There's nothing more practical than a good theory: Integrating motivational interviewing and self-determination theory

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In this article we compare and integrate two well-established approaches to motivating therapeutic change, namely self-determination theory (SDT; Deci & Ryan, 1985, 2000) and motivational interviewing (MI; Miller & Rollnick, 1991, 2002). We show that SDT's theoretical focus on the internalization of therapeutic change and on the issue of need-satisfaction is fully compatible with key principles and clinical strategies within MI. We further suggest that basic need-satisfaction might be an important mechanism accounting for the positive effects of MI. Conversely, MI principles may provide SDT researchers with new insight into the application of SDT's theoretical concept of autonomy-support, and suggest new ways of testing and developing SDT. In short, the applied approach of MI and the theoretical approach of SDT might be fruitfully married, to the benefit of both.

'There is nothing more practical than a good theory,' wrote Lewin (1952, p. 169). Lewin's message was twofold: theorists should try to provide new ideas for understanding or conceptualizing a (problematic) situation, ideas which may suggest potentially fruitful new avenues of dealing with that situation. Conversely, applied researchers should provide theorists with key information and facts relevant to solving a practical problem, facts that need to be conceptualized in a detailed and coherent manner. More generally, theorists should strive to create theories that can be used to solve social or practical problems, and practitioners and researchers in applied psychology should make use of available scientific theory (Lens, 1987; Sarason, 1978).

Herein, we attempt to show that two different lines of research relevant to clinical practice, namely the techniques of motivational interviewing (MI; Miller & Rollnick, 1991, 2002) and the principles of self-determination theory (SDT; Deci & Ryan, 1985, 2000, 2002), can be integrated, providing theorists and clinicians with a good, practical theory.

The promises and current limitations of self-determination theory

SDT is a broad-based theory of human motivation, which has been under development for more than 30 years. The theory is meant to specify the fundamental causes, processes, and outcomes of human thriving, in particular by conceptualizing the nature of 'optimal motivation,' and the general conditions that support or undermine such motivation. SDT has a clear prescription for how to motivate other people to do well and thrive: namely, support their autonomy. This general prescription (discussed in more detail later on) has received considerable empirical confirmation, first in experimental studies (see Deci, Koestner, & Ryan, 1999, for a review of this work from the 1980s), and later, in the 1990s, in many field studies in domains as diverse as education, business, sports, unemployment, and parenting, focusing on many different positive outcomes, such as learning and knowledge integration, optimal performance, persistence, positive mood, adaptive personality change, and cooperative behaviour (for overviews see Deci & Ryan, 2000, 2002; Vallerand, 1997). The theory has more recently been applied to various health-related domains (see Sheldon, Joiner, & Williams, 2003; Williams, 2002 for an overview), as researchers have shown that patients who experience their practitioners as being autonomy-supportive benefit the most from treatment.

Although SDT's basic theoretical premises have received much support, still, the theory has received the least application in the fields of clinical psychology and psychological counselling. Thus, the theory's basic concept of 'autonomy-support' has yet to receive the articulation it deserves in the subtle and difficult context of motivating people towards psychological change. We suggest that MI, which provides many psychotherapeutic techniques that are fully consistent with SDT's concept of autonomy-support, may help to fill in these details.

The promises and current limitations of motivational interviewing

MI is one of the most popular and dominant contemporary approaches (Simoneau & Bergeron, 2003) to enhancing clients' treatment motivation. It was developed from clinical practice, which yielded cumulative insights into the best ways to help clients be proactive participants in therapy. As we will show below, MI provides many practical principles that, if skilfully applied, can promote treatment motivation, perhaps especially among those patients in the earlier stages of change (DiClemente & Prochaska, 1998). These principles, such as expressing empathy, developing discrepancy, and rolling with resistance (Miller & Rollnick, 2002) have been shown to be effective in a number of domains such as addiction treatment, diet, exercise, hypertension, diabetes, and bulimia, although the theory has received less empirical confirmation in the domains of smoking cessation and HIV risk behaviours (Burke, Arkowitz, & Dunn, 2002; Burke, Arkowitz, & Menchola, 2003; Dunn, DeRoo, & Rivara, 2001; Noonan & Moyers, 1997; Stotts, Schmitz, Rhoades, & Garbowski, 2001, but see Miller, Yahne, & Tonigan, 2003). Importantly, MI interventions did not only result in improvement in target symptoms, but also had a significant impact upon social functioning, suggesting that MI treatment has positive consequences for a wide range of important life problems beyond the target problems (Burke *et al.*, 2003).[1]

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[1] *Notably, the efficacy of MI in its pure form (i.e. expressing empathy, developing discrepancy, rolling with resistance, and supporting self-efficacy; Miller & Rollnick, 2002) has rarely been tested (Burke et al., 2003). Most empirical studies are adaptations of motivational interviewing, because they are also defined by the presence of feedback about the client's level of severity of target symptoms compared with norms. Burke et al. mention that future studies need to investigate whether the obtained therapeutic effect is due to motivational interviewing principles, delivered feedback, or the combination of both.*

However, in order to further improve and extend the clinical MI-interventions, an understanding of the basic processes by which MI works seems necessary. Indeed, although various theoretical insights grew out of the clinical experience, this practice-focused development of MI also implies that the theory may lack the conceptual refinement that characterizes SDT. For instance, we will argue that SDT might help to improve the specific conceptualization of the positive motivation that MI engenders. In addition, in spite of the intuitive attractiveness of MI (Walitzer, Dermer, & Connors, 1999), it has had little to say about the mediating processes by which these techniques have effect and SDT might help to fill this gap (Burke *et al.*, 2002). Perhaps because of these limitations, the principles and insights of MI have not yet received the interest and attention they deserve from theorists and non-clinical researchers.

