constructs and the lack of scientific rigour (Arkes & Garske, 1977). Psychoanalytic theory is said to place too much emphasis on the subconscious and discounts constructs of personal choice, self volitional behaviour, goal achievement and self actualisation. Also, psychoanalytic

theory places little emphasis on the impact of learning, which is well captured by the general learning theories (Weiner, 1972). In terms of scientific rigour, the inability to develop operational definitions of the constructs makes measuring and testing the validity of psychoanalytic theory difficult (Arkes & Garske, 1977). This perhaps stems from the ubiquitous use of covert and inferred constructs, which cannot be observed or easily self-reported. This approach contrasts starkly with Hull's drive theory and other behaviourist paradigms.

Hull's drive theory of motivation is biologically based, with its mechanistic emphasis on stimulus-response. Psychoanalytic and other personality theories of motivation are quasi-cognitive, introducing an element of cognition, but discounting autonomous thought and actions (Weiner, 1972). For contemporary motivational theorists, traditional learning and personality based explanations of motivation were too simplistic or lacked scientific rigour, or both. As a result, motivational researchers shifted towards cognitive explanations of motivation. One example from social psychology is the theory of cognitive dissonance.

Cognitive Theories of Motivation

Behaviouristic theories accept that an organism can act on the environment (operant conditioning) but discount the impact of an individual's interpretation and understanding of the situation on their responses (LeFrancios, 2000). In contrast, cognitive theories see the individual as actively exploring, influencing and predicting the outcomes of their behaviour. An example of such an approach is the theory of cognitive dissonance, which recognizes that individuals act on the basis of their information and beliefs (LeFrancios, 2000).

Cognitive dissonance was first explicated by Festinger (1957) and is based on the premise that individuals strive to ensure that cognitions (knowledge, opinions or beliefs) are consistent with one another. Fundamentally, the theory states that when a person simultaneously possesses two contradictory thoughts (known as cognitive dissonance) that they will be compelled to reduce the contradiction (Lefrancios, 2000). Festinger (1957) suggested that contradictory cognitions cause psychological discomfort, which motivates the individual to address them. As an illustration, an individual may engage in and enjoy smoking cigarettes but come to learn that smoking causes cancer. These two simultaneously held cognitions (I enjoy smoking cigarettes and cigarettes cause cancer) are contradictory and the individual is likely to feel discomfort in possessing them. There are a number of documented means by which individuals address dissonance, such as changing attitudes or behaviour in the direction of cognitive consonance. Cognitive dissonance is considered a motivational theory in that dissonant cognitions act as motives or forces which shape behaviour or thoughts, thus cognitions are motivational.

Festinger (1957) posed two primary hypotheses. Firstly, that the presence of cognitive dissonance is psychologically unpleasant and this will motivate behaviour to address dissonance. Secondly, in the presence of dissonance, other stimuli that might exacerbate dissonance will be actively avoided, while concurrently addressing dissonant cognitions. Festinger (1957) purported that dissonance (the existence of non-fitting cognitions) is a motivating factor in its own right.

Since Festinger's (1957) seminal work, his hypotheses have been supported by prominent researchers (Cooper, 2007). The most rigorous findings concluded that

dissonance creates physiological arousals which are experienced as discomfort within the individual. This results in a change of attitudes, cognitions or behaviours in order to move the cognitive dissonance in the direction of cognitive consonance (Cooper, 2007).

Similarly, cognitive dissonance plays a role in how offenders manage thoughts and feelings about their offending. Offenders commonly enlist cognitive distortions to address the discomfort associated with dissonance, such as minimization, justification, shifting responsibility and denial (Murphy, 1990). Alternatively, an offender may experience discomfort from his or her cognitive dissonance and this discomfort may provide the motive for a pro social behaviour change. However, despite the widespread targeting of cognitive distortions in offender treatment programmes, especially those for sex offenders, little empirical evidence exists to suggest a causal link to offending (Maruna & Mann, 2006).

Hull's drive theory, Freud's psychoanalytic theory and Festinger's cognitive dissonance theory represent a progression from a regulatory to a purposive approach (LeFrancios, 2000; Madsen, 1974; Weiner, 1972). The regulatory approach is based on a stimulus-response framework of motivation, is mechanistic and views the individual as passive, while the purposive approach is based on a framework of cognitively mediated goal directed behaviour. The purposive approach includes cognitive processes ignored by drive theories and the regulatory approach in general. Despite this, regulatory approaches which include concepts such as hunger, thirst and sex remain valid.

However, the construct of motivation has greater breadth than can be explained by the regulatory approach alone, rather the challenge is to weave these two approaches together (Beck, 2004). It is the purposive approach that best reflects the conceptual view of motivation involved in therapeutic interventions. These therapeutic interventions aim to influence behaviour by targeting the determinants of motivated behaviour.

Therapeutic Models of Motivation

Miller and Rollnick's Determinants of Motivation

Miller and Rollnick (2002), within a therapeutic context, explored the variables that determine purposive (i.e. cognitively mediated) motivation. These determinants were developed from clinical practice and were eventually used to inform the development of motivational interviewing as a therapeutic technique to enhance intrinsic motivation to change. Although they were not explicitly founded on any one theory, they do draw from experimental social psychology and other psychological models.

The first of these is an individual's willingness to change, which is synonymous in the motivational literature with the perceived importance of change. Miller and Rollnick identified that as the discrepancy between goals and current behaviour amplifies, therefore as cognitive dissonance escalates, an individual becomes more willing to address the imbalance. 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 either changes their opinions and beliefs or their behaviours.

The second variable expounded by Miller and Rollnick (2002) is an individual's confidence for change. Confidence for change is defined as the coexistence of a tenable change strategy (i.e. general efficacy) with a belief that one can implement it successfully (i.e. self-efficacy). Bandura (1997) defined perceived self-efficacy as "a judgment of one's ability to organise and execute given types of performances" (p. 21). That is, a person high in perceived self-efficacy believes that they can personally effect change. The link between self-efficacy, motivation and behaviour has had

substantial empirical support (Bandura, 1970; 1973; 1977; 1997; Deci & Ryan, 1985; Narciss, 2004). This research has suggested that those higher in self-efficacy are likely to experience greater motivation to change because of their expectation of success. During therapeutic interventions a clinician is well positioned to collaboratively formulate a tenable strategy and concurrently build self efficacy, an approach taken during motivational interviewing.

Miller and Rollnick (2002) described a third construct, readiness to change, as an individual's prioritisation process. To illustrate, an individual may experience considerable cognitive dissonance, be high in self-efficacy and have a tenable change plan. But if behaviour change is not viewed as important, given other priorities, the status quo will remain. In the case of criminal activity, an offender may think it is important to abstain from offending but decide that it is not as important as the associated benefits of continued offending, such as peer support.

Related to this is a fourth construct known as ambivalence. Miller and Rollnick (2002) put forward three main forms of ambivalence: approach-approach, avoidance-avoidance and approach-avoidance. The first two involve choosing between two objects and the last is a choice to engage or not engage with one object or option. In the first form, approach-approach, the choice lies between two mutually attractive options and therefore one becomes caught up in deciding which to choose. The second, avoidance-avoidance, involves choosing between two options that are mutually undesirable, known colloquially as "the lesser of two evils". The third, approach-avoidance, involves a scenario where a person is both attracted to and repelled away from a single object or option. The person caught in this approach-

avoidance ambivalence may be attracted to an object while concurrently sustaining harm. Miller and Rollnick (2002) offer the example of a compulsive hand washer or checker; the person may abhor having to carry out a disabling ritual but fear the consequences of failing to do so and therefore continues.

Finally, locus of control (based on attribution theory) has been considered as a determinant of motivation to change (Lefracois, 2000). Locus of control is an individual's tendency to assign outcomes as either the result of one's own behaviour or the result of an external contingency (Colman, 2006). Research has indicated that those with an internal locus of control are more likely to personally effect behaviour change and sustain efforts (Lefcourt, 1982). Furthermore, locus of control has a demonstrated relationship with cognitive dissonance, in that internally-oriented individuals are more acutely affected by dissonance than those who are externally oriented. However, locus of control is culturally bound and some cultures, namely western culture, attribute greater value to an internal locus of control (Lefcourt, 1982).

When considered discretely, Miller and Rollnick's determinants do not comprehensively explain the process of how motivation is fostered and translated into behaviour change. An individual's motivation to change is likely to be affected to varying degrees by all the determinants, which in turn are likely to interact with one another. This has led to the development of models which explain the relationships between the determinants and the processes of behaviour change. One such model is Prochaska and DiClemente's (1982, 1983) Transtheoretical Model of Intentional Behaviour Change.

The Process of Change

Prochaska and DiClemente's (1982, 1983) Transtheoretical Model of Intentional Behaviour Change (TTM) integrates principles and processes of change from different theories (Prochaska & Velicer, 1997). The TTM explains the process of intentional cognitively mediated behaviour change, reflecting a purposive approach to motivation (DiClemente, 2005).

The TTM asserts that individuals progress through a series of tasks and stages in order to exercise change over an entrenched behaviour (DiClemente, 2005). These stages form the fundamental basis of the TTM and provide a framework for other change related variables, such as decisional balance and self-efficacy. Prochaska and DiClemente (1992) outlined five stages: pre-contemplation, contemplation, preparation, action and maintenance. A sixth stage, known as termination, has been suggested but little empirical evidence exists to support this (Prochaska & DiClemente, 1994, 1992). In terms of an offending population, research with a large sample of males in treatment for domestic violence elucidated only four stages (Levesque, 1998; Levesque, Gelles, & Velicer, 2000).

Progression through the TTM's stages is analogous to an increase in motivation to change (Blanchard, Morgenstern, Morgan, Labouvie, & Bux, 2003). The TTM does not use the term 'motivation' but instead describes progression through the stages as representing an increased likelihood of intentional behaviour change (Drieschner, Lammers, & van der Staak, 2004). The stages of change are described as cyclic and an individual may progress through the stages but also regress, as illustrated in Figure 1.

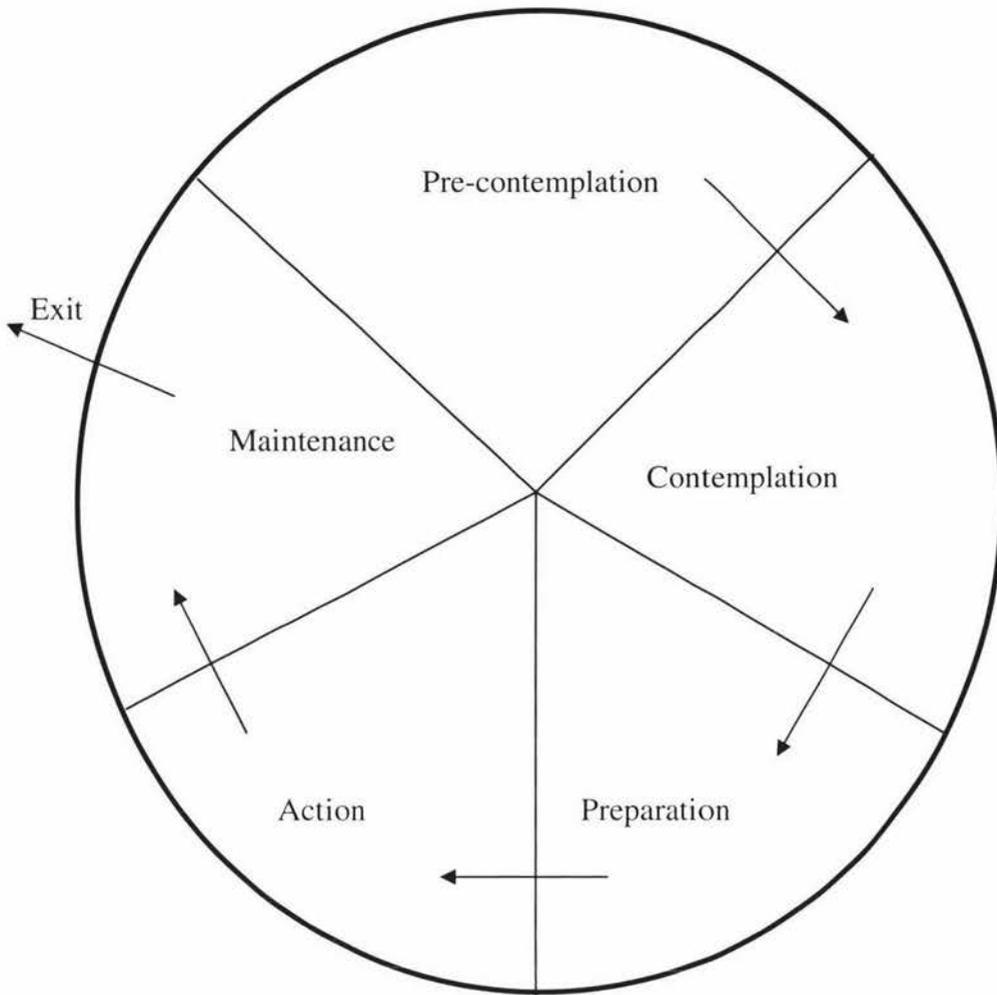


Figure 1
Stages of Change Model (Prochaska & DiClemente, 1994).

Transitions between the stages of change are associated with different processes of change (Prochaska & DiClemente, 1994). Prochaska and DiClemente (1994) reported ten processes of change, which form a simplex pattern of inter-correlations with the five stages. Consciousness raising, dramatic relief and social re-evaluation are correlated with transition from the pre-contemplation to the contemplation stage. Self re-evaluation, self-liberation, contingency management and helping relationships are correlated with transition from the preparation to the action stage. Finally, the processes of counter conditioning and stimulus control are correlated with transition from the action to the maintenance stage (Prochaska and DiClemente, 1994).

The TTM has been adopted as a working model by a range of practitioners, including psychologists, and is commonly proclaimed as effective (Whitelaw, Baldwin, Bunton, & Flynn, 2000) despite only 11 outcome studies having been undertaken in its first 12 years of use (Whitelaw et al., 2000). Heather (1992) suggested that the TTM has largely been adopted based on its intuitive appeal rather than empirical support.

Despite the proclamation of the TTM as effective (Heather, 1994), it has received some criticisms. Firstly, it is suggested that in order to represent levels of the concept motivation, the stages of change need to constitute a single construct (Drieschner, Lammers, & van der Staak, 2004). Instead, the stages of change consider a number of related but discrete concepts. Sutton (2001 as cited in Drieschner et al., 2004) explained that if stages represent levels of a single dimension, namely motivation to change, it would be illogical to conceptualise them as a staged model. Factor analysis has also demonstrated more than a single factor and this is evidenced by measures which operationalise the TTM, such as the University of Rhode Island Change Assessment Questionnaire (Drieschner et al., 2004). However, Prochaska and DiClemente (1982, 1983) did not proclaim the TTM to be a model of motivation but instead describe it as a model of intentional behaviour change. It has been scholars, such as Blanchard et al. (2003), who have interpreted the TTM as a model of motivation.

Secondly, while the TTM may not represent motivation as a single construct it also precludes other constructs of demonstrable importance when explaining intentional behaviour change. Instruments which operationalise the TTM do not include other

motivational constructs of importance, such as self-efficacy, decisional balance, social desirability and social support (Drieschner et al. 2004).

Lastly, there are some reservations about the external validity of the TTM, particularly given the enthusiasm of many fields to use it as a working model. To illustrate, the sample used by Prochaska & DiClemente to develop and validate the TTM was self-selected and already had strong intentions to cease smoking (Prochaska & DiClemente, 1983). In addition, the TTM was developed and validated based on individuals ceasing to emit a single behaviour (smoking) rather than the acquisition of a range of behaviours. When rehabilitating offenders the aim is not only for the individual to cease offending, which may encompass many behaviours, but to also acquire pro social behaviours. Furthermore, behaviours such as smoking are regularly emitted by an individual whereas instances of behaviours such as serious offending may be separated by months or even years.

Despite these criticisms and an evidence base with offenders described by Anstiss (2005) as scant, the TTM has dominated theory for understanding motivation to change with offenders. Studies carried out by Levesque (1998) found that domestically violent men demonstrated qualitatively different change processes in the earlier stages of change to those in later stages, providing initial evidence for the TTM's applicability with offenders. However this study, like most others with offenders, did not investigate the predictive validity of the TTM. McMurran et al. (1998) investigated the TTM by using the University of Rhode Island Change Assessment Questionnaire 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, although this should be interpreted in the context of the sample's challenging diagnosis. In two other studies with child sex offenders, Tierney and McCabe (2004) demonstrated that offenders in different stages of change utilised different processes of change, which provided support for the construct validity of the TTM, though there was little support for the TTM's predictive validity (Tierney & McCabe, 2004). Studies investigating the validity of the TTM with an offending population have returned mixed results, however it remains the dominant model while other paradigms are investigated.

