

# Motivational Interviewing in the Prevention and Management of Chronic Disease: Improving Physical Activity and Exercise in Line with Choice Theory

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## ABSTRACT

Discusses the relationship between motivational interviewing and choice theory in working with chronically ill clients/patients

## BACKGROUND

The prevention and management of preventable chronic disease poses challenging problems for many countries due to aging populations. There are many factors associated with the development of chronic disease, for example, lack of physical activity and exercise. Generally, as people age, they become physically less active. Physical inactivity has been associated with obesity, and obesity with cardiovascular disease, diabetes and osteoarthritis (Cooper et al., 1998; Sui et al., 2007). In addition, chronic disease such as osteoarthritis has been associated with pain, disability and depression (Van Baar, Dekker, Lemmens, Oostendorp, & Bijlsma, 1998) (note that this is the term generally used in the literature).

The health and quality of life benefits of physical activity and exercise have been well established, including in people with depression or anxiety (Babyak et al., 2000; Biddle, Fox, & Boutcher, 2000; Byrne & Byrne, 1993; Lawler & Hopker, 2001; Scully, Kremer, Meade, Graham, & Dudgeon, 1998), or those with chronic diseases such as cardiovascular problems or osteoarthritis (Morris & Schoo, 2004). Physical inactivity, depression and anxiety are common problems. Risk factor data in the Greater Green Triangle region in Victoria and South Australia indicate that most people aged 25-74 were not sufficiently physically active at the time of the surveys (Heistaro, Vaughan, & Schoo, 2007); 7.7-8.7% of the cohorts were moderately to severely depressed while 9.1-10.7% were experiencing anxiety problems (Bunker, Kao-Philpot, & Reddy, 2007). Rates were worse in 45-65 year age groups with up to 19.5% showing signs of depression and 15.7% signs of anxiety. Despite the benefits of physical activity and exercise on mental health, one of the problems is that many perceived their physical fitness as 'reasonable', 'reasonably good' or even 'very good'. This means that there may not necessarily have been a perceived need or motivation to become physically more active (Heistaro, Vaughan, & Schoo, 2007).

One of the problems that health professionals face is that clients mostly don't immediately feel the consequences of poor lifestyle choices on their health and well being. Therefore, one can understand that they can lack the required motivation to change some of their behaviors. This problem can be compounded by mental unwellbeing (i.e., depressive behavior) which makes it more difficult to abide by the recommendations given to them in the understanding that this advice will be adhered to. Regardless the cause of the chronic condition, people who have a chronic illness can be on an emotional rollercoaster similar to those who experience loss and grief. Emotions can include denial, frustration, fear, anger, sadness, isolation and/or acceptance (Baker & Stiller, 2006).

In order for health professionals to move clients from a state of physical or mental illness, or being out of shape or unhappy, towards an optimal state of wellbeing (see Figure 1), it is important to minimize barriers to program adherence and maximize motivation. Assessing mental health status and using counseling techniques such as motivational interviewing that improve clients' motivation to change can be very useful to facilitate behavioral change. This can be important because it is reasonable to expect that people who feel sad, down or miserable most of the time and/or lose interest in most of their usual activities are less likely to adhere to healthy behaviors such as physical activity and exercise. There are various valid and reliable tools to measure depression, for example the K10 (Cairney, Veldhuizen, Wade, Kurdyak, & Streiner, 2007). These tools can be easily applied in clinical practice and justify referral to a counselor if needed.

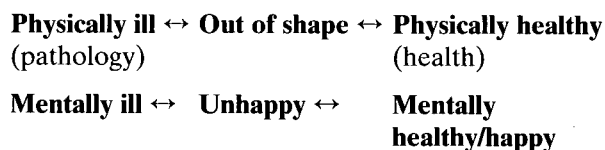


Figure 1. The continua of physical and mental health according to Glasser (2003)

## Motivational interviewing and changing behavior

Motivational interviewing is a "client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence" (W. Miller & Rollnick, 2002). In terms of CT, motivational interviewing can assist in creating discrepancy in the comparing place

between what is wanted and what is perceived to be received. This discrepancy facilitates change by assisting clients to discover inconsistencies between what they are currently doing and their core values and sense of self (Markland, Ryan, Tobin, & Rollnick, 2005). Although some may be of the opinion that motivational interviewing lacks the framework that CT has, it has been used effectively in many studies that examined modification of lifestyle behaviors, including physical activity (Hardcastle, Taylor, Bailey, & Castle, 2007). The principles of motivational interviewing are:

1. Express empathy
2. Develop discrepancy
3. Avoid argumentation
4. Roll with resistance
5. Support self-efficacy

Characteristics of motivational interviewing:

1. Client centered
2. Non-judgmental
3. Expressing empathy
4. Building trust
5. Being collaborative
6. Reflective listening
7. Increasing discrepancy
8. Exploring ambivalence
9. Reducing resistance
10. Increasing readiness
11. Eliciting change talk
12. Increasing self-efficacy

Motivational interviewing fits in well with acceptance and client-centered counseling according to 'theory of critical conditions for change', 'cognitive dissonance theory', health belief models (does one think that one is at risk), 'trans-theoretical model of change', 'self-perception theory', self-determination and the innate ability to sort things out (Ryan & Deci, 2000), and love and caring habits that respect the growth of others (Markland, Ryan, Tobin, & Rollnick, 2005; W. Miller, 1999). Motivational interviewing detects ambivalence, increases change talk (i.e., desire, ability, reasons, need, commitment) of the client, and decreases resistance to change (Figure 2).