The marriage of two theories

Accordingly, in this article we propose a 'marriage' between the two schools, such that each can be used to complement and fill in the other's weaknesses. Notably, we do not claim that MI is purely situated in the area of applied psychology, or that SDT is purely situated in the realm of theoretical psychology – researchers in both traditions have been continually concerned about developing coherent conceptual frameworks that can be used to tackle real-life problems. Nevertheless, it is true that SDT has been somewhat more concerned with theory, and MI somewhat more concerned with effective technique: thus, the potential complementarity.

The two frameworks will be compared on four different levels. First, we will indicate that the theories' basic prescriptions for conducting treatment and enhancing client treatment motivation are generally the same. Second, we will argue that MI might benefit from SDT's more fine-grained analysis of the different types of motivation. Third, we will argue that SDT can help to clarify 'why MI works' (Miller & Rollnick, 2002, p. 28). In particular, we will argue that SDT's psychological needs approach (Deci & Ryan, 2000; Ryan, 1995) provides a useful way to reinterpret and reorganize the MI principles and techniques outlined by Miller and Rollnick. Fourth, we will try to show that MI can provide SDT researchers with deeper insights into the application of autonomy-support in therapy, insights that deserve empirical attention and elaboration within the SDT framework. We will consider each of these four arguments in greater detail, below.

Similar general approach

Common origin

Both theories were developed, in part, out of dissatisfaction with existing dominant theoretical frameworks, particularly frameworks that de-emphasize the phenomenology of the individual. The aim of the first SDT studies on the effects of external rewards on intrinsic motivation (Deci, 1971) was to show that, contradictory to behaviouristic principles (Skinner, 1974), external contingencies such as rewards, deadlines, and pressures can actually undermine, rather than support, peoples' voluntary task-persistence. Further research revealed that this is because externally motivated participants typically do not experience their task-engagement as self-initiated, autonomous, or self-chosen (Deci *et al.*, 1999). Instead, they often come to feel controlled by the external factors, thus tending to lose or failing to develop enjoyment and valuation of the task for its own sake.

In a similar vein, MI developed in part from dissatisfaction with the prescriptive nature of many treatment approaches. For example, confrontational therapies (e.g. DiCocco, Unterberger, & Mack, 1978; Moore & Murphy, 1961) say that clinicians should confront people with the strongest potential negative effects of their current situation, so as to enhance the threat – such fear is thought to be the energizer of the change process. As another example, rational-emotive therapy involves confronting clients with their 'irrational cognitions', as defined by the therapist (Ellis, 1962), and pressuring the client to change them. In contrast, Miller and Rollnick (2002) argue that fear-inducing or pressuring communications can immobilize the individual, making the possibility of change more remote (Miller, Benefield, & Tonigan, 1993; Patterson & Forgatch, 1985). Rather than being confrontational and controlling or trying to directly persuade clients to change (Stockwell, 1995), clinicians should instead try to create a situation in which clients engage in self-exploration and contemplation of change. This, in turn, improves clients' treatment decisions because these come from themselves rather than from the clinician (Amrhein, Miller, Yahne, Palmer, & Fulcher, 2003; Ginsburg, Mann, Rotgers, & Weekes, 2002). In short, both SDT and MI developed as alternatives to theoretical paradigms that emphasize the external controls, contingencies, or criticisms that can influence human behaviour.

Shared assumptions regarding human nature and therapy

Further, MI and SDT also share a common set of metatheoretical beliefs regarding positive human nature. Both theories claim that clients possess a powerful potential for change – that a client is an active, growth-oriented organism who has a natural tendency towards personal development and change, and that every client has strong inner resources to realize such change. The task of the clinician is to evoke and strengthen this inner resourcefulness, facilitating the natural change process that is already inherent in the individual, rather than trying to impose motivation or 'install' a change process via the use of externally controlling strategies. Thus, for both MI and SDT, counselling is not a prescriptive activity in which the therapist directs and guides the change process, but rather an eliciting or drawing out of motivation from people by supporting their inner resources and authentic world-view. Miller and Rollnick (2002) label this approach as MI, or 'a together looking at something' (p. 25). As we will see below, this is also what is generally meant by SDT's concept of autonomy-support.

Notably, the principles advocated by both approaches can be described as 'content-free'. That is, they are independent of what message or programme is being promoted, instead focusing on how it is promoted. This implies that they can be applied to enhance almost any particular form of treatment, because they are primarily concerned with the manner (i.e. collaborative/supportive versus confrontational) in which treatment interventions are delivered (Geller, Brown, Zaitsoff, Goodrich, & Hastings, 2003). Consistent with this claim, Sheldon *et al.* (2003) demonstrated that being autonomy-supportive is fully compatible with many existing clinical approaches, such as cognitive-behavioural therapy, desensitization therapy, and interpersonal therapy.

Using SDT to clarify MI's conception of motivation

The motivation for change: Intrinsic, or internalized extrinsic?

We suggest that SDT may provide some important clarifications for MI researchers, by better differentiating the concept of motivation. For example, according to Miller and

Rollnick (2002), MI is 'a client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence' (p. 25). However, from the SDT-perspective, it is unlikely that MI promotes intrinsic motivation for change; instead, it more probable facilitates greater identified or integrated motivation for change. To clarify this point, we need to explain in more detail SDT's distinction between different types of motivation. Figure 1 contains a schematic representation of the conceptual continuum upon which these types may be located.

