

Use of Motivational Interviewing to Improve Return-to-work and Work-related Outcomes: A Review

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Work-based return-to-work (RTW) interventions can help to reduce the duration and cost of work disability, and in turn, prevent the negative effects of long-term sickness absence. However, there are a number of complex cognitive, affective and behavioural factors that can impact an individual's confidence, motivation and willingness to RTW that need to be addressed to facilitate effective outcomes. This literature review investigates evidence for the use of motivational interviewing (MI) for improving return-to-work (RTW) and employment outcomes. Whilst evidence for the efficacy of MI in clinical settings to motivate health behaviour change is strong, more research is needed to determine whether MI can be usefully applied to improve RTW and other work-related outcomes.

Keywords: motivational interviewing, injured workers, return-to-work, disability management

Worker disability as a result of experiencing injury or illness is associated with significant economic, social and health-related burdens, particularly when return-to-work (RTW) is delayed (MacKenzie et al., 1998). The social and economic impacts of this include effects on families and communities, including workplaces, both of which may be affected by an individual's injury or illness and time off work (Waddell & Burton, 2005). Broader society costs of long-term disability and worklessness include an increasingly burdened welfare system and lost productive time by those of a working age (Black, 2008). Returning pensioned workers to employment, therefore, is a critical concern for industrialised countries across the world (OECD, 2003). Research suggests that re-engaging in work, as soon as it is safe and healthy to do so, can play an important role in an individual's recovery process as well as prevent broader social and economic cost of time off work (Black, 2008). Indeed, individuals who are able to return to work in some capacity; report significantly higher life satisfaction and subjective wellbeing than those who have not returned to employment (Vestling, 2003). Evidence suggests that work-based RTW interventions can help to reduce the duration and cost of work disability, and in turn, prevent the negative effects of long-term sickness absence (Black, 2008; Franche, 2005). However, there are a

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number of complex cognitive, affective and behavioural factors that can impact an individual's confidence, motivation and willingness to RTW (Magnussen, 2007; Waddell & Burton, 2005). These factors need to be addressed and overcome in order to support workers to return quickly and successfully to work.

Motivational interviewing (MI) is an empirically validated approach or 'way of being' with a client that may be particularly useful in a RTW context. MI is particularly useful in situations where an individual may be ambivalent toward behaviour change (Miller & Rollnick, 2002) and has been shown to promote behaviour change across a diverse range of problem areas (Dunn, 2001; Hettema, Steele, & Miller, 2005; Rubak, Sandboek, Lauritzen, & Christensen, 2005). Even though MI has been widely studied and is considered a flexible intervention strategy, research has not yet considered its effectiveness in work-settings such as to improve RTW outcomes. The objective of this review is to explore whether the use of MI techniques can facilitate positive changes in thinking and behaviour amongst individuals in an employment context, including returning to work, or gaining new employment, after illness or injury.

Motivation, Efficacy and RTW

Motivation and efficacy beliefs play a critical role in an individual's willingness and capacity to return to work following an illness or injury (Magnussen, 2007; Waddell & Burton, 2005). Motivational factors may impact multiple stages within a recovery and RTW process, including seeking and responding to medical advice regarding illness or injury, adhering to treatment, engaging with rehabilitation providers and maintaining contact with the workplace – all of which are important for both recovery and RTW (Lloyd, Tse, Waghorn, & Hennessy, 2008). Motivational and efficacy barriers may be particularly evident in RTW cases where an individual has been out of the workforce for long periods of time, due to chronic health conditions, such as low back pain and mental health problems (Fraser, Vandergoot, Thomas, & Wagner, 2004; Lloyd et al., 2008; Manthey, 2009). In these cases, individuals typically experience significant psychosocial barriers to RTW, including pain, fear avoidance, lack of confidence and low social support (Fraser et al., 2004; Lloyd et al., 2008; Manthey, 2009). In recognition of this complex interplay of health-related, psychological and social factors that can affect the rehabilitation and RTW process, Waddell and Burton (2005) suggest that rehabilitation programs should follow a bio-psycho-social model. Within this model, identifying and addressing the hurdles to RTW including motivational and efficacy beliefs is a critical part of an early intervention approach (Foreman, 2006).