With these criticisms in mind, evidence has demonstrated that an individual's motivation to change fluxes over time and is predictive of therapeutic outcomes (Burke et al., 2003). These studies have demonstrated that motivation to change is linked to therapeutic alliance and treatment completion, and that those who complete treatment experience better outcomes (Cann, Falshaw, Nugent, & Friendship, 2003). Additionally, those who do not complete treatment have, in some cases, demonstrated poorer outcomes than those who refuse to begin treatment (Cann et al., 2003). Similarly, research with offenders has suggested that motivation is predictive of treatment completion and that those who complete treatment are less likely to re-offend (De Leon, Melnick, Thomas, Kressel, & Wexler, 2000; Department of Corrections, 2002).

Given these findings with a range of populations, researchers are beginning to explore methods to influence motivation to change and maximise therapeutic outcomes. One technique that has become widely used and adapted is motivational interviewing.

Motivational Interviewing

Miller and Rollnick (2002) defined motivational interviewing as “a client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence to change” (p. 25). Motivational interviewing developed from clinical practice that aimed to increase motivation and effect behaviour change, and the subsequent outcome data. As such, motivational interviewing does not propose a comprehensive theory of behaviour change but rather stemmed from experimental social psychology and psychological models, such as causal attributions, cognitive dissonance and self-efficacy (Miller, 1983). Only recently has motivational interviewing reached a stage whereby theory can be explicated and tested (Miller, 2005). A theory which shows some explanatory value for understanding the efficacy of motivational interviewing is Ryan and Deci’s (2002) self-determination theory. The parallels between self-determination theory and motivational interviewing have been promulgated in a paper by Markland, Richard, Vannessa, and Rollnick (2005). In general terms, self-determination theory suggests that individuals innately pursue personal growth toward integration and psychological consistency (Markland et al., 2005). There are similarities between the principles of motivational interviewing and the conditions specified by self-determination theory to foster intrinsic motivation. Specifically, self-determination theory posits three psychological needs: competence, autonomy, and relatedness. Individuals experience these needs along a continuum, and motivational interviewing can be explained as a process of fostering the factors required to meet these psychological needs.

Amrhein, Miller, Yahne, Palmer, and Fulcher (2003) have suggested possible change processes, such as faith and hope effects, commitment language, empathy and change

talk to explain the efficacy of motivational interviewing. Emerging evidence demonstrates that commitment language, specifically its strength and trajectory over the course of therapy, is predictive of motivational outcomes (Amrhein et al., 2003). Despite promising findings, Burke et al. (2003) have emphasised that further empirical testing is necessary to validate these theoretical proposals. Motivational interviewing theory remains in its infancy and researchers are just beginning to understand the processes involved in its efficacy. Although it is not a comprehensive theory of motivational interviewing, Miller and Rollnick (2002) have proposed a framework for effective motivational interviewing, known as its spirit, principles and skills.

The spirit of motivational interviewing is defined by the concepts of collaboration, evocation and autonomy. Collaboration is based on the clinician and the individual working together in a partner-like relationship. In this relationship the clinician fosters an inter-personal environment that is favourable to change but not coercive (Miller & Rollnick, 2002). Evocation emphasises the role of the client as the expert on themselves. Rather than imparting expertise, the clinician elicits the individual's solutions (Miller & Rollnick, 2002). Autonomy refers to an emphasis on the individual taking responsibility for behaviour change. It is the individual, not the clinician, who must formulate and then enact the reasons for change (Miller & Rollnick, 2002).

The principles provide the link between the spirit of motivational interviewing and in-session clinical skills (Miller & Rollnick, 1991). These principles include developing discrepancy, avoiding argumentation, rolling with resistance, expressing empathy and

supporting self-efficacy. Developing discrepancy is the process whereby the clinician identifies and amplifies ambivalence, focusing on the discrepancy between the client's behaviour and their broader goals (Miller and Rollnick, 2002). While client-centred, motivational interviewing subtly introduces the use of direction through the principle of developing discrepancy. This approach is founded on cognitive dissonance theory (Festinger, 1957). The clinician guides the individual towards cognitive consonance through behaviour change. Motivation is developed intrinsically rather than through persuasion and sustainable change is achieved (Amrhein et al., 2003; Moyers & Martin, 2006). Avoiding argumentation is similarly based on the premise that confrontation can be counter-productive (Moyers & Martin, 2003) and is evidenced through clinical skills, such as empathic responding (Miller & Rollnick, 2002). 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). Expressing empathy is characteristic of the client-centeredness of motivational interviewing (Rogers, 1951). Expressing empathy is synonymous with accurate understanding and acceptance but does not suggest universal agreement. The final principle, supporting self efficacy, involves fostering an individual's belief in their ability to personally effect change. It is fundamental that if a desire for change exists that the individual's belief in their ability is promoted (Bandura, 1977, 1997). In the absence of self-efficacy an individual may be prepared to change but encumbered by a lack of self-belief.

The skills of motivational interviewing allow the principles to be translated into clinical techniques. Each skill facilitates the client towards resolving ambivalence,

building motivation and progressing towards behaviour change. Miller and Rollnick (2002) suggested that while in-session skills are important, adherence to the five principles of motivational interviewing has better predicted of outcomes. As such, the spirit and principles of motivational interviewing discriminate it from a prescriptive set of techniques. Figure 2 illustrates the flow between the spirit, principles and skills of motivational interviewing and how these promote change talk, commitment talk and effect behaviour change.

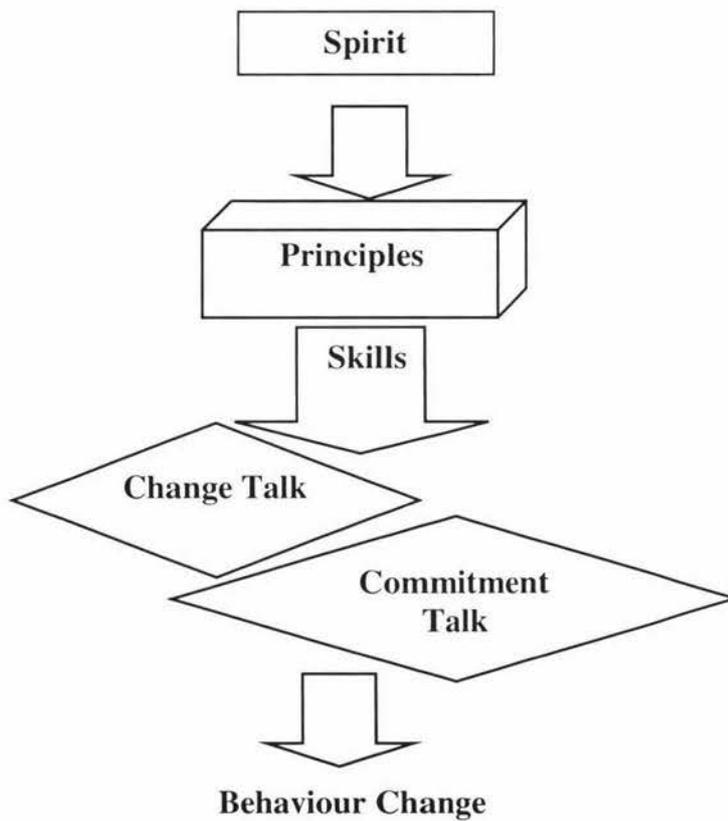


Figure 2

The Flow of Motivational Interviewing (Courtesy of Dr J. Porter, PsyD).

Outcomes of Motivational Interviewing

Research investigating the efficacy of motivational interviewing emerged from the addictions field (Hettema, Steele, & Miller, 2005; Miller & Rollnick, 2002). However, the use of motivational interviewing has now proliferated in a range of areas. To illustrate, Rubak, Sandbak, Lauritzen, and Christensen (2005) in a meta-analysis of 72 studies, all of which required a randomised controlled trial, demonstrated motivational interviewing to be efficacious in decreasing risky sexual behaviour, increasing adherence to medication and encouraging healthy lifestyle changes. Miller (2005) also found motivational interviewing was effective in brief forms, such as a 15 minute one-off encounter, and consistently matched and, at times, outperformed a range of alternative therapeutic modalities.

A meta-analysis by Burke et al. (2003) of 30 controlled clinical trials found that adaptations of motivational interviewing were as effective as alternative therapeutic modalities for problems involving alcohol, drugs, and diet and exercise. Motivational interviewing was less effective than alternative therapeutic modalities for smoking cessation and HIV-risk taking behaviours. However, another study by Naar-King et al. (2006) demonstrated the efficacy of motivational interviewing to reduce HIV-risk taking behaviour among adolescents. The effect sizes relating to alcohol, drug, and diet and exercise found by Burke et al. (2003) were in the medium range (Cohen's $d = .50$) and clinically significant. The most significant moderator was the number of sessions completed, with positive outcomes increasing with more sessions. This is despite findings by Rubak et al. (2005) that demonstrated one 15 minute session of motivational interviewing to be effective. Other studies demonstrated that while

positive outcomes increased with more sessions, the greatest gains were experienced during initial treatment sessions (Miller, 1985; Miller, Benefield, & Tonigan, 1993).

Project MATCH (1997), a large scale, multi-site comparison between cognitive-behaviour therapy, the Alcoholics Anonymous-based 12-step model and motivational interviewing, found motivational interviewing was as effective as the other interventions and often required less time for an equivalent effect. An equivalent effect in less time ultimately equates to less distress for the individual, as the problem is alleviated more rapidly. Additionally, a shorter intervention may have other positive outcomes, such as financial savings and quicker re-engagement with peers and the community. There is also a general trend in the behaviour change literature towards shorter treatments, albeit perpetuated by the interests of funders (Lambert, Bergin, & Garfield, 2004).

The efficacy of motivational interviewing has also been established among young people. A study by Tevyaw and Monti (2004) demonstrated that an adaptation of motivational interviewing was effective for young people diagnosed with adolescent substance abuse disorder. This study showed the intervention to be most effective for those who commenced as less motivated and with heavier substance use patterns. Another study by McCambridge and Strang (2004) also demonstrated the efficacy of motivational interviewing to reduce young people's use of alcohol, tobacco and cannabis.

Although many studies have investigated the external validity of motivational interviewing, very little research has focussed on internal validity (Burke, Arkowitz,

& Dunn, 2002). The majority of outcome studies do not describe in detail the independent variable (how motivational interviewing was delivered). Reference is not made to whether interventions are based on a manual, how well this manual is adhered to, the training received by therapists and their motivational interviewing skills. As such, this makes it difficult to exclude alternative explanations for therapeutic outcomes.

Motivational Interviewing with Offenders

The absence of motivation to change among offenders is implicated in premature termination of treatment and its presence enhances the likelihood of positive therapeutic outcomes (Cann et al., 2003; Draycott, 2007). These findings have prompted interest in interventions which foster motivation to change among offenders. Motivational interviewing is one intervention which has demonstrated potential (Anstiss, 2005; Ginsburg, Mann, Rotgers, & Weekes, 2002; Harper & Hardy, 2000).

Prior to discussing motivational interviewing with offenders, there is merit in an exposition of correctional rehabilitation and its relationship to offender motivation to change. The following discussion will provide an historical account of correctional rehabilitation and will introduce principles of effective correctional rehabilitation. Effective correctional rehabilitation will then be discussed with reference to two correctional programmes; one which does not consider motivation to change and the other which integrates motivation to change throughout programme delivery. Outcome studies of motivational interviewing with offenders will then be considered.

Correctional Rehabilitation

Offender rehabilitation was supported as an ideal by correctional professionals for the first seven decades of the 1900s (Cullen & Gendreau, 2000), although this was not necessarily well implemented on a practical service delivery level (Sarre, 1999). However, in the early 1970s correctional rehabilitation was criticised in response to an increasing societal disaffection with rising prison populations (Andrews & Bonta, 2006; Blackburn, 1993; Cullen & Gendreau, 2000; McGuire, 1995; Sarre, 1999).

During this era, sociologist Robert Martinson (1974) published the text *What Works? – Questions and answers about prison reform*. This report concluded that very little, if any, reduction in recidivism could be attributed to correctional rehabilitation. Notably, Martinson's research measured reconviction alone, which does not consider other potential outcomes from correctional rehabilitation, such as a greater willingness to address problem behaviours, insight, or change in type and frequency of offending. Also, Martinson did not consider treatment integrity, now a common tool in contemporary programme evaluation (Sarre, 1999). Treatment integrity would have provided context to Martinson's findings and indicated whether outcomes were affected by the quality of programme delivery. A number of scholars contested Martinson's findings. Palmer (1975) re-examined Martinson's data set and found that 48% of studies could be categorised as having a positive effect. Gendreau and Ross (1979) analysed other studies not included in Martinson's cohort and concluded that some programmes were effective in reducing recidivism. Martinson (1979) later published another paper which acknowledged exceptions to his findings. Cullen and Gendreau (2000) suggested that though this was a well conceptualised and executed study its impacts went beyond what most would expect from a single review. MacKenzie (1989) and Ruth and Reitz (2003) suggested that the political climate of the time, combined with professionals seeking explanations for rising prison populations, led to an acceptance of Martinson's findings with little critique.

With an accumulation of empirical data, meta-analysis (as explained in Durlak & Lipsey, 1991) was used to analyse a number of well controlled empirical studies, which had not previously been possible with narrative reviews (Cooper & Dorr, 1996; Cullen, Wright, Gendreau, & Andrews, 2003). Meta-analyses consistently

demonstrated that, if 'well-delivered', correctional rehabilitation reduces recidivism (Andrews, 1995; Andrews, Zinger, Gendreau, Hoge & Cullen, 1990; Dowden & Andrews, 1999, 2000; Garret, 1985; Izzo & Ross, 1990; Lipsey, 1992; Lipsey, Chapman & Landenberger, 2001; Lipsey & Wilson, 1993; McGuire & Priestly, 1995; Wexler, Falkin & Lipton, 1990; Whitehead & Lab, 1989). With greater agreement that correctional rehabilitation, under appropriate conditions, reduces recidivism, focus moved towards developing principles of effective correctional rehabilitation (Gendreau and Ross, 1987). The three most established are the principles of risk, need and responsivity (Andrews & Bonta, 2006).

The first of these principles, risk, posits that offenders who are more likely to re-offend benefit from intensive highly resourced interventions, while those who are less likely to re-offend benefit from less intensive interventions. Risk factors can be both static (unchangeable) and dynamic (changeable) (Andrews & Bonta, 2006; Cullen & Gendreau, 2000; McGuire, 2000). The second principle states that effective correctional programmes focus on offenders' needs. These needs are a component of an offender's risk of recidivism; they are malleable and can be either rehabilitative (predictive of offending) or not rehabilitative. The final principle, responsivity, states that offenders will benefit most from interventions that are delivered in a style and mode consistent with their ability and way of learning (Andrews & Bonta, 2006). An important component of responsivity is readiness to change, which includes both internal factors such as motivation to change and external factors such as the custodial environment in which treatment is delivered (Day & Howells, 2007; Day, Howells, Casey, Ward, & Birgden, 2007).

An offender low in motivation to change is unlikely to benefit from action oriented interventions, because the individual is not at a stage of readiness to consider and act on new learning (Miller & Rollnick, 2002). High risk offenders are more likely to prematurely cease treatment and motivation to change is one of the strongest predictor variables for treatment engagement, participation and completion (De Leon, Melnick, Thomas, Kressel, & Wexler, 2000). Given that treatment completers are more likely to benefit from treatment, it is pertinent that motivation to change is fostered.

Furthermore, effective correctional rehabilitation programmes tend to be highly structured, directive, skill oriented, and cognitive-behavioural (Andrews, 1995; Izzo & Ross, 1990; Lipsey, Chapman, & Landenberger, 2001; MacKenzie, 2006) and community based interventions tend to demonstrate greater effectiveness than their institutional equivalents (Blackburn, 1993; Lipsey, Chapman, & Landenberger 2001; McGuire, 2000; Palmer, 1975). Programme integrity, the degree to which the identified programme is implemented and carried out in accordance with its underlying theory, design, manual specifications and key clinical and interpersonal skills, is predictive of outcome (Andrews & Dowden, 2005; Gendreau & Goggin, 1997; Izzo & Ross, 1990). Finally, professional discretion has also been explicated as an important principle of correctional rehabilitation.

Alternative models of correctional rehabilitation have been proposed. Two of these are the Good Lives Model (Ward & Brown, 2004) and the Theory of Current Concerns (Klinger & Cox, 2004). Both of these paradigms consider offender motivation to change but are critical of the emphasis that is placed on risk in the risk, need and responsivity model (McMurrin & Ward, 2004). These alternative models,

although promising, currently lack empirical support and work is underway to investigate their respective validity. Andrews and Bonta's (2006) risk, need and responsivity model remains the dominant contemporary model of effective correctional rehabilitation. Those programmes which integrate all the principles of effective correctional rehabilitation are most likely to reduce recidivism.