Within SDT, and in agreement with many other contemporary motivational theorists (Csikszentmihalyi, 1997; Lepper, Greene, Nisbett, 1973), being intrinsically motivated (depicted at the right of Fig. 1) refers to doing the activity for its own sake, that is, because the activity is inherently enjoyable, satisfying, or challenging. Intrinsic motivation is viewed as automatically self-determined, as the person's full capacities are willingly engaged in a self-catalyzing chain of activity (Ryan & Deci, 2000). Intrinsic motivation stands in contrast to extrinsic motivation (represented by the four middle forms in Fig. 1), which refers to engaging in the activity to obtain an outcome that is separable from the activity itself. In such cases people typically derive little or no enjoyment from the activity *per se*.

Given this definition of intrinsic motivation, it is hard to understand how clinicians can build clients' intrinsic motivation for change – realistically, to what extent can the effort to change problematic aspects of oneself be a 'fun' activity? This is not to say that change in other contexts cannot be experienced as inherently enjoyable and intrinsically stimulating, as when people move to other cities to explore new environments and to engage in new challenges. However, we believe that in the context of therapeutic change, it is less probable that people will change their maladaptive behaviours because it is 'fun' to do. Instead, clients are probable to feel that changing their behavioural patterns is primarily instrumental to the goal of coping with or ameliorating a difficult personal problem (but see Pelletier, Tuson, & Haddad, 1997, for a description of how going into treatment might sometimes be motivated by curiosity and intrinsic motivation).

If behavioural change efforts are almost certainly extrinsically motivated, does this mean they are doomed from the start? Not at all. To illustrate, however, we must first explain SDT's distinction between four different types of extrinsic motivation.
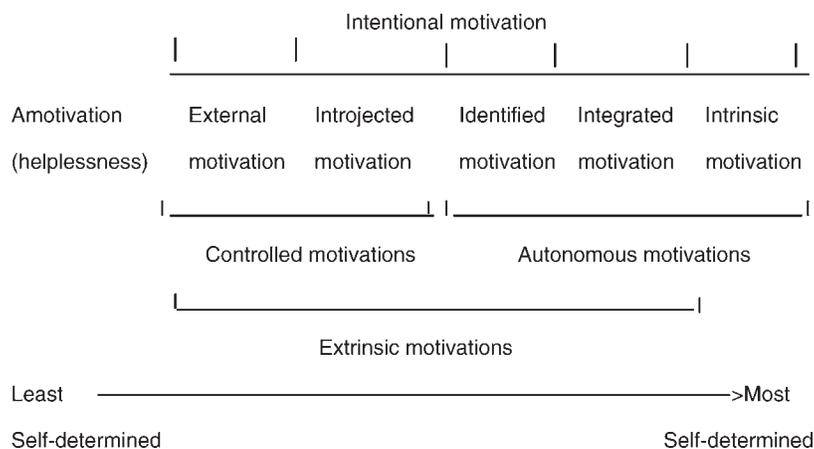
Figure 1. Schematic relation of the six types of motivation according to SDT (Ryan & Deci, 2000).

Although all four types can give rise to behaviour that is not experienced as intrinsically enjoyable, the types nevertheless differ in the degree of autonomy or self-integration they represent. As we will show, autonomous extrinsically motivated behaviour has many of the same positive qualities as intrinsically motivated behaviour, and thus is probably the real target of MI interventions. We will consider the four types of extrinsic motivation in some detail, below.

External motivation, in which people engage in an activity out of social pressure or to obtain an external reward or to avoid punishment, represents the least self-determined form of extrinsic motivation. In such cases, the person has a purely external perceived locus of causality (E-PLOC; deCharms, 1968; Ryan & Connell, 1989) for the behavioural change intention. For example, a smoker who comes into smoking cessation treatment only because she feels her husband is making her would be said to be externally motivated.

In contrast, *introjected motivation* is a partially self-integrated form of extrinsic motivation. Here, instead of being motivated by external contingencies and forces, the person is motivated by internal pressures and compulsions, that is, feelings of guilt, shame, and anxiety. Although introjected behaviour arises from motivational forces that reside within the person, these motivational forces still remain external to person's self, because he/she does not fully and freely endorse them (Deci & Ryan, 1995). For example, an alcoholic who forces himself to enter treatment because he is ashamed and guilty about how he treats his children may not have fully 'digested' or owned the behaviour change intention, given that one part of the person is trying to compel the compliance of another part. Because the person's self feels an E-PLOC for behaving in the case of external and introjected motivations, they are often combined into a single 'controlled' motivation composite by SDT researchers.

The third form of extrinsic motivation specified by SDT is identified motivation, in which the person feels a sense of endorsing or accepting an extrinsic motivation or intention. Behaviours and duties underlain by identified motivation are often non-enjoyable (such as changing diapers, voting, or paying taxes), yet despite this, a person might feel no resistance to doing them. For example, a bulimic adolescent might shift from viewing therapy as undesirable and externally imposed, to viewing it as vitally important for her health.

Finally, a fourth form of extrinsic motivation is integrated motivation, in which the particular identification has been made consistent with the person's entire system of identifications. For example, the alcoholic father may realize that seeking treatment is also consistent with many other of his life-goals and values, such as being physically healthy, connecting authentically with others, and maximizing his work potential. Because identified and integrated motivations are both characterized by an internal perceived locus of causality (I-PLOC), they are often combined to form an autonomous motivation composite (e.g. Vansteenkiste, Lens, Dewitte, De Witte, & Deci, 2004).

