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MOTIVATIONAL INTERVIEWING IN THEORY AND PRACTICE

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To all members of Söderlund and Lindhe families

Ord kan öppna dörrar - och ord kan stänga dörrar

- *Jan Eliasson*

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ABSTRACT

Background: An estimated 50% of mortality from the 10 leading causes of death is due to behaviour. Individuals can make important contributions to their own health by adopting health-related behaviours and avoiding others. Motivational interviewing (MI) has emerged as a counselling approach for behavioural change that builds on behavioural change of relevance for many public health issues. MI builds on a patient empowerment perspective by supporting autonomy and self-efficacy.

Aims: The overall aim of this thesis is to contribute to improved understanding of the different factors that impact on general health care professionals' learning and practice of MI. Specific aims are; study I was to identify barriers, facilitators and modifiers to use MI with pharmacy clients in community pharmacies; study II was to identify barriers and facilitators to use MI with overweight and obese children in child welfare and school health services; study III was to evaluate the attitudes towards MI and clinical use of MI with children's weight issues one year after child health care nurses' participation in MI training; study IV was to systematically review studies that have evaluated the contents and outcomes of MI training for general health care professionals.

Methods: Participants in study I were 15 community pharmacy pharmacists in Östergötland, Sweden. Participants in study II were five child welfare centre nurses from the county council and six municipally-employed school health service nurses, all from Östergötland, Sweden. Data for both studies were obtained through focus group interviews. Study III, participants were 76 nurses from child health care centres in Östergötland, Sweden. 1-year after MI training they answered a survey. Study IV, the studies were obtained through databases searches. The following terms or relevant combinations thereof were used: "MI", "training", and "education".

Results: In study I, pharmacists who had previously participated in education that included elements similar to MI felt this facilitated their use of MI. The pharmacists believed the physical environment of the pharmacies was favourable for MI use, but they experienced time limitations when there were many clients on the premises. The organizational context affected the

pharmacists' attitudes to using MI. Feed-back from clients was a modifier depending on client reaction it could be encouraging or discouraging. In study II, important barriers were nurses' lack of recognition that overweight and obesity among children constitutes a health problem, problem ambivalence among nurses who felt that children's weight might be a problem although there was no immediate motivation to do anything, and parents who the nurses believed were unmotivated to deal with their children's weight problem. Facilitators included nurses' recognition of the advantages of MI, parents who were cooperative and aware of the health problem, and working with obese children rather than those who were overweight. Study III, nearly half of the nurses had changed the content and structure of their discussions regarding weight issues. The nurses' attitudes to MI were positive, especially their perception that MI was consistent with their values and was better than traditional advice-giving approaches. Study IV, ten studies were found and the median length of training was 9 h. The most commonly addressed training elements were MI skills, recognizing and reinforcing change talk and rolling with resistance. Most studies involved follow-up training sessions. The training generated positive outcomes and had a significant effect on many aspects of health care providers daily practice.

Conclusions:

MI training for general health care providers is generally of short duration and tends to focus on specific topics such as diabetes, smoking, and alcohol. The training seems to contain more training on phase I elements, such as clients' inner motivation, than on phase II, which involves strengthening clients' commitment to change. MI is seen as practical and useful in work with lifestyle and health promotion issues, especially with issues that may be perceived as sensitive, such as obesity and alcohol. General health care providers have positive attitudes to MI and view MI as being compatible with their values about how they want to work. Clients' resistance reactions are difficult to handle in the first stages of learning MI while strategies to avoid resistance are included in the final stages of learning MI. Learning and clinical use of MI for general health care providers is influenced by interactions with their environment (colleagues, staff and organization). Unlearning of old knowledge can be a problem for general health care providers in the learning and clinical use of MI.

Key words: children, counseling, general health care, health promotion, motivational interviewing, nurse, overweight, pharmacist.

STUDIES

This thesis is based on the following four studies, which are referred to in the text by Roman numerals I, II, III, and IV:

STUDY I

Lindhe Söderlund, L., & Nilsen, P. (2008). Feasibility of using motivational interviewing in a Swedish pharmacy setting. *International Journal of Pharmacy Practice*, Vol. 17(3), 143–149.

STUDY II

Lindhe Söderlund, L., Nordqvist, C., Angbratt, M., & Nilsen, P. (2009). Applying motivational interviewing to counselling overweight and obese children. *Health Education Research*, Vol. 24 (3), 442–449.

STUDY III

Lindhe Söderlund, L., Malmsten, J., Bendtsen, P., & Nilsen, P. (2010). Applying motivational interviewing (MI) in counselling obese and overweight children and parents in Swedish child health care. *Health Education Journal*, in press. doi: 10.1177/017896910373136.

STUDY IV

Lindhe Söderlund, L., Madson, M., Rubak, S., & Nilsen, P. (2010). A systematic review of motivational interviewing training for general health care practitioners. *Patient Education and Counselling*, in press. doi: 10.1016/j.pec.2010.06.025

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1. INTRODUCTION

There has been an increase in health promotion research and practice in the past three decades. This interest has been stimulated by the epidemiologic transition of the leading causes of death from infectious to chronic diseases in higher-income areas of the world; the ageing of the population in the West; escalating health care costs; and research findings linking individual health-related behaviours such as physical inactivity, poor dietary habits, tobacco use, and alcohol consumption to increased risk of morbidity and mortality (Tones & Green, 2004). An estimated 50% of mortality from the 10 leading causes of death is due to behaviour, which suggests individuals can make important contributions to their own health by adopting some health-related behaviours and avoiding others (McGinnis & Foege, 1993; Conner & Norman, 2005).