Integrating the Principles of Effective Correctional Rehabilitation

Straight Thinking is an example of a programme which partially adhered to the principles of effective correctional rehabilitation but failed to address responsivity factors, namely motivation to change. Straight Thinking was delivered to groups of offenders both in prison and in the community. The programme aimed to improve offenders' critical thinking skills and reorient their beliefs and behaviours. It consisted approximately 70 hours of contact time and was delivered to offenders with a range of offending histories.

Straight Thinking was evaluated in 2001 and 2002 and produced effect sizes, in terms of reduced recidivism, of $r = .056$ (within the prison) and $r = .009$ (within the community) (Anstiss, 2003). These effect sizes, though marginally positive, were statistically insignificant and precluded offenders who did not complete the programme. This preclusion is significant as offenders who did not complete treatment were later re-incarcerated at a higher rate than the control group (Department of Corrections, 2002). Despite being cognitive behavioural and structured, the Straight Thinking programme was largely ineffective. While partially adhering to the principles of effective correctional rehabilitation, Straight Thinking treated all offenders homogeneously by not considering differences in rehabilitative

needs and motivation to change. Consequently, the offenders in the Straight Thinking programme were unlikely to have the requisite motivation to engage in what was an action oriented programme. Even with the requisite motivation to change, this approach did not specifically target an offender's rehabilitative needs.

In contrast to the Straight Thinking programme, Wong, Gordon, and Gu (2007) developed an approach (the Violence Reduction programme) which integrated concepts of motivation to change and effective correctional rehabilitation. Offenders are identified for treatment, based on risk and need. Their motivation to change is assessed with a modified version of the Transtheoretical Model of Intentional Behaviour Change (TTM). This is done by measuring an offender's motivation to change each of their rehabilitative needs. An offender's motivation to change is then used to inform the clinician's interactions. These clinical interactions are further guided by the processes of change most likely to facilitate movement from one stage of change to another (see Figure 1). Wong et al. (2007) have proposed that motivational interviewing techniques be used to operationalise the processes of change throughout the Violence Reduction programme. Progress is carried out over three phases. The first phase focuses on fostering treatment engagement and the therapeutic alliance. The second phase focuses on skill acquisition but only once adequate motivation to change is achieved. The final phase focuses on relapse prevention. Each phase is associated with a different stage of change and therefore different processes of change (Prochaska & DiClemente, 1994).

Wong et al.'s (2007) approach to correctional rehabilitation has recognised the importance of motivation to change to the efficacy of rehabilitative programmes. It

has integrated Prochaska and DiClemente's (1983) TTM and the techniques of motivational interviewing for delivering programme content, while adhering to the principles of effective correctional rehabilitation. Evidence has suggested that this and similar approaches are effective in reducing risk of recidivism among some of the most resistant offenders (Wong et al., 2005, 2006).

The New Zealand Department of Corrections has developed the Short Motivational Programme (SMP), which is similar to Wong et al.'s (2007) approach but less comprehensive and ambitious (Steyn & Devereux, 2006). The principles of effective correctional rehabilitation are reflected in the SMP's content and are delivered using the techniques of motivational interviewing. The SMP is less focused on reducing recidivism than Wong et al.'s (2007) Violence Reduction programme. Instead, the SMP focuses on fostering motivation to change so offenders will be more likely to engage in ongoing rehabilitative programmes, either in the prison or in the community upon release. It is then the focus of these ongoing rehabilitative programmes to target rehabilitative needs and reduce recidivism. The SMP stemmed from a motivational interviewing programme developed for offenders by Anstiss (2003). An evaluation of this programme demonstrated the efficacy of motivational interviewing with low to medium risk of recidivism offenders (Anstiss, 2005). The Department of Corrections, as a pilot study, has recently begun to deliver the SMP to offenders with a high risk of recidivism who are serving short sentences. These offenders do not qualify for comprehensive rehabilitation programmes due to the brevity of their sentences. For these offenders, the SMP aims to foster motivation to change so that they will, upon release, seek out and engage with community resources to address their rehabilitative needs.

Outcome Studies of Motivational Interviewing with Offenders

Despite the introduction of motivational interviewing into the correctional field, for example in Wong et al.'s (2007) Violence Reduction Programme, empirical evidence for its use with offenders remains scarce (Anstiss, 2005; Farr & Draycott, 2007). The majority of literature pertaining to the use of motivational interviewing with offenders has involved recommendations rather than empirical outcome studies. Rather, the popularity of motivational interviewing has been, at least partially, driven by face validity and anecdotal evidence (Czuchry, Sia, & Dansereau, 2006; Harper & Hardy, 2000). This is possibly in response to a developing school of thought that targeting and tailoring interventions to match motivation to change is a legitimate element of correctional rehabilitation (McMurrin et al., 1998; Project MATCH Research Group, 1997). However, there is value in not presuming that motivational interviewing is efficacious with offenders, especially given the idiosyncrasies of a correctional population and setting. These idiosyncrasies include the prison environment, contingencies on behaviour and current correctional rehabilitation practices. Also, the majority of motivational interviewing research with offenders has focused on changing specific behaviours, such as substance abuse, rather than an offending lifestyle. Substance abuse is a behaviour that, for the abuser, occurs quite regularly, whereas many months or even years may separate periods of offending. In response, scholars are beginning to investigate the efficacy of motivational interviewing, and its adaptations, to promote motivation to change with offenders.

Notwithstanding the lack of outcome research, initial studies have provided tentative support for the efficacy of motivational interviewing with offenders (Murphy & Baxter, 1997). A New Zealand study by Anstiss (2005) showed an increase in

motivation to change and a reduction in recidivism. Anstiss' (2005) study demonstrated a 78% reconviction rate for a control group matched on risk of recidivism versus a 57% reconviction rate for the motivational interviewing group. The recidivism data was collected from release day to approximately four years post release (Anstiss, 2005). Motivational interviewing has demonstrated positive impacts on offender engagement in initial outpatient treatment (De Leon et al., 2000). A study by Czuchry, Sia, and Dansereau (2006), comprised of three two-hour sessions of motivational interviewing, demonstrated increased early treatment engagement amongst probationers receiving treatment for substance abuse. In this particular study, female probationers experienced the greatest shift in motivation to engage. Male offenders, although not benefiting as greatly, still demonstrated clinically significant motivational gains in comparison to the control group.

Despite limited empirical evidence Mann, Ginsburg, and Weekes (2002) proposed hypotheses for the efficacy of motivational interviewing. Mann et al. (2002) suggested that offending can be conceptualised as an addictive behaviour. On this basis, motivational interviewing might be efficacious with offenders given its demonstrated efficacy with addictions (Burke et al., 2003; Harper & Hardy, 2000). Mann et al. (2002) also suggested that offending leads to negative self-evaluations and labels. Given this, motivational interviewing is potentially efficacious because of its humanistic conceptions (Miller & Rollnick, 2002; Rogers, 1951). Lastly, Mann et al. (2002) suggested that offending is the result of a decisional process. This might make motivational interviewing efficacious with offenders because it directly resolves ambivalence by developing discrepancy between current behaviour and broader goals.

However, some studies have not demonstrated positive outcomes. Research carried out by Amrod (1997 cited in Ginsburg et al., 2002) found no positive treatment effect in comparison with a control group for offenders with coexisting substance abuse. This is perplexing given that motivational interviewing has demonstrated efficacy with substance abusing clients who were not offenders (Burke et al., 2003). With the above caution in mind, preliminary evidence has suggested that motivational interviewing can be efficacious with offenders (Anstiss, 2005; Ginsburg, Mann, Rotgers, & Weekes, 2002; Harper & Hardy, 2000).

Challenges to Motivational Interviewing with Offenders

Motivational interviewing is a brief intervention and therefore does not address the risk principle when delivered to high risk offenders. However, although the risk principle is well validated, it is based on recidivism as the treatment criterion (Andrews & Bonta, 2006). During motivational interviewing motivation to change, rather than reduced recidivism, is the criterion of interest. Although it would be ideal for motivational interviewing to reduce recidivism, its primary focus is to increase motivation to change so rehabilitative programmes can more effectively target rehabilitative needs.

Also, the principles of effective correctional rehabilitation state that interventions should be highly structured. This raises concerns about motivational interviewing, given its client-centred conceptions. In mitigation, motivational interviewing is also partially directive, as is evident in the principle of developing discrepancy. Also, the Department of Corrections has adapted the SMP to reflect a structured approach. This is similar to Wong et al.'s (2007) Violence Reduction programme which consists of

content based on effective correctional rehabilitation that is delivered through motivational interviewing techniques. There is, however, a risk that adapting motivational interviewing to reflect effective correctional rehabilitation will dilute its efficacy.

Finally, as with other therapeutic endeavours, practitioners need to be trained appropriately and adequately. This includes understanding the complexities of motivational interviewing and the idiosyncrasies of a correctional setting.

Summary

This literature review has expounded definitions and theories of motivation, therapeutic models of motivation, the efficacy of motivational interviewing and the use of motivational interviewing with offenders. Findings from this literature review support several conclusions and have important implications for the current study.

Motivation as a predictor variable for behaviour change is not confined to any one area (Burke et al., 2003). Motivational interviewing has consistently matched, and at times outperformed, alternative modalities (Burke et al., 2004; Project MATCH Research Group, 1997; Rubak et al., 2005). Evidence has demonstrated that the spirit, principles and skills of motivational interviewing predict motivational outcomes (Amrhein et al., 2003). Furthermore, recent studies have suggested that the use of motivational interviewing with offenders is promising (Anstiss, 2005; Ginsburg et al., 2002; Harper & Hardy, 2000).

Approximately 75% of New Zealand offenders are ambivalent about the factors that contributed to their offending (Anstiss, 2003, Steyn, Devereux, 2006).

Given the scale of the motivational problem and the demonstrated efficacy of motivational interviewing in other fields, there is value in evaluating its efficacy with offenders. Lastly, the spirit, principles and skills of motivational interviewing have predicted motivational outcomes. Therefore, an evaluation of motivational interviewing with offenders should include measures of treatment integrity.

Purpose of the Current Study

This study has two primary aims:

1. To explore the efficacy of the Short Motivational Programme (SMP) to increase and maintain motivation to change with a high risk sample of incarcerated male offenders (outcome component); and
2. To measure the integrity of the SMP in terms of psychologists' use of motivational interviewing skills and offenders' experiences of motivational interviewing principles (process component).

Additionally, this study explores the relationship between offenders' experiences of motivational interviewing principles and their motivation to change.

Hypotheses

Outcome:

1. Offenders who complete the SMP will demonstrate a sustained increase in motivation to change.

This will be evidenced by:

- a. A statistically significant increase in offenders' motivation to change scores from pre to post SMP.
- b. The maintenance of offenders' post motivation to change scores at follow-up.
- c. This will in turn provide evidence for the efficacy of motivational interviewing for high risk offenders (risk of recidivism scores of .7 and over).

Process:

2. Psychologists who deliver the SMP will demonstrate competency in the use of motivational interviewing skills.

This will be evidenced by:

- a. Psychologists demonstrating motivational interviewing skills which meet or exceed the Motivational Interviewing Treatment Integrity Code 3.0 cut-off scores for 'competency'.

3. Offenders will report strongly experiencing motivational interviewing principles during the SMP.

This will be evidenced by:

- a. Mean scores of four or greater for each principle on the Assessment of the Five Principles of Motivational Interviewing. This cut-off score represents a level at which offenders predominantly report strongly experiencing motivational interviewing principles.

4. Offenders who report strongly experiencing motivational interviewing principles will demonstrate a larger increase in motivation to change than offenders who report weakly experiencing motivational interviewing principles.

This will be evidenced by:

- a. Those offenders with higher scores on the Assessment of the Five Principles of Motivational Interviewing will demonstrate a statistically significant larger shift in motivation to change scores from pre to post SMP and at follow-up.

CHAPTER II

METHOD

Research Design

This research comprised an evaluation of a motivational interviewing programme delivered by the Department of Corrections and adapted for use with incarcerated offenders, known as the Short Motivational Programme (SMP). The evaluation consisted of two components: outcome and process.

Outcome

The outcome component measured the efficacy of the SMP to increase and maintain motivation to change with high risk offenders. This was addressed with a quasi experimental repeated measures within-group design. This design first measured shift in motivation to change over two time periods: pre-intervention and post-intervention. For a sub-group of the total sample this was extended to a third time period (follow-up), to measure the maintenance of motivation to change.

Process

The process component measured programme integrity and comprised two parts: psychologists' use of motivational interviewing skills and offenders' experiences of motivational interviewing principles. The first part was undertaken by comparing psychologists' use of motivational interviewing skills to cut-off scores for competency. The second part was done by measuring offenders' experiences of motivational interviewing principles and comparing these to cut-off scores selected by the researcher.

Additionally, the relationship between offenders' experiences of motivational interviewing principles during the SMP and their motivation to change was investigated. This was done with a quasi experimental repeated measures mixed between-within subjects design. This design measured motivation to change over time, to establish whether offenders who strongly experienced motivational interviewing principles demonstrated greater increases in motivation to change.

The Short Motivational Programme

The Short Motivational Programme (SMP) is delivered over five sessions within the prison, according to a manual by the Department of Corrections. The SMP aims to increase motivation to change identified rehabilitative needs, in accordance with the principles of effective correctional rehabilitation as reflected in its content (Andrews & Bonta, 2006). The SMP's content is then delivered according to the spirit, principles and skills of motivational interviewing (Miller & Rollnick, 2002). The SMP is delivered to offenders at a higher risk of recidivism by registered clinical psychologists (Anstiss, 2003, Steyn & Devereux, 2006, Devereux, 2007). Psychologists receive training in the use of motivational interviewing and regular supervision.

Each of the five sessions lasts approximately one hour and is structured to achieve specific outcomes. An initial pre-session introduces the offender to the SMP, elicits informed consent, and assesses an offender's pre motivation to change with an adapted version of the University of Rhode Island Change Assessment Questionnaire (SMP URICA). Session One aims to identify an offender's rehabilitative needs, with later sessions targeting increased motivation to change each subsequent need. Session

Two involves developing an understanding of how thoughts and emotions lead to offending behaviours via use of an offence chain diagram. Session Three addresses motivation to change a specific rehabilitative need and then looks to generalise this to other rehabilitative needs. Session Four involves identifying barriers to change and solutions to these. Session Five aims to strengthen commitment for change and the SMP URICA is re-administered for a post assessment of motivation to change (Anstiss, 2003; Steyn & Devereux, 2006; Devereux, 2007).

Offenders being targeted by the SMP in this study are serving short sentences, generally less than two years, but pose a high risk of re-offending. These offenders do not qualify for comprehensive programmes due to the brevity of their sentences. The SMP for this sample aims to increase motivation to change, so that upon release offenders will seek out social and community resources to address their rehabilitative needs. Community based interventions have demonstrated better outcomes to their institutional equivalents; hence there is theoretical value in this approach (Blackburn, 1993; Lipsey, Chapman, & Landenberger 2001; McGuire, 2000; Palmer, 1975).

Participants

Outcome

For the outcome component the participants were 38 male offenders who had completed the SMP and were incarcerated in either Waikeria or Tongariro-Rangipo prison. These 38 offenders were all assessed at pre and post SMP for their motivation to change. The offenders were aged between 18 and 42 years ($M = 27.24$, $SD = 6.701$) with 76.3% identifying as Maori and 23.7% as non-Maori. Index offences consisted of burglary (75%), sex offences (9.4%), aggravated robbery (3.1%), drug offences (3.1%), driving offences (6.3%) and assault (3.1%). Some offenders had histories which included a diverse range of offending.

Of these 38 offenders, a sub-group of 12 consented to a follow-up assessment of motivation to change and socially desirable responding. They also provided data for the process component, detailed below. The sub-group of offenders were aged between 21 and 42 years ($M = 28.83$, $SD = 5.47$) with 83.3% identifying as Maori and 16.7% as non-Maori. Index offences consisted of burglary (81.8%), sex offences (9.1%) and drug offences (9.1%). As for the total sample, this sub-group included some offenders with histories of a diverse range of offending.