In sum, SDT claims that there are four different types of extrinsic motivation, which reflect the degree to which socially valued tasks with little intrinsic appeal have been internalized or 'taken in' (Schafer, 1968). Based on this analysis, we argue that MI is not about enhancing people's intrinsic motivation for change (Ginsburg, Mann, Rotgers, & Weekes, 2002; Martino, Carroll, Kostas, Perkins, & Rounsaville, 2002), but rather, it is about trying to successfully promote the internalization of extrinsic change intentions. By enhancing their sense of identification with the change intention, and by integrating that intention with the rest of their value-system (see also DiClemente, 1999), clients

come to perform the activity with a sense of self-endorsement rather than with a sense of resistance and pressure.

Demonstrating the importance of this kind of conceptual shift, many studies have provided evidence for SDT's process model of change (Sheldon *et al.*, 2003; Williams, 2002). This process model shows that well-internalized motivations to change together with feeling effective or competent in carrying out the change both independently predict a variety of outcomes, including higher treatment attendance, less drop-out, less relapse, and enhanced well-being over the course of treatment. Those results were obtained in various domains such as alcohol cessation (Ryan, Plant, & O'Malley, 1995), weight loss (Williams, Grow, Freedman, Ryan, & Deci, 1996), exercise and diet programs for coronary artery disease and diabetes (Williams, Freedman, & Deci, 1998), smoking cessation (Curry, Wagner, & Grothaus, 1991; Williams & Deci, 2001; Williams, Gagné, Ryan, & Deci, 2002), medication adherence (Williams, Rodin, Ryan, Grolnick, & Deci, 1998), adjustment to HIV + and aids (Igreja *et al.*, 2000) and dietary self-care among diabetes patients (Senécal, Nouwen, & White, 2000; see Williams, 2002 for a review of this literature). In addition, most recently, Williams *et al.* (2005) reported that an SDT-intervention among adult smokers resulted in greater medication use and more 6-month prolonged abstinence compared with community care.

Quantity versus quality of motivation

A related clarification that SDT might supply to MI concerns the distinction between the amount or quantity of motivation, and the character or quality of motivation. Although SDT's unique contribution to contemporary motivation theory comes from its focus on the quality (i.e. the degree of internalization) of people's motivation, the quantity of motivation is also considered by the theory, as in most current clinical motivational theories. Specifically, SDT distinguishes between amotivation, which involves the lack of clear intentions for action (the leftmost form in Fig. 1), and motivation, which involves clear intentions, whether they are autonomous or non-autonomous ones (the five forms at the right of Fig. 1). When they are amotivated, people feel they cannot change anything, often because of a lack of perceived competence (Deci, 1975) self-efficacy (Bandura, 1989), or contingency between behaviour and outcomes (Seligman, 1975). Just as poorly internalized motivation is associated with poorer outcomes, amotivation is also found to negatively predict various treatment outcomes (Long, Willimas, Midgley, & Hollin, 2000; Senecal, *et al.*, 2000); in fact, the outcomes associated with amotivation are generally even more debilitating or maladaptive than those associated with controlled motivation (Deci & Ryan, 1985).

Because of MI's focus on the personal responsibility and choice of clients to change their behaviour, we believe that MI generally serves to enhance the quality, and not just the quantity, of clients' treatment motivation. However, a closer look at the conceptual definitions of MI reveals that motivation is primarily conceptualized in terms of its strength or quantity. For example, according to Miller and Rollnick (2002, p. 10), people manifest a high 'intrinsic' motivation to change (a) if they perceive the change as important (willingness), (b) if they feel capable of making the change (ability), and (c) if they give a high priority to making the change compared with other priorities (readiness). In other words, MI emphasizes the importance of clients' building a strong intention to change, accompanied by strong expectancies of success. Accordingly, in their clinical practice, Miller and Rollnick often use an 'importance-ruler' and a 'confidence-ruler' to assess clients' degree of attributed importance of change, and their

confidence in change. This is consistent with classic expectancy and expectancy-value models of motivation (Eccles & Wigfield, 2002; Feather, 1990, 1992), which focus on the quantity of motivation (Vansteenkiste, Lens, De Witte, & Feather, 2005). Again, however, SDT goes on to consider the *quality* of motivation, by asking whether the change intention has been fully internalized (Vansteenkiste, Soenens, & Vandereycken, 2005). Although MI's general approach is fully compatible with such considerations, we believe that MI might gain by explicitly articulating the distinction.

For example, in its current formulation, MI may not be equipped to handle the case in which a person considerably values change, but for introjected reasons. Consider an alcoholic who comes to therapy one day and states a strong intention to stop drinking, because he has recently experienced shame in front of his colleagues, or because he has recently felt guilty for letting down his wife. As currently formulated, MI would seem to view this as a very positive state, because client motivation is very strong. However, from the SDT-perspective, such change efforts may be doomed to failure, because they are not really aligned with the self of the person. Again, we believe that this distinction is implicitly present within metatheoretical assumptions of MI, and that incorporating it explicitly would give MI researchers a basis to differentiate between alienated versus authentic desires for change, or introjected versus fully internalized change intentions. If so, MI advocates might no longer suggest, as do Foote *et al.* (1999), that clinicians practicing MI might emphasize 'the client's sense of shame due to failure to live up to his/her idealized self-image' (p. 184).