Motivational Interviewing

MI is a collaborative, person-centred approach to motivating positive behaviour change (Miller & Rollnick, 2002; Miller & Rose, 2009). MI was first developed to treat substance abuse in the 1980s by clinicians and therapists. It is now used by a diverse range of practitioners to facilitate lifestyle changes and improve treatment adherence for a number of health problems, including, for example, obesity, HIV, cardiac rehabilitation and mental health disorders (Armstrong et al., 2011; Britt, 2003; Dunn, 2001; Soderlund, Madson, Rubak, & Nilsen, 2011). In contrast to other more coercive and externally motivated approaches to behaviour change (e.g. telling, advice giving, arguing, directing), the goal of MI is to elicit and reinforce an individual's own

motivation to change. This is achieved through a process of reflective questioning and active listening which helps an individual to see how changing their behaviour would allow them to achieve important life goals. These core MI techniques are guided by the underlying 'spirit' of MI, which involves:

- Collaboration: Working with a client in a non-confrontational manner, where the recipient's perspective, rather than the practitioner's, is held paramount.
- Evocation: Change is elicited from within, drawing on the individual's own resources and expertise, as opposed to the client being 'educated' by the practitioner.
- Autonomy: The client is seen as their own best expert and encouraged to make decisions and take action in an independent and self-directed manner (Miller & Rollnick, 2002; Miller & Rose, 2009).

MI focuses, in particular, on understanding and resolving a person's ambivalence towards change, acknowledging that ambivalence is a normal part of the change process. The role of the MI practitioner is to work with, rather than against, a client's resistance to change. MI can, in turn, strengthen the client's confidence, readiness, and commitment to take positive action. In so doing, change is elicited in a way that aligns with the client's own values, goals, and desires rather than the values, goals or desires of others. Reinforcing a client's natural strengths and resources, whilst respecting self-determination, plays a key role in the MI process (Miller & Rollnick, 2012; Resnicow & McMaster, 2012). This involves: (a) exploring client goals and values, (b) reinforcing the client's motivation to achieve these goals and values, (c) determining how the client's current behaviour is congruous or incongruous with their goals and values, and (d) developing a change plan that aligns with the client's own desires and preferences and enables the individual to live in a more value-congruent manner (Manthey, Knowles, Asher, & Wahab, 2011).

Increasing Readiness to Change

One specific application of MI principles is to help increase a client's readiness to change their behaviour. According to the Transtheoretical Model (TTM) of change (also called the 'stages of change' model) people typically cycle through a series of stages before making a change (Prochaska & DiClemente, 1983; Prochaska, DiClemente, & Norcross, 1992). These stages include:

1. Pre-contemplation, where an individual is not aware of a need for change and is therefore resistant to change.
2. Contemplation, where individuals are aware of a need for change but are still somewhat resistant.
3. Preparation, where individuals are ready to change and start planning for action.
4. Action, where an individual undertakes different behaviours to achieve their change goal.
5. Maintenance stage, where the behaviours are being maintained.
6. Relapse can also occur at any stage, whereby an individual reverts to their old habits and behaviours. An individual may re-enter the process at any stage.

MI can be usefully applied to help a client move from pre-contemplation to the contemplation and preparation stages of change, thus increasing the likelihood of action; although the two do not necessarily need to be used hand-in-hand and should not be confused (Lam, 2010; Miller & Rollnick, 2009).

The MI approach can be seen to be consistent with current thinking and practice in the field of RTW where a collaborative and empowering approach is favoured over the more traditional directive and prescriptive approach (Beyondblue, n.d.). In particular, MI may be useful for helping individuals explore the role of work (or not working) in their recovery process, identifying and addressing barriers to RTW; encouraging injured workers to maintain contact with colleagues/manager; adhering to tailored RTW and treatment plans, and gradually transitioning back into the workplace, when it is safe and appropriate to do so (Lloyd et al., 2008).

Effectiveness of MI in Clinical and Health Settings

Several systematic reviews have shown MI to be an effective treatment modality for a broad range of target behaviours, such as alcohol, smoking, eating disorders, treatment compliance, diet and exercise and gambling, generally with low to moderate effect sizes (Hettema et al., 2005; Rubak et al., 2005; Soderlund et al., 2011). In a review of 72 studies, Hettema et al. (2005) found 53% (38) of the studies reviewed indicated positive results for MI. Positive effects were not dependent on the purity of training (i.e. MI alone or MI in addition to other treatment) or on the targeted problem area. The effect of MI was significantly larger for minority groups and when practitioners did not deliver MI via a set manual. Further, MI effects were found to gradually decrease over time for all groups.