Each offender's risk of recidivism was assessed upon entering the prison by a trained Department of Corrections assessor. Risk of recidivism was measured using the Risk of Reconviction/Risk of Reimprisonment scale (RoCRoI). The RoCRoI is an actuarial instrument developed by Bakker, O'Malley, and Riley (1999) that combines two scales: risk of reconviction and risk of re-imprisonment. The RoCRoI is calculated using an offender's history of offending and demographic information, and is based

on the case histories of 133,000 offenders (Bakker et al., 1999). A RoCRoI score can vary from 0 (indicating a 0% likelihood of recidivism) to 1 (indicating a 100% likelihood of recidivism). Actuarial approaches such as the RoCRoI, have consistently out performed clinical judgements made by correctional professionals (Bakker et al., 1998; Gottfredson & Gottfredson, 1988). The RoCRoI is primarily used by the Department of Corrections to decide which offenders should receive priority for treatment while serving prison sentences. This rationale is based on Andrews and Bonta's (2006) risk principle that offenders with a higher risk of recidivism benefit from more intensive interventions.

The mean risk of recidivism score for the total sample of 38 offenders was $M = .78$, $SD = .09$ versus $M = .79$, $SD = .05$ for the sub-group of 12 offenders; all were considered at a high risk of recidivism.

Process

For the process component the participants were five registered clinical psychologists working for the Department of Corrections and the sub-group of 12 offenders described above. The psychologists were involved in audio-taping their SMP sessions for later treatment integrity checks. The sub-group of 12 offenders provided data about their experience of the SMP in terms of the motivational interviewing principles.

Participants were conceived as four study conditions. Condition (a) participants were offenders who provided pre and post motivation to change scores (the total sample of offenders); condition (b) was a sub-group of 12 offenders who also provided pre and

post motivation to change scores, plus a follow-up assessment of motivation to change, socially desirable responding and the five principles of motivational interviewing; condition (c) participants were psychologists who audio-taped their SMP sessions for later treatment integrity checks for motivational interviewing skills; and condition (d) participants were offenders only involved in audio-taped SMP sessions with psychologists and did not provide any data.

Power Analysis

A power analysis was used to calculate the required sample size to detect an effect when measuring motivation to change from pre to post SMP and at follow-up. One recent study had investigated motivational interviewing with a New Zealand offender population (Anstiss, 2005). On the criterion of motivation to change, Anstiss' (2005) sample of adult offenders produced a pre-post effect size following motivational interviewing of $\eta^2 = .27$; a large effect size according to Cohen (1988, pp. 284-7). Based on Anstiss' effect size, a p value = .05, and a power level = .80, it was calculated that approximate sample sizes of 26 for t-tests and 21 for ANOVA would provide adequate statistical power to detect an effect (Cohen, 1988, pp. 284-7).

Measures

For all of the offenders, a single measure was used to assess their motivation to change. For the sub-group of offenders, additional measures assessed their experiences of motivational interviewing principles and their socially desirable responding tendencies. Age, gender, ethnicity, risk of recidivism and index offences were also obtained for each offender. For the psychologists, measures assessed their use of motivational interviewing skills; no demographic data were collected from the psychologists.

Outcome Measures

Motivation to Change

Offender motivation to change was measured with an adapted version of the University of Rhode Island Change Assessment Questionnaire (URICA). The URICA is a 32 item, structured self report questionnaire with four hypothesised factors (DiClemente & Hughes, 1990). The Department of Corrections has adapted the URICA for use with offenders. Some of the URICA's introduction and items have been reworded but each item's meaning and intent has been retained. For example, statement 1 "As far as I'm concerned, I don't have any problems that need changing" was reworded to read "As far as I'm concerned I don't have any offending related problems that need changing". The Department of Corrections adapted version is known as the SMP URICA (Appendix A).

Factor analysis has validated four factors, labelled pre-contemplation, contemplation, action and maintenance (McConaughy, Prochaska, & Velicer, 1983). These results were replicated by McConaughy, DiClemente, Prochaska, and Velicer (1989). A

study undertaken by Greenstein, Franklin, and McGuffin (1999) with an adolescent sample replicated similar results to those obtained by McConaughy et al. (1989). As has been the case with other offender samples, Hemphill and Howell (2000) found a lack of clear discrimination between the action and maintenance scales. However, other studies with offender samples have demonstrated the four factor structure, such as a study carried out with domestically violent men by Levesque, Gelles, and Velicer (2000). Through confirmatory factor analysis, tentative support for the SMP URICA's construct validity was found against the New Zealand Department of Corrections Criminogenic Needs Inventory – Readiness to Change Score (CNI-RTC) (Anstiss, 2005). Ideally a factor analysis would have been carried out for the current study but this would have required more participants (Tabachnick & Fidell, 1989). Pearson product-moment correlation coefficients of .80, considered to be large by Cohen (1988), demonstrated strong convergent validity between the URICA and the CNI-RTC (Anstiss, 2005). The URICA has also been predictive of treatment outcome, as demonstrated by DiClemente and Hughes (1990) and Prochaska, Norcross, Fowler, Follick, and Abrams (1992).

McConaughy et al.'s (1983) seminal work confirmed the reliability of the URICA. A study with a New Zealand offender sample by Anstiss (2005) found the SMP URICA demonstrated acceptable internal reliability with an overall Cronbach alpha coefficient of .84 and coefficients of .75 for pre-contemplation, .60 for contemplation, .93 for action, and .90 for maintenance. In the current study, Cronbach alpha coefficients were .80 for pre-contemplation, .70 for contemplation, .78 for action, .61 for maintenance and .65 for the SMP URICA total score. These results approximate the acceptable level of .7 and over (Tabachnick & Fidell, 2007).

Socially Desirable Responding

The Balanced Inventory of Desirable Responding 7.0 (BIDR), also known as the Paulhus Deception Scale: Version 7, measured offenders' tendency towards socially desirable responding (Paulhus, 2002). The BIDR is a structured 40 item self-report questionnaire where each item consists of a statement about oneself, such as "I never regret my decisions". Items are scored on a five-point Likert scale, from 1 = not true of me to 5 = very true of me. The measure was developed for respondents over 16 years of age and takes five to seven minutes to complete (Appendix B).

A measure of socially desirable responding was included, given the transparency of the SMP URICA and the Assessment of the Five Principles of Motivational Interviewing, and the feasible pressure on offenders to appear to have benefited from the SMP. This is partially mitigated in this study as offenders are serving fixed sentences. Also, research has replicated findings negatively correlating risk with socially desirable responding (Mills & Kroner, 2005). This would suggest that the offenders in the current study, a sample of high risk offenders (RoCRoI scores: $M = .77$, $SD = .09$), would be less vulnerable to socially desirable responding.

Research has recognised that socially desirable responding can be conceptualised in two forms (Kroner & Weekes, 1996; Nederhof, 1985; Paulhus, 1984). Paulhus (2002) has framed these two constructs as self-deceptive enhancement (SDE) and impression management (IM), and they are reflected in the BIDR as two separate factors.

Impression management captures the conscious use of inaccurate self-descriptions, such as malingering. Self-deceptive enhancement represents an unconscious process to deny psychologically threatening cognitions and affect, in that respondents believe

they are responding honestly. Essentially, the two scales differ on the level of consciousness associated with respondents' socially desirable responding (Paulhus, 1984).

According to Paulhus (1998), the BIDR scale has Cronbach alpha coefficients of .70 to .75 for the SDE scale and .81 to .86 for both the IM scale and the BIDR total score. Cronbach alpha coefficients for this study were .47 for SDE, .85 for IM and .86 for the BIDR total score. This would suggest that caution should be used when interpreting the SDE scale for offenders in this study. Other than the SDE scale, the IM scale and the total score reached an acceptable level of .7 and over (Tabachnick & Fidell, 2007).

Process Measures

Motivational Interviewing Skills

The use of motivational interviewing skills by psychologists was measured with the Motivational Interviewing Treatment Integrity Code 3.0 (MITI) (Appendix C). The MITI has two components: global scores and behaviour counts (Moyers, Martin, Manuel, Miller, & Ernst, 2007). The MITI is coded by sampling a 20 minute segment of a recorded session, taking one parse to record the global scores and another to record behaviour counts (Moyers et al., 2007). Each assessment with the MITI produces five global scores: Evocation, Collaboration, Autonomy/Support, Direction, and Empathy. These global scores provide a judgment of the extent to which a clinician has demonstrated the spirit of motivational interviewing. Each global score is rated on a five-point Likert-type scale whereby 1 = low and 5 = high. Each point from 1 to 5 is anchored with a qualitative description to increase coder reliability.

Clinician behaviour counts are coded into seven mutually exclusive categories; giving information, MI adherent, MI non-adherent, open question, closed question, simple reflection and complex reflection. The coder provides a rating by counting the behaviour within the randomly selected 20 minute segment. Cut-off scores have been generated from clinicians experienced in the use of motivational interviewing (not normative data). These cut-off scores are designed to represent levels of skilfulness, designated as either beginning proficiency or competency.

Although another instrument has been developed that is capable of measuring clinician fidelity to motivational interviewing skills, the Motivational Interviewing Skills Code (MISC) (de Jong, Schippers, & Schapp, 2005), investigation of both measures found the MITI the most valid, reliable and parsimonious (Madson & Campbell, 2006). Compared to the MISC, the MITI was less complex and vulnerable to coder lapses, thus increasing its reliability. Furthermore, the MITI is designed specifically to measure clinician adherence to motivational interviewing skills, which was the focus of this research. For these reasons the MITI was chosen for the current study.

Psychometric data has been collected by using 20 minute segments of motivational interviewing. Use of longer segments has led to problems of sustained coder attention and difficulty forming global judgments and finding large spans of uninterrupted time in applied settings (Moyers et al., 2007). Moyers et al. (2005) calculated intraclass correlation coefficients to estimate the inter-rater reliability of the global ratings and behaviour counts for the MITI. Intraclass correlation coefficients for global ratings were .51 for empathy and .58 for the spirit of motivational interviewing. Intraclass

correlation coefficients for behaviour counts ranged from .57 to .96. For the current study a second rater was used to generate a measure of inter-rater reliability. Substantial inter-rater reliability was recorded for empathy (.71) and the spirit of motivational interviewing (.63). Moderate inter-rater reliability was recorded for global ratings (.47) and other than percentage of complex reflections, which rated poorly for inter-rater reliability (.10), the remaining behaviour counts generated moderate inter-rater reliability ($M = .41$) (Haggard, 1958). Inter-rater reliability for empathy, the spirit of motivational interviewing and global ratings in the current study are comparable to the findings of Moyers et al. (2007). However, inter-rater reliability for behaviour counts is considerably lower for the current study than in Moyers et al.'s (2007) findings. Inter-rater reliability for complex reflections is poor and therefore caution is required when interpreting these results.

Madson and Campbell (2006) tested the convergent validity of the MITI with the MISC and conducted an exploratory factor analysis of the MITI items. This provided evidence for both the convergent validity and the factor structure of the MITI.

Assessment of the Five Principles of Motivational Interviewing (A5PMI)

As there were no measures available to assess an individual's experience of the principles of motivational interviewing a questionnaire was developed (Appendix D). For each principle of motivational interviewing two statements were constructed. One statement reflected the individual's response if the principle was adhered to and the other if the principle was contravened. This was done by phrasing one statement in a positive direction (e.g. my counsellor always understood my point of view) and the other in a negative direction (e.g. my counsellor never understood my point of view).

The counterbalancing of items was designed to address the scale's vulnerability to acquiescence bias. The questions were ranked on a five-point bipolar Likert scale. This allowed offenders to respond with no opinion, and was anchored at each end from strongly agree to strongly disagree, which ensured constancy of meaning (Hand, 2004; Thorndike, 2005). By including the option of 'no opinion' the scale was more vulnerable to central tendency bias but this was preferred to a forced response format. The statements were based on descriptions of the nature of the five principles through the literature (Miller & Rollnick, 2002).

The internal consistency of the A5PMI was found to be .71 using Cronbach's alpha coefficient from the current study's data and therefore acceptable according to Tabachnick and Fidell (2007). This instrument has been developed for the current study, given the lack of an alternative and consequently the instrument has not undergone a process of validity and reliability checks, other than a pilot test.

Procedure

Approval for this study was granted by the Massey University Human Ethics Committee and the Department of Corrections. During this process, information sheets and consent forms were pilot tested with three offenders. Subsequent feedback resulted in the development of separate information sheets for participants in each study condition. This provided greater clarity for each participant about what they could expect from participating in this study.

Participant Selection

Outcome

The researcher was provided with a database of offenders who had completed the SMP and were incarcerated in Waikeria or Tongariro-Rangipo prisons. Upon commencing the SMP, consent was granted by the offenders, including permission for their SMP URICA scores to be used for future research, such as this study. Consent was nevertheless sought to collect their demographic information for the study, such as index offence, risk score, age and ethnicity from their files. Given the limited numbers who were still incarcerated, all offenders who had commenced the SMP were invited to discuss the research. The study was explained during a scheduled meeting in a prison interview room. There was an opportunity for each offender to read the information sheet (Appendix E) and ask questions, and it was also verbally explained to ensure comprehension. The researcher explained that their decision to participate or not would have no impact upon their treatment or sentence.

Of the offenders contacted, one declined to participate and some had been transferred to more distant prisons or released, leaving a total of 39. One of these offenders later

recorded an inflated impression management score (IM = 13) on the BIDR. This score is considered by Paulhus (1998) as very much above average for both prison entrants and a non-offending population. Paulhus (1998) suggested that such individuals inflate test responses from implicit or explicit demands. The offender's assessment data was inspected and showed very high SMP URICA and A5PMI scores. It is possible that this offender's responses were less than honest and they were therefore omitted from further analysis. This left a total sample size of 38 offenders for the purposes of pre and post SMP measures of motivation to change.

Offender sub-group

From 38 offenders a sub-group of 12 consented to participate in an additional follow-up assessment of motivation to change and socially desirable responding. Given the added requirements of participating within this sub-group of offenders, a separate information sheet was used (Appendix F). A larger group of offenders would have been preferable, given the pre-emptive power analysis, however some of the original group had been transferred to other prisons or been released prior to the follow-up dates. This sub-group of 12 offenders also contributed data to the process component, detailed below.

Process

Psychologists delivering the SMP were approached to participate via a presentation at a regular staff meeting and notification by the principal psychologist. Those interested in participating received a more detailed explanation of the study with an information sheet (Appendix G). Five psychologists consented to have two of their SMP sessions audio-taped and coded for integrity checks. It is unknown how many psychologists

were delivering the SMP but declined to participate. Prior to audio-taping, each psychologist approached the offender they were working with to seek their consent, supported with an information sheet (Appendix H). Offenders involved in the audio-taped SMP sessions did not contribute any data, however as their voices would be heard during coding their consent was nevertheless sought.

Offender sub-group

The 12 offenders in the sub-group were also interviewed about their experience of the SMP in terms of the five principles of motivational interviewing, which contributed to the process component.

Once the study had been explained and the appropriate information sheet fully understood (as per the study condition), each participant was asked to complete and sign a consent form (Appendix I). Participants who chose to receive a summary of the research findings provided their postal address on the consent form.

Data Collection

Outcome

Age, ethnicity, risk of recidivism, index offence and SMP pre and post motivation to change scores were recorded from the files of all 38 offenders. Files were delivered to a central Community Probation and Psychological Services office. Data were then recorded from each offender's file and entered into an excel spreadsheet; no files were removed from the premises.

Offender sub-group

Interviews were scheduled for the offenders who had consented to a follow-up assessment of motivation to change (SMP URICA) and socially desirable responding (BIDR) and these were held in a prison interview room. Each interview was expected to last for one hour but 90 minutes was allocated to ensure interviews were not rushed. The SMP URICA was always administered first because it would later be compared with pre and post SMP URICA scores, which were administered on their own. To have administered the follow-up SMP URICA after other measures would have introduced possible order effects not present during original pre and post SMP URICA assessments, and therefore have compromised their comparability.

Process

Psychologists audio-taped their own SMP sessions and forwarded these to the researcher. This posed a threat to validity, in that psychologists may have chosen not to pass on audio-tapes which they perceived as disparaging. However, this was preferable to mandating psychologists to audio-tape all sessions or having the researcher sit in and record sessions: such an approach may have caused discomfort

for psychologists, impacted their performance or encouraged them to withhold consent. Audio-tapes were coded with the MITI by the researcher and a second coder. A Master's level psychology student undertook this work as the second coder and signed a confidentiality agreement (Appendix J). The second coder allowed a measure of inter-rater reliability to be calculated, reported under *Measures*.

Offender sub-group

During the follow-up assessment the offender sub-group also completed a measure of their experience of the SMP in terms of the five principles of motivational interviewing (A5PMI). Any order effects (learning, practice and fatigue) were counterbalanced by rotating the presentation of the A5PMI with the BIDR.

Further explanation was provided when an offender indicated that they did not understand the instructions or any statement within a measure. This was pertinent for the A5PMI, which relied on only two statements per motivational interviewing principle. Explanations were however kept to the minimum required and each response was audio-taped so it could be reviewed for accuracy. Once completed each offender was thanked for their time and escorted back by a custodial officer, prior to the following participant's interview.