Consistent with the idea that that introjected (partially internalized) and integrated (fully internalized) motivation are differentially related to various outcomes, previous research found that introjected motivation is associated with school anxiety, poorer coping mechanisms after failure among students (Ryan & Connell, 1989), vulnerability to mindless persuasion in making voting decisions (Koestner, Losier, Vallerand, & Carducci, 1996) and distress and decreased well-being among HIV + and AIDS patients (Igreja *et al.*, 2000). By contrast, identified motivation is positively related with school enjoyment and pro-active coping at school (Ryan & Connell, 1989), with actively pursuing information regarding political outcomes (Koestner *et al.*, 1996; Losier, Perreault, Koestner, & Vallerand, 2001), and it positively predicts adjustment to a life-threatening illness as HIV + or AIDS (Igreja, *et al.*, 2000). Highlighting the functional difference between the two types of motivation, Pelletier, Fortier, Vallerand, and Brière (2001) showed that introjection was positively predictive of short-term persistence but negatively predictive of long-term persistence, whereas identification remained positive throughout (see also Sheldon & Elliot, 1998). In short, those results indicate the importance of fully internalizing rather than only partially internalizing the reason for one's acting or changing.

The question then becomes: how can the internalization process be facilitated, such that people come to identify and own the best set of goals for themselves? SDT takes an organismic perspective upon this question, claiming that contexts that maximally satisfy peoples' psychological needs are also maximally supportive of their inherent internalization process (Deci & Ryan, 2000; Sheldon, Elliot, Kim, & Kasser, 2001). Indeed, according to SDT, psychological need-satisfaction is the key mediator between supportive contexts and positive outcomes – when peoples' needs are met, their inherent integrative and growth tendencies are allowed full play. In the next section we will consider this issue in greater detail, as we believe it can make a further theoretical contribution to MI.

Why MI works: The role of psychological need-satisfaction

Basic psychological needs

Although past research reveals that MI results in more positive treatment outcomes compared with other control-groups and yields equal benefits compared with other therapeutic techniques (for an overview see Burke *et al.*, 2002, 2003), 'the theory and data thus far are less clear in documenting in how and why it works' (Miller & Rollnick, 2002, p. 26). We suggest that the construct of need-satisfaction, as conceptualized within SDT, may provide a useful way to understand the positive effects of MI.

The concept of the 'psychological need' has evoked much debate within psychology (Deci & Ryan, 2000). Some traditions view needs as acquired individual differences that vary among persons, whereas other traditions view needs as universal features of human nature. In addition, some traditions view needs as motive forces, pushing 'out,' whereas other traditions view needs as required inputs, coming 'in'. SDT takes a universalistic position, positing the same set of needs in all humans. SDT also takes a primarily 'input' position, viewing the satisfaction of one's needs as experiential nutriments that are vitally important for one's well-being and optimal functioning (Deci & Ryan, 2000). To use an analogy, just as plentiful water, soil and sunshine are crucial nutriments for the thriving of plants, the satisfaction of basic human needs is the vital input for people to thrive to their fullest potential (Ryan, 1995). Furthermore, SDT argues that psychological needs are species-typical features of human nature, which evolved because of the adaptive advantages they afforded.

For parsimony, three different psychological needs have been distinguished by SDT. The first is the *need for competence* (White, 1959), which pulls people to explore and try to master the environment. The need for competence proposes that humans actively seek challenge, a propensity which contributes to their growth and skill development and which also helps them to adapt to the complex and changing world around them (Deci & Ryan, 2000). In contrast, when people receive little opportunity to master the environment or when their sense of competence is not supported (i.e. they receive little competence-input), amotivation and less than optimal functioning is likely to result.

The need for competence maps well onto similar theories' concepts such as confidence, optimism, self-efficacy, and control (Bandura, 1989; Carver, Sotton, & Scheier, 2000; Maisto, Carey, & Bradizza, 1999; Rotter, 1966), and its postulation is thus relatively uncontroversial within contemporary motivational theory.

Second, SDT claims that people also have a *need for autonomy*. In other words, in addition to benefiting from feeling effective in their behaviour, people also benefit from experiencing a sense of choicefulness and authorship with respect to their behaviour. To highlight the difference between competence and autonomy, consider that one might expect to do very well at a task that one resents doing (i.e. a woman might feel a 'pawn' to her husbands' insistence that she comes into treatment, but still, she might believe that she can succeed in treatment), or, that one might expect to do very poorly at a task that one really values and wants to do (i.e. a man might feel pessimistic about finding a stable solution for his alcohol problems, but still, might engage in the task very autonomously or willingly). SDT holds that, in addition to satisfying people's need for competence, social environments also need to nurture individuals' need for autonomy (e.g. by providing choice) to further enhance their thriving and optimal functioning. Indeed, Deci and Ryan (2000) argued that the need for autonomy provides many adaptive advantages, including the ability to better regulate one's thoughts, actions, and emotions in concordance with one's own needs and desires, the ability to become more

internally coordinated and integrated functioning, and the ability to disengage from social groups when necessary.

Much of SDT research has focused on the need for autonomy, because it is often confused with competence or control, or mis-defined in terms of independence, isolation, detachment, individualism, or competitiveness (Chirkov, Ryan, Kim, & Kaplan, 2003; Hmel & Pincus, 2002; Ryan & Lynch, 1989; Soenens & Vansteenkiste, 2005). As noted above, the postulation of a need for autonomy corresponds to SDT's insistence on considering the 'quality' of a person's motivation, and also, with SDT's emphasis on the importance of self-organized functioning.