In another meta-analysis, Rubak et al. (2005) found that MI outperformed traditional advice giving in around 80% of cases. MI was equally effective in the treatment of both psychological and physical health disorders. Success was more likely when the practitioner had ongoing involvement with an individual; however, brief, one-off encounters (around 15 minutes) led to positive results in 64% of cases. More recently, Lundahl, Kunz, Bownell, Tollefson and Burke (2010) conducted a meta-analysis of 119 studies. Half of the studies reviewed showed small but significant effects, 25% showed neutral or negative effects and 25% demonstrated a larger than a medium effect. These effects varied substantially according to participant and study features. In contrast to Hettema and colleagues (2005), effects were not dependent on whether or not MI was delivered according to a set manual. They also did not depend on the format or role of MI in the treatment process, fidelity to MI, or the type of practitioner applying MI techniques. The outcomes most improved through application of MI principles were engagement in the treatment process and client's intention and motivation to change.

Effectiveness of MI in Non-Clinical Settings

Given that MI was designed to support clients who may be resistant or ambivalent towards change, and that motivation plays an important role in the RTW process (Waddell & Burton, 2005), MI techniques may also be effective in the complex RTW context (Lloyd et al., 2008). However, despite the strong support for MI in

clinical and health settings and the sound rationale for the use of MI in a rehabilitation context, no studies have examined MI in a RTW context. Indeed, only a handful have empirically investigated the use of MI outside of clinical or health settings. These papers differ considerably in terms of focus and outcome, but all include MI as part of an integrated intervention that was delivered, either with working populations, or with individuals that were injured or ill with the expressed aim of returning these individuals to employment. One additional study looked at how MI could be used to reduce the risk of criminal re-offending. Each of these studies is now examined in more detail.

MI-based health coaching Butterworth, Linden, McClay, and Leo (2006) investigated whether MI-based health coaching could be used to reduce health risks in a sample of 276 medical centre employees as part of its Employee Wellness Program in the United States. One hundred and forty-five participants self-selected into the intervention group and 131 into the control group. Participants in the former group received three, 30-minute health coaching sessions with trained health professionals (non-specified). Health issues targeted by the coaching included weight loss, stress, exercise and nutrition. The authors reported significant increases in both self-rated physical and mental health, as measured by the Short Form 12 Health Survey, amongst intervention participants relative to controls. Unfortunately, however, the study did not assess specific changes in employee behaviour that may have contributed to these results.

In a later study, Linden, Butterworth, and Prochaska (2010) evaluated the impact of MI-based health coaching on chronically ill employees on self-efficacy, patient activation, readiness to change, lifestyle change and perceived health status. Of the total population of 8,500 employees eligible to participate, 3,832 employees completed an initial health risk assessment. From here, the authors selected 336 employees who were considered chronically ill and had completed the survey twice and compared those who had and had not engaged in the MI-based health coaching ($n = 106$ compared to $n = 230$). Data was statistically adjusted to account for selection bias. All of the health-related outcomes were significantly associated with engagement in coaching, even after adjustment. Employees attended, on average, three coaching sessions. There was no association between number of sessions and any of the outcomes examined.

MI as part of an integrated health and employment program In another study conducted in the United States, this time focusing specifically on employment outcomes, Bohman et al. (2011) investigated whether provision of comprehensive health and employment supports, including MI, could help workers with a high risk of disability through chronic physical or mental health problems maintain their employment status. Individuals were randomly assigned to either an intervention ($n = 904$) or a control ($n = 712$) group. Around 11% had a serious mental health condition. The remaining 89% had other behavioural issues, such as non-clinical depression in addition to a chronic physical health condition (e.g., heart disease, diabetes). Intervention participants received tailored case management services including goal setting, planning, advocacy, health education and connection to health and employment resources.

Each employee was in contact with a case manager, around once or twice a month, who worked to build their confidence and motivation through the utilization of MI principles. Case managers were typically nurses, social workers or vocational specialists. Control group participants received standard healthcare services with no MI. Participants reported a number of benefits including better access to care and medical visits, and a lower likelihood of receiving social benefits. Contrary to hypotheses, there was no difference between the intervention and control group in terms of hours worked or unemployment. Unfortunately, the integrative approach used here makes it hard to determine whether or not more positive behaviour changes would have been achieved through a more focused MI approach. Further, participants' readiness for change was not assessed prior to engagement in this program; the benefits of MI may have been more apparent in those individuals who were assessed as being in a pre-contemplative state (i.e. not yet ready to change).

MI and the stages of change Larson, Barr and Kuwabara (2007) applied MI specifically to individuals in the pre-contemplation, contemplation and relapse phases of the TTM of change (Prochaska & DiClemente, 1983; Prochaska et al., 1992) with the objective of moving individuals towards greater readiness to change. The focus of this latter study, conducted in the United States, was to assess the impact of an individual placement and support program, integrated with MI, on individuals with severe psychiatric disabilities. The goal of the study was to help such individuals to both seek and secure potential employment. Employment specialists utilised MI techniques to help individuals overcome resistance and resolve gaps between intentions and behaviour.