Participants who requested a summary of the findings were sent a copy (Appendix K) to the address provided on their consent form.

Ethical Considerations

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 a research request, they will be punished. Conversely, offenders may perceive that by taking part they will be given preferential treatment. Because acting voluntarily is an important component of informed consent, the ability of offenders to provide genuine consent can be tenuous. Given this, offenders were consistently advised that participation would not impact, either positively or negatively upon their current conditions or sentence. Also, these offenders were serving fixed term sentences and therefore any contingencies on appearing to be compliant were reduced. The Department of Corrections was not informed about which offenders had or had not consented to participate.

The researcher was aware that some offenders were serving prison sentences for violence. All practicable steps were taken to ensure a level of adequate safety when interviewing participants. This was done by collaborating with custodial staff at Waikeria and Tongariro-Rangipo Prison Services.

CHAPTER III

RESULTS

Data analyses were conducted using the Statistical Package for the Social Sciences Version 15 (SPSS) (SPSS Inc., 2007). Preliminary analyses were done first to screen for missing data and outliers and to test for the violation of statistical assumptions. Bivariate analyses were also conducted to investigate the relationship between measures used in this study. Following this, analyses were conducted on the data to investigate each of the hypotheses. From 38 offenders, scores of risk of recidivism were missing for 7, as shown in Table 1. These were managed through the SPSS 'pairwise exclusion' so cases were only precluded from analyses when missing the requisite data.

The mean, standard deviation, sample sizes and percentage of cases missing for each measure are reported in Table 1.

Table 1

Descriptive Statistics for the SMP URICA, RoCRoI, BIDR, MITI and the A5PMI

Measure	<i>M</i>	<i>SD</i>	<i>N</i>	missing cases
SMP URICA Pre	129.61	13.23	38	0%
SMP URICA Post	133.89	14.51	38	0%
SMP URICA Follow-up	134.92	15.83	12	0%
RoCRoI	.78	.09	31	18%
BIDR	9.25	4.81	12	0%
MITI (GCR)	3.67	.72	5	0%
MITI (RQR)	.57	.33	5	0%
MITI (POQ)	65.11	18.92	5	0%
MITI (PcCR)	29.93	17.66	5	0%
MITI (PcMIA)	64.47	28.01	5	0%
MITI (Evoc)	3.75	.91	5	0%
MITI (Collab)	3.60	.94	5	0%
MITI (Auton)	3.70	.73	5	0%
MITI (Direc)	4.30	.73	5	0%
MITI (Emp)	3.65	.88	5	0%
A5PMI	44.91	3.45	5	0%

NOTE: SMP URICA = Short Motivational Programme University of Rhode Island Change Assessment Questionnaire – adapted version, RoCRoI = Risk of Conviction/Risk of Incarceration, BIDR = Balanced Inventory of Desirable Responding, MITI = Motivational Interviewing Treatment Integrity Code 3.0, GCR = Global Clinician Rating, RQR = Reflection to Question Ratio, PcOQ = Percent Open Questions, PcCR = Percent of Complex Reflections, PcMIA = Percent Motivational Interviewing Adherent, Evoc = Evocation, Collab = Collaboration, Auton = Autonomy, Direc = Direction, Emp = Empathy, A5PMI = Assessment of the Five Principles of Motivational Interviewing.

Normality

T-tests, pearson product-moment correlation coefficients, a one-way repeated measures and a mixed between-within subjects ANOVA were conducted for hypothesis testing. These required that data meet underlying statistical assumptions, such as normality. The Kolmogorov-Smirnov statistic was used to establish the normality of data from the SMP URICA, RoCRoI, BIDR, MITI and the A5PMI. These are outlined within Table 2 with respective skewness and kurtosis values.

Table 2

Tests of Normality for Measures used in Parametric Tests for the Present Study

Measure	Kolmogorov-Smirnov			
	Statistic	Sig.	Skewness	Kurtosis
SMP URICA pre	.10	.20	-1.35	4.35
SMP URICA post	.13	.13	-1.37	5.22
SMP URICA follow-up	.18	.20	.20	-.55
RoCRoI	.19	.00	- 2.03	5.73
BIDR	.19	.00	.63	.77
A5PMI	.16	.04	.17	-.91

NOTE: SMP URICA = Short Motivational Programme University of Rhode Island Change Assessment Questionnaire – adapted version, RoCRoI = Risk of Conviction/Risk of Incarceration, BIDR = Balanced Inventory of Desirable Responding, A5PMI = Assessment of the Five Principles of Motivational Interviewing, Sig. = Significance.

The significance levels of the Kolmogorov-Smirnov statistic for the SMP URICA at pre, post and follow-up were all above .05 and therefore normality was assumed (Pallant, 2007). Significance levels of the RoCRoI, BIDR and the A5PMI suggested

that the assumption of normality had been violated. However, inspection of skewness and kurtosis values for each measure indicated that they were not unduly skewed. Inspection of Normal Q-Q Plots, Detrended Normal Q-Q Plots and histograms (with a normal curve), as recommended by Tabachnick and Fidell (2007), confirmed the data were not unduly skewed. Furthermore, Pallant (2007) suggested that t-tests and ANOVA are robust to small violations of normality, particularly when sample sizes are above 30 and groups are equal sizes. Some degree of non-normality is expected when measuring psychological constructs and this reflects the true nature of the construct (Pallant, 2007). Therefore data transformations were not conducted.

Bivariate analyses

The relationships between each of the measures used in this study were first investigated. It was hypothesised that:

- a. There would be a positive relationship between a measure's subscales and its total score.
- b. There would be a positive relationship between subscales of the SMP URICA, based on modern conceptualisations of motivation as a single construct with multiple levels rather than discrete stages (Drieschner et al., 2004).
- c. There would be no relationship between the subscales of the BIDR, given research which suggests the two subscales measure separate forms of socially desirable responding (Kroner & Weekes, 1996; Nederhof, 1985; Paulhus, 1984).

- d. Risk of recidivism scores would positively correlate with pre-contemplation (precon) and negatively with contemplation (con), action (act) and maintenance (main) subscales.
- e. There would be a negative relationship between risk of recidivism scores and social desirability, based on recent research (Mills & Kroner, 2005).

Pearson product-moment correlation coefficients found significant medium correlations between the SMP URICA total score and its subscales (Pre-contemplation, Contemplation, Action and Maintenance) and significant large correlations between the BIDR total score and its subscales (Impression Management and Self-Deceptive Enhancement). This result supports the hypothesis of a positive relationship between measures' total scores and their respective subscales. Small to medium significant positive correlations were found between the subscales of the SMP URICA. This supports the hypothesis of a positive relationship between the subscales of the SMP URICA and adds credence to modern conceptualisations of motivation as a single construct with multiple levels, rather than discrete stages (Drieschner et al., 2004). The hypothesis of no relationship between the subscales of the BIDR was supported by non-significant correlations. There was a medium positive correlation between the RoCRoI and the SMP URICA pre-contemplation subscale; a small to medium negative correlation with the SMP URICA's contemplation and action subscales; and no relationship with the SMP URICA's maintenance subscale. Other than the SMP URICA's maintenance subscale, these correlations support the hypothesis that the RoCRoI would positively correlate with pre-contemplation (precon) and negatively with contemplation (con) and action (act)

subscales. The hypothesis of a negative relationship between risk of recidivism and social desirability was not supported; no significant relationship was found in either direction. The Pearson product-moment correlation coefficients are reported for all measures used with offenders in Table 3.

Table 3
Relationship between Measures and Sub-scales Used in the Present Study for Offenders

	SMP	Precon	Con	Act	Main	A5PMI	BIDR	IM	SDE
	URICA								
RoCRoI	-.06	.34**	-.29*	-.37**	-.14	-.12	-.07	.01	-.16
SMP URICA		.42**	.44**	.43**	.24*	-.34	.24	.22	.18
Precon			.37**	.27*	.09	.36	.32	.24	.34
Con				.64**	.63**	.32	-.75	-.19	.12
Act					.39**	.18	-.03	-.02	-.03
Main						.23	-.34	-.36	-.19
A5PMI							-.04	-.16	.20
BIDR								.91**	.79**
IM									.46
SDE									

*p<.01 (2 tailed)

**p<.05 (2 tailed)

NOTE: RoCRoI = Risk of Conviction/Risk of Incarceration, SMP URICA = Short Motivational Programme University of Rhode Island Change Assessment Questionnaire – adapted version, Precon = SMP URICA pre-contemplation subscale, Con = SMP URICA contemplation subscale, Act = SMP URICA action subscale, Main = SMP URICA maintenance subscale, A5PMI = Assessment of the Five Principles of Motivational Interviewing, BIDR = Balanced Inventory of Desirable Responding.

Outcome Component

Hypothesis One

It was hypothesised that the offenders who complete the SMP will demonstrate an increase in motivation to change from pre to post SMP and at follow-up. A paired samples t-test was carried out to compare scores on the SMP URICA at Time 1 (pre SMP) with Time 2 (post SMP) for the total sample of 38 offenders. There was a statistically significant increase in SMP URICA scores from Time 1 ($M = 129.61$, $SD = 13.23$) to Time 2 ($M = 133.89$, $SD = 14.51$), $t(37) = -2.99$, $p < .05$ (two tailed). The mean increase for SMP URICA scores was 4.29 with a 95% confidence interval ranging from -7.20 to -1.38. The calculated eta squared statistic of .19 indicated a large effect size (Cohen, 1988, pp. 284-7).

Table 4

Mean SMP URICA Total Scores at Pre and Post the SMP

Time period	<i>N</i>	<i>M</i>	<i>SD</i>
Time 1 (pre-SMP)	38	129.61	13.23
Time 2 (post-SMP)	38	133.89	14.51

This result supported the first part of this hypothesis that offenders who complete the SMP will demonstrate an increase in motivation to change, evidenced by a statistically significant change in SMP URICA scores from pre to post the SMP.

The second part of Hypothesis One, that offenders will maintain their motivation to change at follow-up, was investigated with the sub-group of 12 offenders.

Demographic data were first compared, to assess the comparability of the sub-group

of 12 who did the follow-up interview with the remaining 26 who did not. As illustrated in Table 5, offenders within the sub-group were slightly older and there were slightly more Maori in the sub-group. However, these differences were not unduly large and both samples appear very similar in terms of risk of recidivism, as measured by the RoCRoI.

Table 5

Demographic Data for Offenders Not Involved in a Follow-up Assessment of Motivation to Change vs. the Sub-group of Offenders Involved in Follow-up Assessments

Measure	Total minus sub-group (N = 26)		Sub-group (n = 12)	
	M	SD	M	SD
Age	26.48	7.26	28.83	5.47
RoCRoI	.77	.10	.79	.05
Pre SMP URICA	131.08	9.46	126.42	19.21
Post SMP URICA	134.08	10.20	133.50	21.71
Maori	73%		83%	
Non-Maori	26%		16%	

Furthermore, independent-samples t-tests were carried out to compare the pre and post SMP URICA means of the two samples (total minus the sub-group versus the sub-group) to measure whether any significant differences between the two groups existed.

The data were first inspected to assess for violation of normality. Inspection of Levene's test for equality of variances on pre and post SMP URICA data for the two groups demonstrated that the assumption of equal variances had not been violated, Sig. = .058 and .054, respectively. Therefore the SPSS "equal variances assumed" statistic was used to interpret the output from independent samples t-tests for pre and post SMP data between the two groups. There were no significant differences in pre SMP URICA scores for the sub-group who consented for a follow-up assessment ($M = 126.42$, $SD = 19.91$) compared to the larger group who did not do a follow-up assessment ($M = 131.08$, $SD = 9.46$); $t(36) = 1.01$, $p = .32$. Furthermore the effect size of eta squared = .002 was small (Cohen, 1988, pp. 284-7).

Similarly, there was no significant difference in post SMP URICA scores for the sub-group who consented to a follow-up assessment ($M = 133.50$, $SD = 21.70$) compared to the larger group who did not undertake a follow-up assessment ($M = 134.10$, $SD = 10.20$); $t(36) = .11$, $p = .91$. Furthermore the effect size of eta squared = < .000 was very small (Cohen, 1988, pp. 284-7).

Therefore the sub-group used to measure motivation to change at follow-up, though smaller ($N = 12$), can be considered representative of the larger group of offenders based on there being no statistically significant differences between their pre and post SMP URICA means.

Prior to conducting one-way repeated measures ANOVA the alpha level was adjusted to .15. This adjustment was made because the sample size was less than required to meet adequate statistical power ($N = 21$), based on the pre-emptive power analysis.

Consequently there is an inflated risk of Type One error and the results should be considered in light of this. Cohen (1992) suggested that adjustment to alpha, above the traditional .05 level, is defensible during exploratory research. This was considered to be the case for this study, as the maintenance of motivation and motivation to change following a motivational interviewing programme had not been investigated with high risk offenders.

One-way repeated measures ANOVA was carried out to compare scores on the SMP URICA at Time 1 (pre SMP), Time 2 (post SMP) and Time 3 (follow-up). Time to follow-up varied; $M = 7.78$, $SD = 3.53$ months (see Table 6). Mauchly's test of sphericity (sig. value = .007) indicated that the assumption of sphericity had been violated. Therefore the multivariate statistic was used, as it did not require the assumption of sphericity to be met. Additionally, one-way repeated measures ANOVA is robust to small violations of sphericity when sample sizes match. There was a significant effect for time, Wilks' Lambda = .61, $F(2, 10) = 3.15$, $p < .15$ and a large effect size, multivariate partial eta squared = .39.

Table 6
Mean SMP URICA Total Scores across the SMP at Pre, Post and Follow-up

Time period	<i>N</i>	<i>M</i>	<i>SD</i>
Time 1 (pre-SMP)	12	126.42	19.21
Time 2 (post-SMP)	12	133.50	21.71
Time 3 (follow-up)	12	134.92	15.83

The Pairwise Comparisons table in SPSS output for the above one-way repeated measures ANOVA was inspected, to ascertain where (pre, post or follow-up) the significant effect existed. There was a significant effect for time from pre to post but not from post to follow-up. This suggested the greatest shift in motivation to change occurred from pre to post, with motivation to change maintained on average at follow-up. This result supported the second part of Hypothesis One that offenders who complete the SMP maintain their motivation to change as measured by the SMP URICA at follow-up.

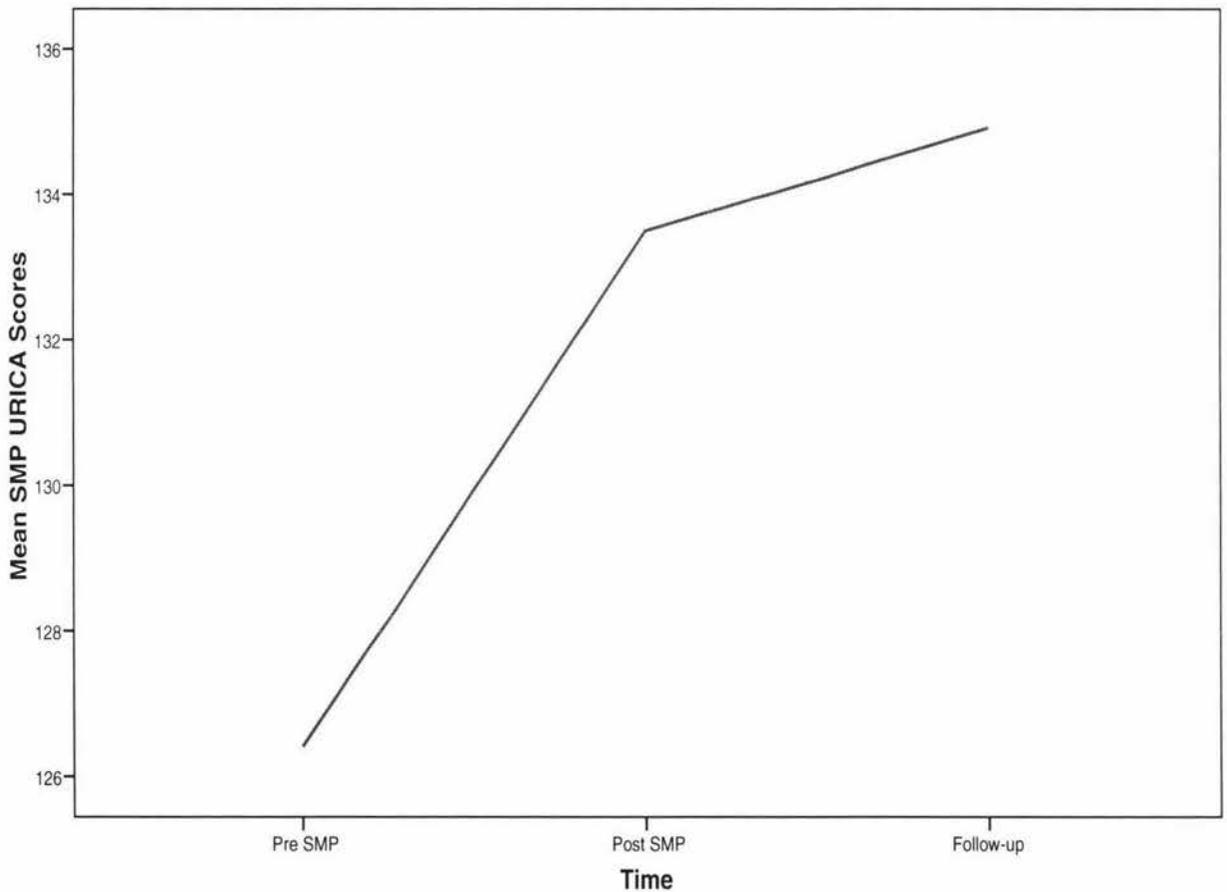


Figure 3
Mean SMP URICA Total Scores at Pre, Post and Follow-up (N = 12)

Hypothesis One also provided evidence for the SMP's efficacy with high risk offenders. As illustrated in Table 5, the total sample and sub-group of offenders are

high risk with mean RoCRoI scores of .77 and .79, respectively. The total sample of offenders demonstrated an increase in motivation to change from pre to post the SMP. The sub-group of offenders demonstrated a similar increase in motivation to change from pre to post the SMP and maintained this at follow-up.