Third, SDT postulates a *need for relatedness*. People are naturally inclined to seek close and intimate relationships with (at least some) other people, and to try to achieve a sense of communion and belongingness with other selves in their surroundings (Baumeister & Leary, 1995). In other words, they are pulled to be involved in supportive, caring relationships in which their feelings, thoughts, and beliefs are respected. For instance, if an alcoholic experiences a strong sense of caring and commitment from her husband, her ability to effect the desired change will be enhanced. Because of this need, humans are enabled to create mutually supportive relationships which help them through times of hardship, and to better transmit communal knowledge both between individuals and between generations over time (Deci & Ryan, 2000).

The postulation of a need for relatedness is also relatively uncontroversial in contemporary motivational theory (Baumeister & Leary, 1995; Blatt & Blass, 1996). Importantly, recent research indicates that the needs for relatedness and autonomy are not conflicting, as is often assumed (Hirschfield, Klerman, Gough, Barrett, Korchin, & Chodoff, 1977), but in fact, are quite complementary and highly correlated (Hodgins, Koestner, & Duncan, 1996; Koestner & Losier, 1996; Sheldon & Bettencourt, 2002).

Notably, SDT does not view this list of three needs as exhaustive, but argues that these three experiential qualities are particularly important for people's optimal functioning. Furthermore, SDT subscribes to an additive model, arguing that thriving is maximized when all three qualities of experience are present. Indeed, several recent studies have shown that each need uniquely predicts positive outcomes, such as optimal performance, secure attachments, event-satisfaction, psychological well-being, and positive teacher-course evaluations (Baard, Deci, & Ryan, 2004; Filak & Sheldon, 2003; La Guardia, Ryan, Couchman, & Deci, 2000; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Sheldon *et al.*, 2001).

Other studies have shown that need-satisfaction acts as a mediator between need-supportive contexts and distal outcomes, such as treatment attendance, continued persistence, medication adherence, long-term change and treatment attendance (Reeve & Deci, 1996; Vallerand & Reid, 1984; Vansteenkiste & Deci, 2003; Williams *et al.*, 1996; Williams *et al.*, 1998). Figure 2 summarizes this pattern, in the context of the general model of health behaviour offered by SDT (see Sheldon *et al.*, 2003, or Williams, 2002, for a review). As can be seen, both initial need-supportive social contexts and autonomy-oriented personality styles (not considered herein) are predictive of experiential need-satisfaction, measured during the course of treatment. Need-satisfaction in turn predicts positive outcomes by the end of treatment. From this perspective, it is incumbent upon clinical and health care providers to help clients feel that they have autonomously chosen their treatment, that they can succeed at the treatment, and that they feel a sense of relationship with the therapist and others while doing the treatment. In the following, we try to outline how the general principles of
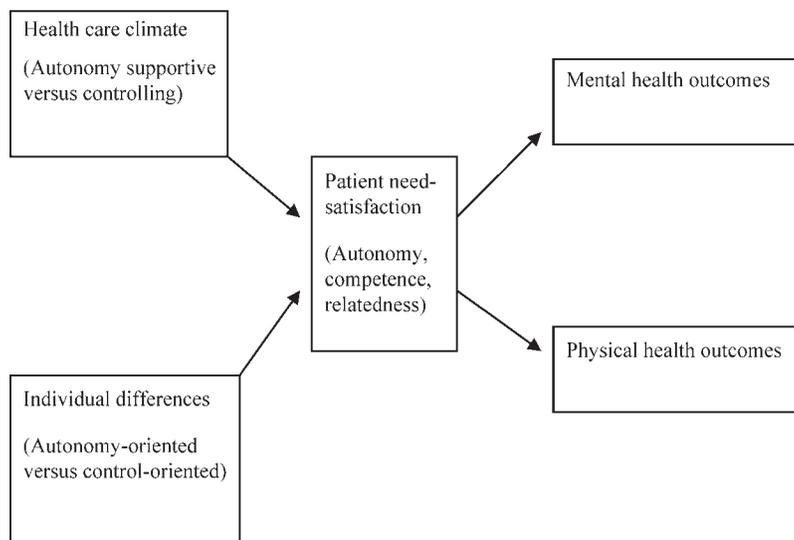
Figure 2. SDT's health outcomes model.

MI are likely to produce positive treatment outcomes precisely because they promote satisfaction of the three needs postulated by SDT.

MI and need-satisfaction

MI may be conceptualized as having four key components (Miller & Rollnick, 2002), each of which may be re-interpreted in terms of SDT's three needs. One key component is its empathic counselling style. The counsellor avoids taking an authoritarian or 'one-up' position, in which he/she claims that he/she knows the clients' problem or the direction in which the client should move forward. Instead, the clinician works from the world-view of the client and tries to hear and genuinely acknowledge the feeling behind the client's stories. Being empathetic implies that one listens respectfully, with an authentic desire to understand the clients' perspective. This idea is fully consistent with SDT, and we suggest that such an empathic relationship is probable to help satisfy people's need for relatedness within the treatment setting.

A second key principle within MI is that the therapist 'rolls with resistance'. Resistance is viewed not as a personal phenomenon, in which the client is lacking motivation (obviously, the client has some motivation, or he/she would not be there), but instead, as an interpersonal phenomenon, in part also elicited by the therapists' approach to the client. To avoid creating resistance, the therapist should not argue with or challenge the client, or tell him what he should do (Miller *et al.*, 1993). The idea is to help people see for themselves what they are doing, thus hopefully putting them in a position to make a more whole-hearted and personally committed choice about what to do next (Amrhein *et al.*, 2003). We believe this approach is likely to help satisfy the need for autonomy, providing positive experiential support during the course of treatment.