Interventions were tailored towards individuals' stage of change (i.e. pre-contemplation, contemplation, determination, action, maintenance and relapse). The 125 individuals were tracked over six months. Positive effects of the program were found for number of jobs obtained by the individuals, number of hours worked per week, hourly wage, and the total income earned per month. Stage of change was positively related to job outcomes – that is, the more ready individuals were to find employment, the more likely that they were to achieve positive outcomes. Unfortunately, this study did not involve a control group and likely included some level of selection bias, as participants self-selected into the program and hence were likely to be more motivated to change than were non-participants. However, given that such selection effects are also likely to occur in a real world environment, results provide preliminary evidence that a blended vocational program can improve work-related outcomes.

Similar results were found by Anstiss, Polaschek and Wilson (2011) in a New Zealand study, this time investigating the application of MI to 58 male criminal offenders to increase their motivation to engage in behaviour that reduced their likelihood of reoffending. In this study, however, all participants received a brief MI intervention (MI only), regardless of their stage of change, with the goal of motivating prisoners to engage in a formal rehabilitation program. As with Larson et al. (2007), MI was shown to be useful in motivating individuals (male offenders in this study) towards increased readiness for change (on average one stage forward in the TTM model). Stage of change, in turn, predicted reconviction outcomes.

Vocational rehabilitation programs, MI and RTW Magnussen, Strand, Skouen and Eriksen (2007) looked at whether a brief vocational program could support workers with chronic lower back pain to RTW in a Norwegian sample. Eighty-nine individuals who had been off work and receiving disability benefits for at least one year were randomly selected to partake in two, three-hour sessions; one session involving provision of information/education to reduce limiting beliefs about RTW (e.g. fear/avoidance behaviours) and one session of MI. At a one-year follow-up, twice as many individuals in the intervention ($n = 45$) group, compared to the control ($n = 44$) groups, had entered into a process of RTW. However, this difference was not significant, possibly due to limitations in statistical power. Further, research evidence indicates that there is a negative relationship between the length of time an individual has been off-work and their likelihood of ever returning to work (Foreman, Murphy, & Swerissen, 2006) consistent with the fact that in this sample only 18% of participants believed that they would be able to successfully RTW one day, prior to entering the intervention.

Finally, Martin et al. (2012) investigated the effectiveness of an intervention that incorporated MI (as well as Dialectical Behaviour Therapy, a combination of cognitive-behavioural therapy and mindful awareness, and training for job-related skills) on people with HIV/AIDS and their RTW prospects. A psychologist, vocational counsellor and a peer leader delivered the intervention, including the MI components, to 83 participants, with 91 participants receiving a standard (control) program (total participants = 174). The study found that participants who received the intervention were more likely to engage in job-training activities, compared to individuals in the control group. Lastly, more participants in the intervention group maintained their employment following their RTW program in comparison to the control group.

Training Practitioners to Learn and Apply MI Skills

A large proportion of practitioners that delivered MI or MI components in these studies were from a non-clinical background (i.e. not trained as therapists or psychologists) but instead tended to be nurses, midwives, health promotion officers, students (e.g. medical) and vocational counsellors. This raises an interesting question as to the level of training required to be able to deliver MI effectively. Training practitioners to effectively apply MI techniques across the field (clinicians as well as non-clinicians) remains a challenge for the field and is the focus of current research (Gibbons et al., 2010; Miller, Yahne, Moyers, Martinez, & Pirritano, 2004). In particular, it is important that practitioners are able to apply the techniques competently and adhere to the core principles of MI (Gibbons et al., 2010). Indeed, Apodaca and Longabaugh (2009) found that MI-inconsistent behaviour on behalf of practitioners reduced outcome effectiveness. In contrast, Rubak et al.'s (2005) meta-analysis, discussed earlier, found that the positive outcomes achieved in 80% of the MI studies reviewed were not dependent on the practitioner's background and education when comparing psychologists and psychiatrists with physicians. Success was also found in 46% of studies involving other health practitioners (e.g., nurses, midwives, dieticians) although the authors suggested that the lower success rates may have been due to study design and target population (e.g., more resistant groups of people). Regardless of this, initial evidence, at least with clinicians, suggests that a two-day interactive workshop, followed

by ongoing coaching and supervision, is the most effective way to train practitioners (Miller et al., 2004). This however does not yet seem to be common practice; for example, a systematic review by Madson, Loigon, and Lane (2009) discovered that only four studies out of 28 that were reviewed incorporated workshops and supervision as part of MI training, and only one study described ongoing coaching as part of the MI training strategy.