Process Component

Hypothesis Two

It was hypothesised that psychologists who deliver the SMP will demonstrate competence in the use of motivational interviewing skills. The MITI generated a number of ratings of motivational interviewing skills demonstrated by psychologists delivering the SMP, as outlined in Table 7.

Table 7

Mean MITI Scores for Psychologists Delivering the SMP

Scale	Study Sample		Cut-off Score	
	<i>M</i>	range	Beginning Proficiency	Competency
Global clinician rating	3.67	3.00	Average of 3.5	Average of 4
Reflection to question ratio	.57	1.46	1	2
Percent of open questions	65.11	69.00	50	70
Percent of complex reflections	29.93	56.00	40	50
Percent MI adherent	64.47	100.00	90	100
Evocation	3.75	3	3.5	4
Collaboration	3.60	3	3.5	4
Autonomy	3.70	3	3.5	4
Direction	4.30	2		
Empathy	3.65	3		

(*N* = 5)

Psychologists received a score between beginning proficiency and competency for global clinician rating and a beginning proficiency rating for open questions, evocation, collaboration and autonomy. Psychologists received a rating less than beginning proficiency for reflection to question ratio, complex reflections and MI adherent behaviours. Cut-off scores were not available for direction and empathy, however it can be inferred that psychologists displayed a likely level of beginning proficiency for empathy and competency for direction.

Based on cut-off scores Hypothesis Two that psychologists who deliver the SMP will demonstrate competence in the use of motivational interviewing skills was not supported. Psychologists only demonstrated competency in the use of direction, although global clinician ratings, percent open questions, evocation, collaboration, autonomy and empathy all closely approached competence. The SMP is a structured and manual-based programme, which may partially explain why psychologists were able to provide such a high level of direction.

Studies have shown that the use of motivational interviewing skills impacts on motivational outcomes (Moyers & Martin, 2006). This would suggest that the motivational outcomes of offenders could be improved by improving the motivational interviewing skills of psychologists delivering the SMP.

Hypothesis Three

It was hypothesised that offenders will report strongly experiencing motivational interviewing principles during the SMP. An arbitrary cut-off score of four was used to indicate that any one principle was strongly experienced. Table 8 describes the extent

to which the sub-group of offenders reported experiencing motivational interviewing principles during SMP sessions.

Table 8
Mean A5PMI scores for the Offender Sub-group

Scale	<i>M</i>	<i>N</i>	<i>SD</i>
Developing discrepancy	4.64	12	.67
Avoiding argumentation	4.78	12	.39
Rolling with resistance	3.55	12	1.1
Expressing empathy	4.69	12	.45
Supporting self-efficacy	4.64	12	.49

These results suggested that, other than “rolling with resistance”, offenders strongly experienced motivational interviewing principles. Although “rolling with resistance” did approach the cut-off score of four. Interestingly, offenders ranked “avoiding argumentation” the highest and concurrently ranked “rolling with resistance” the lowest, although these two principles appear to be conceptually similar. It is difficult, based on this data alone, to explicate why this difference occurred. Based on offenders’ self-report, psychologists effectively reflected the principles of motivational interviewing when delivering the SMP. Therefore the hypothesis that offenders will report strongly experiencing motivational interviewing principles during the SMP is supported. Miller and Rollnick (2002) suggested that though the skills of motivational interviewing are important (Hypothesis Two), the principles of motivational interviewing (Hypothesis Three) have better predicted motivational outcomes.

Hypothesis Four

It was hypothesised that offenders who report strongly experiencing motivational interviewing principles will demonstrate a larger increase in motivation to change than those offenders who report weakly experiencing motivational interviewing principles. A mixed between-within subjects ANOVA was performed to assess the impact of motivational interviewing principles on offenders' motivation to change scores from pre to post SMP and at follow-up. Mauchly's Test of Sphericity indicated that the assumption of sphericity was violated, a common occurrence according to Pallant (2007). Therefore the multivariate statistic was used, as this does not require the assumption of sphericity to be met. Inspection of Levene's test of Equality of Error Variances indicated that the assumption of homogeneity of variances was not violated.

There was no significant interaction effect between an offender's experience of motivational interviewing principles and time, Wilks Lambda = .73, $F(2, 9) = 1.67$, $p = .24$, partial eta squared = .27. Similarly there was no significant effect for time, Wilks Lambda = .57, $F(2, 9) = 3.37$, $p = .08$, partial eta squared = .43. The main effect comparing the two groups (high versus low experience of motivational interviewing principles) was not significant, $F(1,10) = .002$, $p = .97$, partial eta squared < .005. This suggested no difference in motivation to change as a result of an offender's experience of motivational interviewing principles.

The narrow variance in scores ($SD = .39$ to 1.1) made it difficult to measure the impact of motivational interviewing principles on offenders' motivation to change. Also, given the small sample size ($N = 12$), it is possible that this non-significant

finding was due to low statistical power. Figure 5 would suggest that those who strongly experienced motivational interviewing principles were better able to maintain motivation to change at follow-up. This would need to be replicated with a larger sample to confirm whether this is statistically significant. However, this data alone did not support Hypothesis Four that offenders who report strongly experiencing motivational interviewing principles will demonstrate a larger increase in motivation to change than those offenders who report weakly experiencing motivational interviewing principles.

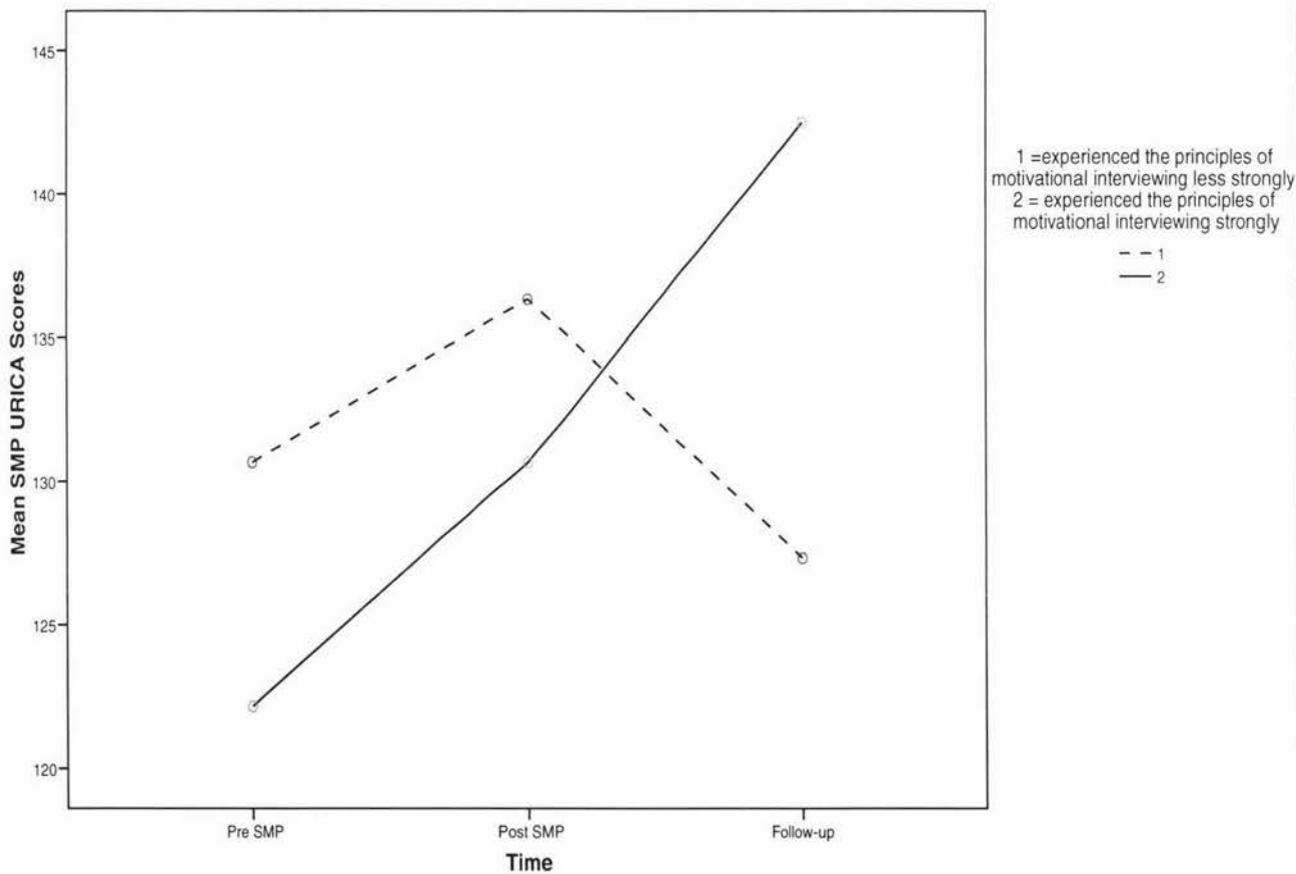


Figure 4
Mean SMP URICA Total Scores from Pre to Post SMP and at Follow-up for Offenders who Experienced Higher vs. Lower Levels of Motivational Interviewing Principles

CHAPTER IV

DISCUSSION

This study constituted an outcome and process evaluation of the Short Motivational Programme (SMP), an adaptation of motivational interviewing for use with offenders. The study aimed to explore the efficacy of the SMP to increase and maintain motivation to change with a sample of high risk male incarcerated offenders, and to measure the integrity of the SMP in terms of psychologists' use of motivational interviewing skills and offenders' experiences of motivational interviewing principles.

For the purposes of this discussion, the main findings of this study will be outlined and discussed with reference to previous research, and any implications for theory and practice will be highlighted. Lastly, the limitations of this study will be examined, followed by recommendations for future research and concluding remarks.

Outcome

Hypothesis One, that offenders who complete the SMP will demonstrate a sustained increase in motivation to change, underpinned the outcome component of this research. Offenders who completed the SMP demonstrated a statistically significant pre- to post-intervention increase in motivation to change. This result supported the findings of previous research that motivational interviewing is efficacious with offenders on the criterion of motivation to change (Clark, 2006; Czuchry et al., 2006; De Leon et al., 2000; Ginsburg et al., 2002; Harper & Hardy, 2000; Harry, 2005). A recent study by Anstiss (2005) demonstrated a pre- to post-intervention increase in motivation to change, with an effect size considered by Cohen (1988, pp. 284-7) as

large. In testing Hypothesis One for this study, the effect size was smaller than that reported by Anstiss (2005) but still large according to Cohen's (1988, pp. 284-7) guidelines. The offenders in the study by Anstiss (2005) constituted a sample of low to medium risk of recidivism offenders, with a greater variance of Risk of Reconviction/Risk of Reimprisonment scale (RoCRoI) scores. It is therefore difficult to compare this study directly with that carried out by Anstiss (2005). However, considered together the two studies suggest that motivational interviewing is efficacious with low, medium and high risk offenders.

Despite a mean pre to post SMP increase in motivation to change, inspection of the raw data indicated that motivation to change decreased for 10 offenders and remained unchanged for four offenders. The SMP has either lacked efficacy with these offenders or a confounding variable has affected their motivation to change. Rigorous process investigations may elucidate the reasons why some offenders benefit more than others. Process research into the mechanisms of change during motivational interviewing is underway (Moyers & Martin, 2006), although not with an offender sample.

Sub-group

The second part of Hypothesis One, that offenders will maintain their motivation to change at follow-up, was also supported. A comparable sub-group of offenders demonstrated a similar pre to post mean increase of motivation to change and maintained this at follow-up. Mean motivation to change slightly increased from post the SMP to follow-up, though this increase was not found to be statistically significant and therefore better represented the maintenance of motivation to change. Follow-up

periods for the sub-group ranged from 3 to 12 months and therefore provided evidence for the resilience of offenders' increased motivation to change.

This finding has implications for planning successive rehabilitative interventions. It would suggest that any additive effects incurred by subsequent rehabilitative interventions, due to increased motivation to change, would remain for up to 12 months. Ongoing programmes would ideally target rehabilitative needs following the SMP and therefore reduce an offender's risk of re-offending. Such an approach would be theoretically consistent with the aim of motivational interviewing, which is to increase motivation to change rather than to reduce re-offending. However, while an offender's motivation to change is on average maintained at 12 months, this finding does not provide evidence for how much time must elapse before any effect ceases. This would require longer and additional periods of follow-up. Previous studies have not investigated the maintenance of motivation to change with offenders and so comparisons are not yet possible. Furthermore, this result needs to be replicated with a larger sample size and a more stringent alpha level for greater confidence in the findings.

Lastly, Hypothesis One provided evidence for the SMP's efficacy with high risk offenders, as both the total sample and the sub-group of offenders are considered to be at a high risk of recidivism. Given the narrow variance of RoCROI scores, this data alone can not be used to understand if the SMP is correspondingly effective for lower risk offenders. However research carried out by Anstiss (2005), with a sample of offenders with low to medium risk of recidivism scores, demonstrated a slightly larger effect size. The findings from Anstiss (2005) and this study would suggest that

motivational interviewing is efficacious for both low to medium and high risk offenders, with slightly better outcomes for offenders at a lower risk of re-offending. However, without the data set used in the Anstiss (2005) study it is difficult to know whether the differences in effect sizes are statistically significant. Anstiss (2005) used the Criminogenic Needs Inventory – Readiness to Change score (CNI –RTC) to measure motivation to change rather than the SMP adapted version of the University of Rhode Island Change Assessment Questionnaire (SMP URICA) used in this study. This makes comparisons more difficult; particularly given the controversy which has surrounded efforts to conceptualise and measure motivation (see Draycott, 2007). However, in the same study by Anstiss (2005) the CNI-RTC and the SMP URICA demonstrated strong convergent validity with Pearson product-moment correlation coefficients of .80 (Cohen, 1988). Given this, comparisons between the data collected by Anstiss (2005) and data collected for this study can be made with reasonable confidence.

The finding that a brief intervention (e.g. SMP) is efficacious with high risk offenders partially contradicts the dominant correctional paradigm that high risk offenders benefit from highly resourced and intensive programmes (Andrews & Bonta, 2006). However, the risk principle is based on recidivism as the criterion of interest rather than motivation to change. Further research with offenders who represent a range of risk profiles would provide better evidence about the relationship between risk, the SMP and motivation to change.

In terms of recidivism, Anstiss' (2005) research demonstrated a reduction in recidivism following motivational interviewing. However, this was with a group of

offenders with a lower mean risk of recidivism compared to the current study. Further research measuring recidivism rates with high and low risk offenders, following motivational interviewing and in the absence of other programmes, would provide clarity about whether motivational interviewing contradicts the risk principle. An investigation is currently underway to measure recidivism with the offenders that were involved in this study.

It has been suggested that 75% of New Zealand offenders are, at best, ambivalent about addressing the factors that contributed to their offending (Anstiss, 2003, Steyn, Devereux, 2006). Given the prevalence of low motivation to change, this and other studies (Anstiss, 2005; Clark, 2006; Czuchry et al., 2006; De Leon et al., 2000; Ginsburg et al., 2002; Harper & Hardy, 2000; Harry, 2005) would suggest there is utility in delivering motivational interviewing to a majority of the New Zealand offender population. Further investigation is warranted to explore the degree to which motivational interviewing leads to an additive effect for ongoing rehabilitative interventions versus its efficacy as a stand alone intervention with low, medium and high risk offenders. Such investigations would assist in understanding how motivational interviewing is best implemented within the prison setting with a range of offenders.