A third key principle of MI involves supporting people's feelings of self-efficacy (Bandura, 1989). The purpose is to enhance people's confidence in their capacity to make progress in the change process, and in their ability to adequately cope with

setbacks. From a SDT-perspective, supporting people's self-efficacy is likely to satisfy the need for competence or effectance, further enhancing the process of therapy.

The last key principle of MI implies drawing out or eliciting arguments from the client for making the change. In other words, change intentions should come from the client, and should be expressed in his/her own words. This drawing out of arguments is facilitated by MI-practitioners by creating and amplifying, from the client's perspective, a discrepancy between present behaviour and his or her broader goals and values. Helping the client to foresee such discrepancy is likely to enhance the personal decision to make the change (approach-component), while simultaneously decreasing resistance to the change (avoidance-component). This is also consistent with SDT, and its insistence that clients' autonomy needs be supported.

In short, we believe that skilfully applying the key principles of MI during therapeutic interventions is likely to help satisfy people's basic needs the process, which in turn produces the desired treatment outcomes. Future studies of therapeutic effectiveness within the MI tradition might well explore the role of basic need-satisfaction as an explanatory or mediational mechanism. To accomplish this goal, it would be important to measure the client's degree of experienced need-satisfaction at several times during the therapeutic intervention (Sheldon & Elliot, 1999). Aggregate need-satisfaction during the period of treatment would then be used to predict positive outcomes. One hypothesis is that the reason MI is more effective than other forms of therapy is that it better satisfies needs, compared with other forms.

On the nature of autonomy-support: Deeper insights from MI

The concept of autonomy-support

As mentioned earlier, SDT focuses on authority autonomy-support as a crucial determinant of optimal motivation, need-satisfaction, and positive outcomes. In this section we will first consider SDT's definition of autonomy-support in more depth, while also showing its consistency with the principles of MI. Afterwards, we will try to show how MI can help SDT to further apply the concept of autonomy-support in therapeutic practice.

Deci, Eghrari, Patrick, and Leone (1994) experimentally differentiated three components of autonomy-support. First, the person in the 'one-up' position (whether a coach, teacher, parent, or counsellor) should try to take and acknowledge the perspective and world-view of the person being motivated. Deci *et al.* (1994) showed this in the context of a boring computer task, by having the experimenter say 'I know that doing this is not much fun; in fact many subjects have told me that it's pretty boring. So I can perfectly understand and accept that you might not find it very interesting.' Deci *et al.* showed that receiving this communication led participants to persist longer at the task, presumably because they had better internalized the value of the task. Translating this communication to a clinical context, a clinician could for instance say, 'I recognize that coming into treatment might not be much fun; in fact, it might be easier to continue to drink. So, I can understand that trying to do something about your drinking might be very hard for you.' Notice the considerable overlap between this first aspect of autonomy-support and Miller and Rollnick's emphasis on drawing out the client's own perspectives and reasons for change.

The second facet of autonomy-support involves providing as much choice as possible within the limits of the context. Deci *et al.* (1994) provided this second aspect

of autonomy-support by using words like 'choice' and 'willing' for some experimental participants, while using words like 'must' and 'should' for other participants. This factor also significantly predicted persistence in the computer task. To translate this to the clinical setting: if a clinician knows that different treatment options are equally effective and valuable, he/she might give the client the opportunity to choose the one that matches best his personality and interests. Note that this principle is also consistent with MI, in its insistence that clients must make their own choices for change, rather than being told what they 'should' do by the therapist.

The third facet of autonomy-support, according to SDT, is to provide a meaningful rationale in those instances where choice cannot be provided. In the Deci *et al.* experiment, some participants were given a rationale: 'Doing this activity has been shown to be useful. We have found that those subjects who have done it have learned about their own concentration. This has occurred because the activity involves focused attention which is important in concentration. For example, this is the type of task that air traffic controllers use in order to enhance their signal detection duties,' whereas other participants were given no such rationale. This third facet of autonomy-support was also significantly related to persistence in the experimental task. In a clinical context, a counsellor could for instance say: 'Actively trying to change one's eating behaviour has been shown to be very important. Even taking a small step in this direction can make a big difference, as it helps you to realize that you have more power than you thought.'

The importance of those three distinct components for internalization of the target activity has been replicated (Reeve, Jang, Hardre, & Omura, 2002) and extended to applied settings, such as education (Assor, Kaplan, & Roth, 2002) and organizational change (Gagné, Koestner, & Zuckerman, 2000). Specifically, Gagné *et al.* (2000) showed that experiencing of all three autonomy-support facets during an organizational transformation positively predicted the acceptance of change 13 months later, presumably because they fostered the internalization of change.

We would like to stress that SDT's concept of autonomy-support should not be mistaken for a permissive, non-directive approach. Indeed, authorities can be quite directive, according to SDT. What is of crucial importance is how clinicians are directive: do they rely on externally controlling strategies, or are they autonomy-supportive within the context of providing direction? In other words, SDT does not advocate an absence of structure; instead, it advocates that structure be imposed very carefully and sensitively (Deci & Flaste, 1995; Foote *et al.*, 1999; Ryan & Stiller, 1991).