Discussion

The aim of this review was to explore the potential usefulness of MI techniques in a RTW context. Successfully returning an injured worker to employment is a complex process, involving a number of cognitive, emotional and behavioural barriers. Therefore, enhancing individual-level motivation and self-efficacy to return-to work, using MI-based strategies may be an important element to facilitating more positive outcomes. Whilst the effectiveness of MI in clinical or health-based contexts (e.g. changing problematic health behaviours) is strong, our review found only mixed support for the use of MI techniques to facilitate positive changes in thinking and behaviour amongst individuals in an employment context, including returning to work, or gaining new employment, after illness or injury. However, as research in this area is still new, each study offers insight for future research and application in this area.

One factor that may have led to the reduced effectiveness found in the studies presented here relates to the populations being investigated; that is, those who have been out of the workforce beyond three months' time, and those with chronic psychological and physical health conditions. As specified earlier, individuals in this group may experience more significant barriers to RTW (Fraser, Vandergoot, Thomas, & Wagner, 2004; Lloyd et al., 2008; Manthey, 2009). Additionally, the fact that MI was usually combined with several other interventions may have diluted the effect. Although there is evidence that MI can work well when used in combination with other techniques or as a pre-intervention to improve treatment adherence, this may not be true in a non-clinical setting, including RTW, where approaches are often not as structured as in that which occur in the provision of treatment.

It may also be that MI is best applied in a tailored fashion – for example, as a pre-treatment measure or tailored to a person's readiness for change, as was found in the studies of Larson et al. (2007) and Anstiss et al. (2011). MI is generally considered to work best with individuals who are stuck or resistant to change. This might be particularly true in a work setting; for example when an individual does not enjoy their job, or has experienced a relationship breakdown at work. MI may be more challenging or less effective when an individual is working in a poor psychosocial work environment because, in this scenario, the individual is likely to have less control over their work environment and thus reducing their ability or support to make positive behaviour changes. RTW is also considered more difficult in these circumstances. For example, Krause, Dainger, Deegan, Rudolph, and Brand (2001) found that employees with poor supervisory support and high job demands were less likely to return successfully to work (20% less likely) whilst those with high levels of

control over their work and rest periods were more likely to RTW (30% increase). These effects were independent of the severity of injury and physical workload.

We also found evidence in the literature to suggest that MI skills can be learnt and effectively applied by non-clinicians for a range of problem areas (Hettema et al., 2005). This is important given that individuals that work in the RTW setting are typically not trained as clinicians. The use of MI by primary healthcare professionals other than psychologists/ therapists, and in particular, general practitioners, is becoming increasingly common practice as well as an area of medical student training (Addo, Maiden, & Ehrenthal, 2010; Opheim, Andreasson, Eklund, & Prescott, 2009). There have also been calls for MI to be included as a core evidence-based practice area in vocational rehabilitation (Fraser et al., 2004). There may be some benefit in MI being applied by people without a therapeutic background, in that they may be less likely to revert to 'tried and true methods'. In a qualitative study of the training experiences of 20 Swedish nurses, for example, Soderlund, Nilsen, and Kristensson (2008) reported that nurses often found it difficult to replace traditional authoritarian approaches to the more collaborative, person-centred MI style. Current evidence suggests that when practitioners deviate from 'pure' MI methods, less successful outcomes are achieved. Thus, it is critical that those learning MI techniques do so thoroughly, and with appropriate supervision and follow-up (Miller et al., 2004; Smith et al., 2007).

Practical Implications

This study has a number of useful practical implications for RTW practitioners. These include the importance of training RTW practitioners to use MI techniques effectively, including providing follow-up coaching and support. Secondly, if practitioners do choose to use MI as part of a RTW program, efforts should be made to maintain fidelity to the MI approach. Thirdly, MI appears to be particularly effective when practitioners tailor their MI approach to a client's readiness to change (as per the TTM of change). Therefore, practitioners could consider assessing a worker's readiness for change prior to engaging in MI and applying MI as a way of supporting a worker through the stages of change.

Limitations and Future Research

Given the limited studies available for this review, caution should be applied when interpreting the results. Further research in this area is needed. In particular, research should examine the use of MI in individuals RTW with pre-injury employers. Certainly this would bring up additional hurdles that may need to be overcome (e.g., poor supervisor support); and some of these factors may call for interventions to complement MI. Overall however, the strong body of evidence sitting behind the MI approach in general, and some encouraging evidence regarding the use of MI in a work setting, suggests that this is an important area for future RTW research and practice.

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Declaration of Interest

None

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