Clinical significance

The pre to post SMP increase in motivation to change was statistically significant; however this does not denote that results were clinically significant. Jacobson, Roberts, Berns, and McGlinchey (1999) suggested that for clinical significance to occur the magnitude of change needs to be statistically reliable, but additionally the

individual should be in a range considered functional. Norms or cut-off scores that reflect offenders considered to be motivated for change have not yet been developed, which makes the approach proposed by Jacobson et al. (1999) untenable. The intent is that with enough SMP URICA data, norms and cut-off scores will be developed to link scores with clinically significant change.

In a study using the CNI-RTC, Anstiss (2005) purported a shift of one stage, based on a slightly larger effect size, within the stages of change model (see Figure 1). If movement from one stage of change to another is considered clinically significant, it is reasonable to suggest that the comparable though slightly smaller effect size for the current study approached clinical significance. However, such conclusions remain tenuous until norms and cut-off scores for the SMP URICA are established.

Process

Hypotheses Two and Three underpinned the process component of this research. Hypothesis Two, that psychologists who deliver the SMP will demonstrate competency in the use of motivational interviewing skills, was generally not supported. Psychologists demonstrated competency only in the use of direction, although global clinician ratings, percent open questions, evocation, collaboration, autonomy and empathy all approached a level of competence.

In part, psychologists' ability to use direction may be due to the structured nature of the SMP, as outlined in the manual (Anstiss, 2003; Steyn & Devereux, 2006). This reflects effective correctional rehabilitation principles, which suggests that offenders benefit from structured programmes (Andrews, 1995; Izzo & Ross, 1990; Lipsey,

Chapman, & Landenberger, 2001; MacKenzie, 2006). Being directive is an important aptitude when delivering motivational interviewing but being overly directive risks suppressing an offender's sense of agency. However, psychologists received ratings close to competency for collaboration and empathy, which indicated that psychologists were unlikely to be unduly directive. Psychologists' strengths in the use of global skills, such as empathy, may reflect their broader clinical training rather than any specific training in motivational interviewing skills.

Psychologists demonstrated weaknesses in two of the more sophisticated motivational interviewing skills, simple and complex reflections. These findings do need to be interpreted in light of the low level of inter-rater reliability between the researcher and the second coder for reflections. It is possible that low inter-rater reliability was due to conceptual ambiguity between simple and complex reflections. Despite a low level of inter-rater reliability both coders recorded, relative to cut-off scores for competency, low rates of complex reflections. This finding has implications for the expected efficacy of the SMP, in that reflections help diffuse conflict, clarify meaning and build mutual depth of understanding about a problem (Miller & Rollnick, 2002). Reviewed audio-tapes indicated that psychologists tended to affirm offenders' discourse through encouraging verbal gestures but missed opportunities to reflect these statements to demonstrate a deeper understanding. When psychologists did use reflections they tended to be only simple reflections, similar to paraphrasing. While this demonstrated that psychologists had understood the offenders, it did not allow a deeper understanding of the problem to be emphasised. Furthermore, reflections allow a clinician to reinforce change talk. When offenders used change talk such as "I've been thinking that maybe I need to do something differently because I'm sick of ending up

back inside”, psychologists tended to move prematurely to the next question rather than reflect the statement and foster the offender’s thoughts and discourse about change. This has potential implications as studies have demonstrated that change talk, when fostered, leads to commitment language, which has predicted motivational outcomes (Amrhein et al., 2003).

On occasion psychologists used motivational interviewing non-adherent behaviours, such as providing advice without first asking permission. Psychologists displayed very few of these but in order to demonstrate competency it was required that they were not used.

Based on the above findings, there is potential to improve the delivery of the SMP to reflect effective motivational interviewing practice. This is particularly the case for the use of simple and complex reflections. Simple and complex reflections are techniques specific to motivational interviewing and are not necessarily developed through generic clinical training. It is therefore recommended that psychologists delivering the SMP seek out or be provided with training in the more specific skills of motivational interviewing. Training which focuses on the use of these techniques is likely to lead to greater motivational outcomes for offenders, as evidenced in process based research (Amrhein et al., 2003).

Sub-group

Hypothesis Three, that offenders will strongly report experiencing the principles of motivational interviewing during the SMP, was supported. Other than “rolling with resistance”, which approached the cut-off score, offenders reported strongly

experiencing the remaining four motivational interviewing principles. Miller and Rollnick (2002) suggested that while the skills of motivational interviewing are important, adherence to the principles has better predicted outcomes. This is somewhat reassuring, in that although psychologists generally demonstrated poor use of motivational interviewing skills, based on offenders' self-report they effectively adhered to motivational interviewing principles.

Although psychologists did not demonstrate strong use of motivational interviewing skills, offenders nevertheless demonstrated statistically significant increases in motivation to change. Speculatively, this would suggest that motivational interviewing principles accounted for a greater amount of variability in motivational outcomes than the more specific skills. This would need to be tested through ongoing research that focused on psychologists' use of motivational interviewing principles versus the more specific motivational interviewing skills.

The motivational interviewing principles are similar to factors commonly found across therapeutic interventions. Perhaps the best example of this is the principle of "expressing empathy", which stemmed from the seminal works of Rogers (1951) and is a tenet of many therapies. Therefore, evidence that psychologists have effectively used the motivational interviewing principles may reflect their general clinical aptitude rather than specific knowledge or training in motivational interviewing.

The final hypothesis explored the relationship between offenders' experiences of the motivational interviewing principles and motivation to change outcomes. Hypothesis Four, that offenders who report strongly experiencing the motivational interviewing

principles will demonstrate a larger increase in motivation to change than offenders who report weakly experiencing the motivational interviewing principles, was not supported. Offenders who experienced the motivational interviewing principles to the greater extent did not demonstrate any greater increases in motivation to change from pre to post SMP and at follow-up.

There are a number of possible explanations for this finding. Firstly, it is possible that the motivational interviewing principles are not predictive of motivation to change outcomes. However, this contradicts current evidence that has found motivational interviewing principles to be more predictive of motivational outcomes than the skills alone (Miller & Rollnick, 2002). Secondly, it is possible that the very narrow range of scores did not allow for meaningful comparisons. To illustrate, the large majority of offenders reported that their psychologist effectively reflected the motivational interviewing principles. As a result, it was not possible to compare offenders who reported the full range of possible experiences in terms of the motivational interviewing principles. The only possible comparisons were between offenders who reported moderately experiencing motivational interviewing principles and those who reported very strongly experiencing motivational interviewing principles. Thirdly, it is possible that Assessment of the Five Principles of Motivational Interviewing (A5PMI) was not able to discriminate between those offenders who experienced the motivational interviewing principles strongly and those who did not. This is plausible, given the A5PMI has not undergone a process of rigorous psychometric testing. Fourthly, it is possible that offenders were responding in a socially desirable manner. However, this was controlled for with a measure of socially desirable responding, the Balanced Inventory of Desirable Responding (BIDR). Lastly, it is possible that an

effect existed but was not detected due to low statistical power, particularly given the small size of the sub-group ($N = 12$).

Figure 5 (p.78) partially contradicts the statistically null finding. It suggests that offenders who reported strongly experiencing motivational interviewing principles were not more likely to be more motivated to change post SMP but were more likely to maintain motivation to change at follow-up. However, given the statistically non-significant result, this finding can not be concluded with any confidence.

Limitations

The current study included a number of limitations and the findings need to be considered in light of these. These are discussed below and explanations are provided for how these limitations were managed.

This study did not include a control group, which would have added to the rigour of findings by controlling for confounding effects, such as history and maturation. Although not ideal, to some degree the sample acted as their own control group because the same offenders were tested over time. Ideally a control group would have consisted of offenders randomly assigned or matched on key variables, such as risk of recidivism. Unfortunately, there were not adequate offenders available for a control group because the use of the SMP with high risk offenders is a new approach. Given the exploratory nature of this study, a one sample longitudinal design still provided valuable data about the SMP's preliminary efficacy. Also, the process component ensured that the outcome data was not considered in isolation but in the context of

how the SMP was delivered. This is a key point of difference which has been overlooked in other outcome studies of motivation interviewing.

The time from post SMP to follow-up motivation to change assessments varied between offenders and consequently offenders were differentially vulnerable to confounding history and maturation effects. However, this variation in time from post SMP to follow-up provided greater generalisation of the findings over time.

Some offenders had completed rehabilitative programmes during previous sentences and it is plausible that outcomes from these previous programmes interacted with the SMP as a confounding variable. However, had this been controlled through an exclusionary clause there would not have been adequate offenders available for this study. Instead, the inclusion of offenders with a range of previous rehabilitative experiences added to the generalisability of findings.

Demand characteristics possibly affected the way psychologists acted when being audio-taped, and psychologists may not have passed on audio-tapes that they perceived as disparaging. To mitigate this, psychologists were reassured that their audio-tapes were confidential. An alternative would have been to mandate psychologists to audio-tape all sessions, or for the researcher to personally observe sessions. However, such an approach may have caused greater demand characteristics, or have encouraged psychologists to withhold consent.

During the follow-up assessments, offenders commonly reported that pre SMP they considered themselves as highly motivated to change but that in hindsight their pre

SMP motivation to change reflected how they wanted to be rather than how they actually were. Based on these reports, it is plausible that offenders' pre SMP URICA scores were artificially inflated and that offenders' shift in motivation to change from pre to post SMP was underestimated. Unfortunately the Balanced Inventory of Desirable Responding (BIDR) was not administered pre the SMP and therefore any changes in offenders' socially desirable responding tendencies at post the SMP were not able to be measured.

The sample size for the one-way repeated measures ANOVA was expected to be too small to reach adequate statistical power and therefore the alpha level was increased. Cohen (1992) has suggested that setting alpha above the traditional .05 level is defensible during exploratory research. This was considered to be the case with this research as motivational interviewing with high risk offenders had not previously been investigated. Consequently, findings need to be considered in light of the increased risk of Type One error. Unlike the repeated measures ANOVA, alpha was retained at the .05 level for the mixed between-within subjects ANOVA. Given the pre-emptive power analysis it is unlikely that an effect would have been detected unless it was larger than expected.

The five offenders who were in the SMP sessions that were audio-taped for psychologists' use of motivational interviewing skills were not included in the group of 38 offenders who provided pre and post motivation to change scores. Therefore it was not possible to measure the extent to which the motivational interviewing skills demonstrated by psychologists were associated with these offenders' motivation to

change from pre to post the SMP. The time allocated for data collection did not allow for these offenders' motivation to change scores to be included.

This study relied partially on self-report measures, which when compared to behavioural observations can be vulnerable to cognitive biases. This was partially controlled for through the BIDR. Also the offenders may have exhibited different response styles when administered the SMP URICA by their psychologist compared with the researcher. These unknown differences make the comparability of results at pre, post and follow-up more difficult. However this separation of the researcher from the intervention and pre and post assessment also mitigated therapist-researcher effects.

There has been controversy in the literature about whether the Transtheoretical Model of Intentional Behaviour Change (TTM) is a true reflection of motivation to change (Drieschner et al., 2004). The measure used to assess motivation to change in this study (SMP URICA) is theoretically based on the TTM and therefore it is debatable whether the the SMP URICA has genuinely measured motivation to change. Although other measures of offender motivation to change are underway (see McMurrin, Sellen, & Theodosi, 2007; and Serin, Mailloux, & Kennedy, 2007), the URICA has undergone more empirical research than the alternatives. In addition, as the SMP URICA was used for pre and post assessments it was necessary to continue to use the SMP URICA so that results could be meaningfully compared. Furthermore, a great deal of this controversy has stemmed from the conceptualisation of motivation to change as a staged process (Drieschner et al., 2004). To counter this conceptual difficulty the SMP URICA has been scored to generate a continuous score of

motivation to change rather than generating stage profiles. The current study could have been strengthened through the use of another measure of motivation to change to alleviate reliance on the SMP URICA.

The A5PMI did not undergo validity and reliability checks (other than internal consistency based on data used in this study) and instead was developed through a face validity approach and pilot testing. This was somewhat mitigated by also using the MITI to measure treatment integrity. The A5PMI was developed due to the lack of an alternative for assessing treatment integrity from an offender's perspective. This was informed by the literature which emphasised delivering motivational interviewing collaboratively (Miller & Rollnick, 2002), and therefore the offenders' experiences were seen as a valuable source of data.

Offenders participating in this study have high risk of recidivism scores and it is therefore difficult to generalize findings to low or medium risk offenders. However, one study had previously investigated the use of motivational interviewing with low to medium risk offenders (see Anstiss, 2005) and therefore this study addressed a gap in the literature. There were no female offenders available for this study and therefore findings are limited in their generalisability to male offenders. This sample only included incarcerated offenders and so it is difficult to generalise findings to offenders on probation or otherwise in the community. Also the offenders in this study were serving short fixed-term sentences and therefore it is difficult to generalise findings to offenders serving longer sentences. Lastly, the inclusion of non-completers would have added to the external validity of this study, however the one available non-completer declined to participate.

Future Directions

A replication of the current study would be valuable, given the scarcity of research on motivational interviewing with offenders. Any replication should include a larger sample size for follow-up assessments and the use of a more stringent alpha level. The use of a control group would be ideal, preferably randomly selected or alternately matched on key variables. This could include investigating the additive effects of motivational interviewing on rehabilitative programmes and recidivism. Also, introducing measures of related constructs, such as self-efficacy, would add to an understanding of the SMP's broader efficacy. A replication with a greater range of risk of recidivism scores would provide an opportunity to further investigate the relationship between risk of recidivism, motivational interviewing and motivation to change.

The development of norms and cut-off scores for the SMP URICA would be valuable, particularly to enable levels of clinical significance to be assigned. The Department of Corrections is currently collating scores so that norms can be developed.

The A5PMI would benefit from an investigation of its validity and reliability. There was little variance in offenders' A5PMI scores and it is therefore possible that the A5PMI was not effectively discriminating between higher and lower experiences of the motivational interviewing principles. Comparing A5PMI scores against observations may better elucidate its discriminative ability. Also, the addition of more items than the current two per motivational interviewing principle would increase the measure's reliability (Murphy & Davidshofer, 2001).

The SMP is currently delivered to lower risk offenders by clinicians other than psychologists. There is value in exploring any differential impacts of the SMP when delivered by clinicians with other professional identities, versus psychologists. This would require that all clinicians be equally trained in the use of motivational interviewing and offenders then randomly assigned to a clinician.

The SMP combines principles of effective correctional rehabilitation, primarily by way of its content, which is then delivered with motivational interviewing techniques. Further process research would elucidate how motivational interviewing can be delivered to offenders, based on effective correctional rehabilitation principles, without compromising the components of effective motivational interviewing. The Motivational Interviewing Skills Code would be a more suitable measure for this, given its greater focus on in-session micro processes.

There is value in identifying why some offenders experienced a decrease in motivation to change, or no change. Such enquiry might take a greater process focus, detailing psychologist-offender in-session behaviours and their impacts both during and following the SMP. The Motivational Interviewing Skills Code would be a more suitable measure for this rather than the MITI.

Conclusion

Motivation to change has been recognised as a significant factor in the success, or otherwise, of correctional rehabilitation (Anstiss, 2005; Ginsburg et al., 2002; Harper & Hardy, 2000; Levesque, 1998; McMurrin, 2002; McMurrin et al., 1998; Murphy &

Baxter, 1998). Given these findings there was merit in exploring the efficacy of motivational interviewing with offenders.

This study found support for the use of an adaptation motivational interviewing, the Short Motivational Programme (SMP), with a sample of high risk male incarcerated offenders. Offenders demonstrated a pre to post SMP increase in motivation to change. A comparable sub-group of offenders' demonstrated similar pre to post SMP outcomes and on average maintained their motivation to change at follow-up.

Psychologists demonstrated competency only in the use of direction, although global clinician ratings, percent open questions, evocation, collaboration, autonomy and empathy all approached competence. Psychologists underperformed in their use of reflections and complex reflections. In contrast, offenders reported strongly experiencing the use of motivational interviewing principles by their psychologists.

Offenders who experienced motivational interviewing principles to the greater extent did not demonstrate greater increases in motivation to change from pre to post SMP or at follow-up. There are a number of possible explanations for this outcome, which could be addressed through further research.

Research in this area remains in its infancy and would benefit from ongoing study. A number of suggestions have been made for further research. These include replicating this study to confirm the current findings.