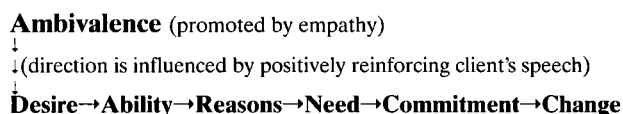


Figure 2. Motivational interviewing facilitates change by fostering ambivalence and directing this ambivalence to stepwise change talk.

Markland et al. (2005) placed the characteristics of motivational interviewing in three domains when utilizing the self-determination theory. The underlying assumptions are that: (i) involvement leads to relatedness; (ii) structure leads to competence; and (iii) autonomy support leads to autonomy (Figure 3).

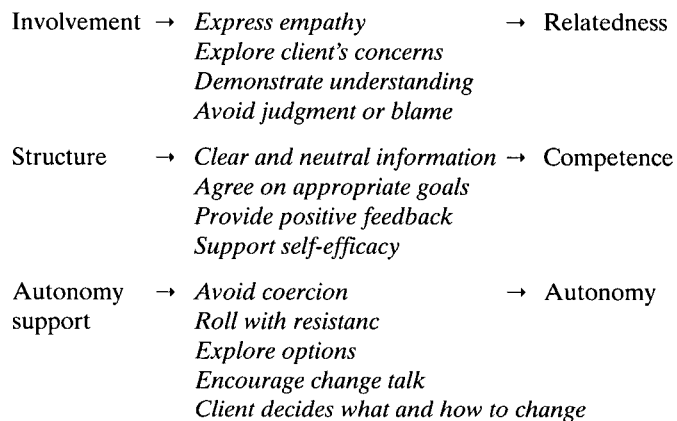


Figure 3. How motivational interviewing fits within in the framework provided by the self-determination theory (Markland, Ryan, Tobin, & Rollnick, 2005).

Motivational interviewing is practiced by health professionals such as psychologists, social workers, nurses, medical practitioners, physiotherapists and dieticians. The method can be applied in settings ranging from 'in the clinic' to at home or via telephone. Although effects are immediate and two treatments can be sufficient, effect sizes diminish over time (from  $d = 0.77$  at post-intervention to  $d = 0.30$  at 6-12 months) (Hettema, Steele, & Miller, 2005) and 6-monthly follow-up sessions are likely to increase the effectiveness of motivational interviewing in the management of chronic diseases.

The skills required for the interviewing process are not dissimilar to reality therapy (Glasser, 2000b) and other counseling methods, and are well described by Miller et al. (2003). Useful tools for motivational interviewing are:

1. decisional balance list on pros (benefits) and cons (costs) for making change or not making change (Table 1);
2. change plan worksheet (identify the desirable changes, reasons, steps, support of others, realization of success, enablers and barriers, back-up plan)
3. readiness ruler (this could be applied to physical activity and diet)
4. expectation (what is wanted from the intervention)

**Table 1. Weighing up the pros and cons using a decisional balance list**

Decision	Pros (Benefits)	Cons (Costs)
Changing	..... .....	..... .....
Not changing	..... .....	..... .....

SMART goal setting (Specific, Measurable, Achievable, Realistic and Timely) can help to keep advancing with small steps and within agreed timeframes. Counselors that use motivational interviewing generally emphasize clients' perceptions of the consequences of their behaviors instead of using a clinician's model causality (Brunette & Drake, 2007). Target practice enhancement of people with chronic illness facilitated by health professionals (Glasgow et al., 2002; Thoesen Coleman & Newton, 2005) includes:

1. Agree together (client and health professional) on one topic appropriate for the session (e.g., increasing level of physical activity);
2. Identify what client wants to know about the topic;
3. Provide the requested information;
4. Identify disease concerns, desired outcome, required steps to reach that outcome, and the barriers that may arise;
5. Provide additional information if needed;
6. Agree on goals and action plan needed to address clients' concerns;
7. Provide clarification of goals and action plan, and utilize personal action plan worksheet;
8. Identify client's confidence in ability to carry out the agreed action plan on a scale from zero to 10. In case confidence rates less than seven, identify what needs to happen to make it higher;
9. Evaluate and refine the plan; and
10. Agree on one other relevant topic (e.g., diet). Etc.

### Motivational interviewing and choice theory

Motivational interviewing is in line with Choice Theory (Glasser, 2000a). Exploiting the differences between clients' perceived pros and cons of changing behavior and enhancing ownership of the interventional program can assist clients in moving towards sustained adherence to healthy behaviors such as physical activity and exercise. Physical activity is defined as any skeletal muscle activity that results in energy expenditure, and exercise as planned, structured, repetitive movement designed to improve or maintain some component of

physical fitness (Casperen, Powell, & Christenson, 1985). Both, physical activity and exercise have been associated with health benefits (Andersen et al., 1999; Dunn et al., 1999) so health professionals can let clients discover what is acceptable to them after they have explored the pros and cons of improving these behaviors. Some like swimming, some dislike it; some like gardening while others do not have a garden; some want routine whereas others like change; some like undertaking activities in company of others and others prefer to be on their own. It is the task of the counselor to enhance ownership in clients' plans to adopt and sustain these behaviors. Reality therapists may want to use other methods that are available to them within the choice theory in addition to these techniques to enhance outcomes. They are equipped to contribute to much needed lifestyle modification programs and/or research for the benefit of public health and well being.

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