Similarly, Miller and Rolnick (2002, p. 86) indicate that MI can at some points be quite directive (in contrast to a classic Rogerian approach, in which directiveness is eschewed at all costs). For instance, a clinician might firmly advocate efforts towards improved glucose control in the case of a client struggling with Type II diabetes. However, if the change goal is not so obvious (i.e. as when a couple is trying to decide whether or not to adopt a child), then according to Miller and Rollnick, motivational interviewers are better served adopting a non-directive approach.

Using MI to apply the concept of autonomy-support

Autonomy-support is likely to be a multifaceted process, such that a client's sense of self can be enhanced and supported in many different ways. In other words, we believe that SDT's concept of autonomy-support could use further elaboration and application, beyond the three simple facets named above. Specifically, we suggest that MI can help

by suggesting many concrete motivational factors that can promote or impede the internalization of change. We elaborate below how these motivational techniques might provide new insights into the application of the SDT-concept of autonomy-support within therapeutic practice.

Fostering change

First, MI stresses the importance of mutual agenda setting, so that the client feels that his specific concerns and goals are reflected in the agreements made between client and therapist. This technique is consistent with SDT's concept of autonomy-support, particularly the facet of perspective-taking, and suggests a new avenue to apply the concept.

Second, reflective listening is another important MI technique that is likely to be related to autonomy-support. All forms of reflection (i.e. simple, amplified, and double reflections) involve the clinician repeating part or most of the person's words back to the person, either verbatim, or with various emphases. These reflections allow the patient to gain more access to their true feelings and thoughts, so that they can be better recognized. Because reflective listening helps to increase the persons' self-awareness and puts him/her in a better position to make autonomous choices, it may also provide a useful application of SDT's concept of autonomy-support.

Third, *summarizing* is likely to produce similar benefits as reflective listening. Summary statements are used to link and draw together the material that has been discussed. Such statements also help increase self-awareness, facilitating more autonomous decision-making. Stated differently, summarizing may help to facilitate the same integrative process that autonomy-support aims to facilitate, in a more explicit and practically useful way.

Impeding change

In addition to discussing what practices to approach to facilitate the change process, Miller and Rollnick also discuss what practices to avoid. First, Miller and Rollnick discuss how diagnostic labelling might sometimes yield undesired effects. This labelling might occur in a very subtle fashion, so that clinicians are not even aware of placing their clients in a certain category. However, because labelling often carries a certain stigma in the public mind, it is probable that client's feelings of self-esteem and competence will be harmed when they feel labelled. In addition, as pointed out by Miller and Rollnick, labelling often entails a power struggle in which the counsellor seeks to assert control and expertise. Clients thus may feel cornered, forced to accept a certain diagnosis. This can produce a defensive attitude that leads them to resist, rather than embrace, change. In contrast, if clinicians can provide diagnostic information in such a way that the client does not feel 'reduced to a category', then the information may be experienced as less stressful and less threatening. This practice, of being very careful not to label, stereotype, or categorize clients or subordinates, might be viewed as an important but unexplored autonomy-support.

Second, MI emphasizes the importance of the therapist's neutrality. After having detected information indicating the presence of a problem, the therapist assumes that the client wants to be helped, and suggests particular pathways to use to solve a 'well-known' problem. The difficulty is that in this case the therapist might start to make unexamined assumptions or peremptory recommendations concerning the clients' perception of the problem and the willingness to do something about it, overlooking or

cutting off the client's own perceptions. This strategy is unlikely to increase clients' awareness of their true underlying reasons for coming into treatment, and may even elicit resistance from the client (Killick & Allen, 1997). We suggest that SDT's concept of autonomy-support might also benefit by including this prescription, which can help minimize the client's perception of a power differential between herself and the therapist.

Third, MI stresses the importance of not asking close-ended questions, which may prevent patients from fully expressing (or even discovering) their concerns. Indeed, asking questions that have simple or factual answers might prompt some clients to adopt a passive role, because of the comfort and safety that it provides. Also, clinicians might be unwittingly tempted to adopt such a strategy, because it provides a way of maintaining control over the session. We suggest that asking open-ended questions might represent an important, but under-explored application of autonomy-supportive counselling.

In sum, Miller and Rollnick (2002) provide SDT researchers with an interesting set of techniques that might help to gain further insight into the concrete application of the construct of autonomy-support. Future research could try to explicitly measure the clinician's use of these change-impeding and change-facilitating techniques within therapeutic sessions, to see how these different contextual facets relate to the clients' more general perceptions of autonomy-support, as measured by SDT. In addition, research could examine how these techniques are related to client need-satisfaction, and in turn to positive therapeutic outcomes such as increased attendance, reduced drop-out, and reduced relapse.

Conclusion

In conclusion, at a metatheoretical level, SDT and MI appear to be very complementary accounts of self-motivated change and the means by which it can be promoted. Furthermore, we have argued that SDT can supply MI with a more articulated language for describing the type of motivations promoted by MI (i.e. identified and integrated extrinsic motivations, rather than intrinsic motivations), and that SDT may also supply a process account of 'how MI works' (i.e. by affording client need-satisfaction). In addition, we have suggested that MI's practical techniques can help to translate SDT's important concept of autonomy-support into therapeutic practice, because these techniques indicate new ways of thinking about what it means to support or hinder a person's self-directed change efforts. In sum, by integrating MI and SDT we may move closer to Lewin's ideal of generating 'good, practical theories' – theories that can simultaneously help us to understand human nature, and, know what to do in order to maximize it.

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