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APPENDIXES

Appendix A

Modified SMP URICA

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Each statement describes how a person might feel when they start to consider their offending behaviour. Please indicate the extent to which you tend to agree or disagree with each statement. In each case, make your choice in terms of how you feel **right now**, not what you have felt in the past or would like to feel.

There are FIVE possible responses to each of the items in the questionnaire:

1 = Strongly Disagree 2 = Disagree

3 = Undecided 4 = Agree

5 = Strongly Agree

1. As far as I'm concerned, I don't have any offending related problems that need changing.
2. I think I might be ready for some self-improvement.
3. I am doing something about the offending related problems that had been bothering me.
4. It might be worthwhile to work on my offending issues or behaviour.
5. My offending behaviour is not a problem. It doesn't make much sense for me to attend these sessions.
6. It worries me that I might slip back into offending patterns that I have already changed, so I am keen to seek help.
7. I am finally doing some work on my offending problems.
8. I've been thinking that I might want to change something about myself.
9. I have previously been successful in working on my offending problems but I'm not sure I can keep up the effort on my own.
10. At times my offending problems are difficult, but I'm working on it.
11. Doing something about my offending issues when I'm released into the community will be pretty much a waste of time for me because my offending was not my fault.
12. I'm hoping that getting help when I'm released from prison will help me to better understand myself.
13. I guess I have faults, but there's nothing that I really need to change.
14. I am really working hard to change.
15. I have offending problems that I really think I should work on.

1 = Strongly Disagree 2 = Disagree
3 = Undecided 4 = Agree
5 = Strongly Agree

16. I'm not following through with things I had already changed as well as I had hoped, and I am going to get help when released to prevent a relapse of my offending behaviour.
17. Even though I'm not always successful in changing, I am at least working on my offending problems.
18. I thought once I had resolved my offending issues I would be free of them, but sometimes I still find myself struggling with them.
19. I wish I had more ideas on how to solve my offending problems.
20. I have started working on my offending problems but I would like help.
21. Maybe some services in the community (when I am released from prison) will be able to help me.
22. I may need a boost when I am released from prison to help me maintain the changes I've already made.
23. I may be part of my offending problems, but I don't really think I am.
24. I hope that someone in the community (when I am released from prison) will have some good advice for me.
25. Anyone can talk about changing; I'm actually doing something about it.
26. All this talk about addressing problems is boring. Why can't people just forget about their problems?
27. When I'm released from prison, I'm going to get help to prevent myself from having a relapse of my offending problems.
28. It is frustrating, but I feel I might be having a recurrence of offending problems that I thought I had resolved.
29. I have worries but so does the next guy. Why spend time thinking about them?
30. I am actively working on my offending problems.
31. I would rather cope with my faults than try to change them.
32. After all I had done to try to change my offending behaviour, every now and again I find myself slipping back into bad habits.

Appendix B

Balanced Inventory of Desirable Responding 7.0 (BIDR)

Client ID: _____ Age: _____ Gender: _____

Date: _____

	not true		neither		very true
My first impressions of people usually turn out to be right	1	2	3	4	5
It would be hard for me to break any of my bad habits	1	2	3	4	5
I don't care to know what other people really think of me	1	2	3	4	5
I have not always been honest with myself	1	2	3	4	5
I always know why I like things	1	2	3	4	5
When my emotions are aroused, it biases my thinking	1	2	3	4	5
Once I've made up my mind, other people cannot change my opinion	1	2	3	4	5
I am not a safe driver when I exceed the speed limit	1	2	3	4	5
I am fully in control of my own fate	1	2	3	4	5
It's hard for me to shut off a disturbing thought	1	2	3	4	5
I never regret my decisions	1	2	3	4	5
I sometimes lose out on things because I can't make up my mind soon enough	1	2	3	4	5
The reason I vote is because my vote makes a difference	1	2	3	4	5
People don't seem to notice me and my abilities	1	2	3	4	5
I am a completely rational person	1	2	3	4	5
I rarely appreciate criticism	1	2	3	4	5
I am very confident of my judgements	1	2	3	4	5
I have sometimes doubted my ability as a lover	1	2	3	4	5
It's alright with me if some people happen to dislike me	1	2	3	4	5
I'm just an average person	1	2	3	4	5

	not true		neither		very true
I sometimes tell lies if I have to	1	2	3	4	5
I never cover up my mistakes	1	2	3	4	5
There have been occasions when I have taken advantage of someone	1	2	3	4	5
I never swear	1	2	3	4	5
I sometimes try to get even rather than forgive and forget	1	2	3	4	5
I always obey laws, even if I'm unlikely to get caught	1	2	3	4	5
I have said something bad about a friend behind his or her back	1	2	3	4	5
When I hear people talking privately, I avoid listening	1	2	3	4	5
I have received too much change from a salesperson without telling him or her	1	2	3	4	5
I always declare everything at customs	1	2	3	4	5
When I was young, I sometimes stole things	1	2	3	4	5
I have never dropped litter in the street	1	2	3	4	5
I sometimes drive faster than the speed limit	1	2	3	4	5
I never read sexy books or magazines	1	2	3	4	5
I have done things that I don't tell other people about	1	2	3	4	5
I never take things that don't belong to me	1	2	3	4	5
I have taken sick-leave from work or school even though I wasn't really sick	1	2	3	4	5
I have never damaged a library book or store merchandise without reporting it	1	2	3	4	5
I have some pretty awful habits	1	2	3	4	5
I don't gossip about other people's business	1	2	3	4	5

(Paulhus, 1998)

Appendix C

Extract from the Motivational Interviewing Treatment Integrity Code 3.0 (MITI) Manual

Because critical indices of Motivational Interviewing (MI) functioning are imperfectly captured by frequency counts, we have found that many applications of therapy coding are better served with summary scores computed from codes, rather than the individual scores themselves. For example, the ratio of reflections to questions provides a concise measure of an important MI process. Below is a partial list of summary scores that serve as outcome measures for determining competence in MI, as well as formulas for calculating them.

- Global Spirit Rating = (Evocation + Collaboration + Autonomy/Support) / 3
- Percent Complex Reflections (% CR) = $R_c / \text{Total reflections}$
- Percent Open Questions (% OC) = $OQ / (OQ + CQ)$
- Reflection-to-Question Ratio (R:Q) = $\text{Total reflections} / (CQ + OQ)$
- Percent MI Adherent (% MiA) = $MiA / (MiA + MiNa)$

Motivational Interviewing Treatment Integrity Code (MITI)

Coding Sheet Revised June, 2007

Tape # _____ Coder: _____ Date: _____

Global Ratings

Evocation	1 2 3 4 5 Low High
Collaboration	1 2 3 4 5 Low High
Autonomy/ Support	1 2 3 4 5 ow High L
Direction	1 2 3 4 5 Low High
Empathy	1 2 3 4 5 Low High

Behavior Counts

Giving Information	
MI Adherent	Asking permission, affirm, emphasize control, support.
MI Non-adherent	Advise, confront, direct.
Question (subclassify)	Closed Question
	Open Question
Reflect (subclassify)	Simple
	Complex
TOTAL REFLECTIONS:	

First sentence: _____

Last sentence: _____

(Moyers, Martin, Manuel, Miller, & Ernst, 2007)

Appendix D

Assessment of the 5 principles of Motivational Interviewing

The following questionnaire contains statements about how a person might experience the short motivational programme. **Please rate/indicate how much you tend to agree or disagree with each statement. Answer in terms of how you felt when with your SMP counsellor, not how you feel now.** It is useful, but not compulsory, if you can talk about why you feel a certain way about each statement. This helps me better understand your opinion.

There are 5 possible answers to each question, as below, choose only one:

1 = Strongly disagree; 2 = Disagree; 3 = Neither; 4 = Agree; 5 = Strongly agree.

Before you start, do you feel comfortable and have any questions?

Scale

1.....2.....3.....4.....5
Strongly Disagree neither Agree Strongly
disagree agree

1	My counsellor always understood my point of view.
2	My counsellor helped me see a difference between who I wanted to be, and the behaviour that led to my offending.
3	My counsellor believed that I could make good changes.
4	My counsellor never argued with me.
5	My counsellor never confronted me on problems.
6	My counsellor never understood my point of view.
7	My counsellor did not help me see a difference between who I wanted to be, and the behaviour that led to my offending.
8	My counsellor did not believe that I could make good changes.
9	My counsellor always argued with me.
10	My counsellor always confronted me on problems.

Ask the interviewee to provide a brief explanation to each response to ensure that they have correctly understood the statement. If not, provide some additional explanation, until it is clear that s/he has understood the statement. Add any additional narrative to answers that might add context or meaning.

Scoring Sheet

For scoring purposes the responses to the first 5 questions are coded verbatim. The remainder, questions 6 to 10, are inversely coded, so that:

1=5; 2=4; 3=3; 4=2; 5=1

Appendix E

Research into Motivational Interviewing

INFORMATION SHEET

My name is Kevin Austin, and I am a masters student at Massey University. I would like to find out how well the Short Motivational Programme (SMP) works and what it's like for people who do it.

My research is not for the Department of Corrections, but it will help them know if the SMP is working.

I would like to invite you to take part in this research.

The research involves:

- Letting me, the researcher, to access your file and record your age, ethnicity and index-offence.

Taking part in the research is up to you. If you decide not to take part it will not affect your treatment or sentence in any way.

Your Rights

If you choose to take part, you have the right to:

- *Ask any questions, at any time;*
- *Give information knowing that your name will not be used;*
- *Be given a summary of what the research finds: please provide a postal address on the consent form*

Keeping your information private

- The information I take will be used for a report to the University and might be sent to, and used in an academic journal.
- No information that can make you known to others will be used in the report, or given to anyone other than me and my supervisor.
- Any identifying information taken for this research will be kept with Corrections and not taken out of the Department.
- All tapes will be destroyed immediately after the research, all other information will be destroyed (by shredding) five years after the research is finished.

Support Processes

This research should not cause you any distress. However, if you do feel distress, remember you can stop at any time. You can also talk to your Case Officer or PCO.

This research is being done by Kevin Austin, a Massey University student. Mei Wah Williams, a lecturer at Massey University, is the supervisor.

Ethics Approval Statement

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application 07/012. If you have any concerns about the conduct of this research, please contact Associate Professor Ann Dupuis, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x9054, email humanethicsnorth@massey.ac.nz.

Appendix F

Research into Motivational Interviewing

INFORMATION SHEET

My name is Kevin Austin, and I am a masters student at Massey University. I would like to find out how well the Short Motivational Programme (SMP) works and what it's like for people who do it.

My research is not for the Department of Corrections, but it will help them know if the SMP is working.

I would like to invite you to take part in this research.

The research involves:

- Meeting with me, the researcher, for 1 hour to talk about how you feel about the SMP and to do two short questionnaires. One is about your motivation, like the one you have already done. The other questionnaire is about your opinions on some general issues.
- Letting me, the researcher, audio-tape the interview.
- Letting me, the researcher, access your file to record your age, ethnicity and index-offence.

Taking part in the research is up to you. If you decide not to take part, it will not affect your treatment or sentence in any way.

Your Rights

If you choose to take part, you have the right to:

- *Decide what questions to answer;*
- *Decide to stop being involved;*
- *Ask any questions, at any time;*
- *Give information knowing that your name will not be used;*
- *Be given a summary of what the research finds: please provide a postal address on the consent form*

Keeping your information private

- The information I take will be used for a report to the university and might be sent to, and used in an academic journal.
- No information that can make you known to others will be used in the report, or given to anyone other than me and my supervisor.
- Any identifying information taken for this research will be kept with Corrections and not taken out of the Department.
- All tapes will be destroyed immediately after the research. All other information will be destroyed (by shredding) five years after the research is finished.

Support Processes

This research should not cause you any distress. However, if you do feel distress, remember you can stop at any time. You can also talk to your Case Officer or PCO.

This research is being done by Kevin Austin, a Massey University student. Mei Wah Williams, a lecturer at Massey University, is the supervisor.

Ethics Approval Statement

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application 07/012. If you have any concerns about the conduct of this research, please contact Associate Professor Ann Dupuis, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x9054, email humanethicsnorth@massey.ac.nz.

Appendix G

Research into Motivational Interviewing

INFORMATION SHEET FOR PSYCHOLOGISTS

My name is Kevin Austin, and I am a masters student at Massey University. I would like to find out how well the Short Motivational Programme (SMP) works and what it's like for people who do it.

My research is not for the Department of Corrections, but it will help them know if the SMP is working.

I would like to invite you to take part in this research. Consent will also be sought from the offender who you are working with to audio-tape sessions as well.

The research involves:

- Audio-taping two of your SMP sessions with the same offender.
- Letting me, the researcher, analyse the tapes for treatment integrity.

Taking part in the research is up to you.

Your Rights

If you choose to take part, you have the right to:

- *Ask any questions, at any time;*
- *Give information knowing that your name will not be used;*
- *Be given a summary of what the research finds: please provide a postal address on the consent form*

Keeping your information private

- The information I take will be used for a report to the University and might be sent to, and used in an academic journal.
- No information that can make you known to others will be used in the report, or given to anyone other than me and my supervisor.
- Any identifying information taken for this research will be kept with Corrections and not taken out of the Department.
- All tapes will be destroyed immediately after the research, all other information will be destroyed (by shredding) five years after the research is finished.

Support Processes

This research should not cause you any distress. However, if you do feel distress, remember you can stop at any time. Please consult with your supervisor should you require support.

This research is being done by Kevin Austin, a Massey University student. Mei Wah Williams, a lecturer at Massey University, is the supervisor.

Ethics Approval Statement

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application 07/012. If you have any concerns about the conduct of this research, please contact Associate Professor Ann Dupuis, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x9054, email humanethicsnorth@massey.ac.nz.

Appendix H

Research into Motivational Interviewing

INFORMATION SHEET

My name is Kevin Austin, and I am a masters student at Massey University. I would like to find out how well the Short Motivational Programme (SMP) works and what it's like for people who do it.

My research is not for the Department of Corrections, but it will help them know if the SMP is working.

I would like to invite you to take part in this research.

The research involves:

- Letting your psychologist/counsellor audio-tape two of your sessions.
- Letting your psychologist/counsellor pass on the audio-tapes of two of your sessions to me, the researcher, to be used as part of a research project.

Taking part in the research is up to you. If you decide not to take part it will not affect your treatment or sentence in any way.

Your Rights

If you choose to take part, you have the right to:

- *Ask any questions, at any time;*
- *Give information knowing that your name will not be used;*
- *Be given a summary of what the research finds: please provide a postal address on the consent form*

Keeping your information private

- The information I take will be used for a report to the University and might be sent to, and used in an academic journal.
- No information that can make you known to others will be used in the report, or given to anyone other than me and my supervisor.
- Any identifying information taken for this research will be kept with Corrections and not taken out of the Department.
- All tapes will be destroyed immediately after the research, all other information will be destroyed (by shredding) five years after the research is finished.

Support Processes

This research should not cause you any distress. However, if you do feel distress, remember you can stop at any time. You can also talk to your Case Officer or PCO.

This research is being done by Kevin Austin, a Massey University student. Mei Wah Williams, a lecturer at Massey University, is the supervisor.

Ethics Approval Statement

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application 07/012. If you have any concerns about the conduct of this research, please contact Associate Professor Ann Dupuis, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x9054, email humanethicsnorth@massey.ac.nz.

Appendix I

Research into Motivational Interviewing

PARTICIPANT CONSENT FORM

This consent form will be held for a period of five (5) years

I have read the Information Sheet and have had the details of the study explained to me. I am happy with how my questions have been answered, and I understand that I may ask more questions at any time.

I agree/do not agree to the audio tapes of my short motivational sessions being listened to by the researcher.

I wish/do not wish to receive a summary of the findings. If so please attach a postal address that you can get mail from in 12 to 18 months.

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

Signature: **Date:**

Full Name – printed

Appendix J

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 (Full Name - printed)

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

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

Signature:

.....

Date:

.....

Appendix K

Summary of Findings for Research Participants

Dear

You took part in a study in 2007 that looked at how well the Short Motivational Programme (SMP) worked and what it was like for people who did the programme.

The study showed that those who did the programme were more motivated to change after the SMP and stayed motivated to change at follow-up. It showed that it worked for people with a high risk of re-offending. It also showed that psychologists were good at using some of the skills needed but could improve on other skills. Those people who did the programme thought that psychologists used most of the motivational interviewing principles. Overall the programme worked and was reasonably well delivered.

This study also found that those who strongly experienced motivational interviewing principles were no more likely to be motivated to change than those who experienced the motivational interviewing principles less strongly.

Without you this study would not have been possible. I would like to thank you for taking part.

Yours Sincerely,

Kevin Austin
Master of Arts Degree Student
Massey University
Private Bag 102 904
North Shore MSC
Auckland