Despite the increased interest and activity in health promotion, the health care system has been remarkably slow to integrate perspectives of patient empowerment and involvement in health care (Dumlen & Bensing, 2002). However, motivational interviewing (MI) has emerged as a brief counselling approach for behavioural modification that builds on a patient empowerment perspective by supporting self-esteem and self-efficacy (Miller, 2004). MI was originally developed for use with patients who suffer from addictions, but has been applied to a range of issues of great public health importance, including alcohol, nicotine, physical activity, human immunodeficiency virus (HIV)-risk behaviour, diabetic care, and obesity (Emmons & Rollnick, 2001; Miller, 2004; Rubak, Sandbaek, Lauritzen, & Christensen, 2005; Van Wormer & Boucher, 2004).

Two personal experiences have contributed to this thesis. The first was in 1997 after I experienced my first MI education delivered by Professor Stephen Rollnick. Back again at my work on alcohol problems, I was enthusiastic about the quality of MI as a door opener to discussions with my clients about their thoughts and feelings about motivation or resistance to change their alcohol consumption.

The second experience was in 2003, when I participated in an MI network meeting for trainers to discuss effects of MI and smoking cessation. I realized that there was a discrepancy between the findings in a review study by Burke,

Arkowiz, and Menchola (2003), which suggested that there was no support for the efficacy of MI and smoking cessation, and The Swedish National Institute of Public Health (2010) programme for implementing MI as a useful method for smoking cessation. That gave me mixed feelings; was MI disseminated too quickly and how could I defend using MI as a method for smoking cessation. Discussions with a senior researcher then came to mind: “when you are working with a new method, remember to evaluate what you are doing”.

This thesis investigates how MI is learnt and practice in general health care. Part of this thesis has already been presented in my licentiate thesis from 2009 (Lindhe Söderlund, 2009). Two new studies are included, article III and IV.

2. MOTIVATIONAL INTERVIEWING

This chapter begins with an overview of the history and development of MI since the first paper on the subject was published in 1983. Section 2.2 describes the content and characteristics of MI, including the triad of MI spirit, MI principles, and MI skills. Although there is no unified MI theory, there are many theoretical influences on MI, which are outlined section 2.3. The evidence base concerning the efficacy and effectiveness of MI is described in section 2.4. The chapter ends by addressing how and why MI has spread from its origins in specialist care for use with alcohol addiction to broad use in general health care settings and beyond.

2.1. A BRIEF HISTORY OF MI

The original concept of MI grew out of a series of discussions held between a visiting scholar and a group of Norwegian post-graduate psychologists at the Hjeltestad Clinic near Bergen in Norway in 1982. American psychologist William R. Miller had taken a sabbatical and spent 3 months at the clinic. He met the group psychologists and they discussed how Miller would respond to difficult situations they had encountered when treating people with alcohol problems. "As I explained and demonstrated how I counselled alcoholics, they asked wonderful probing questions about why I said what I did, what I was thinking, and why I pursued one line and not another," Miller would later explain (Miller, 1995, p. 3). "They coaxed from me a specification of what I was doing and why. I wrote this down in a somewhat long and rambling manuscript, which I shared with a few colleagues".

For Miller, the questions posed by curious colleagues provoked self-exploration that led to his writing a manuscript that outlined the ideas behind MI. Miller did not intend to publish the paper but sent it to a few colleagues for comment. One of them was Dr Ray Hodgson, who was then editor for *Behavioural Psychotherapy*. "Clearly the whole manuscript was too long for publication but I contacted Bill and asked if he would like to consider publishing the bones of the paper in our journal", Hodgson remembered. "I was delighted when he agreed and we decided to put him on the fast track because the ideas were so important to behavioural psychotherapy and, as it turned out, to the therapeutic community at large" (Moyers, 2004, p. 294).

Miller's manuscript, "Motivational interviewing with problem drinkers", was published in the *British Journal of Behavioural Psychotherapy* in 1983. In the article, Miller described MI as a common sense, pragmatic approach based on principles derived from effective counselling practice and experience. He conceptualized motivation not as a personality trait but as part of the process of change in which contemplation and preparation are important early steps that can be influenced by the counsellor. Another key point was that confrontation in counselling tended to elicit denial and avoidance of further discussion. Miller's article generated a great deal of interest from the research world, prompting explorations of the style of counselling he described. Researchers committed to investigate the claims made in the paper.

The next developmental leap for MI occurred in 1989, when Miller, on a sabbatical at the National Drug and Alcohol Research Centre in Sydney, Australia, met the British psychologist Stephen Rollnick, who was coordinating a research programme. "We quickly became friends," Miller later recalled (Miller, 1995, p. 3). "I was quite surprised to hear from Steve how influential motivational interviewing had become in Britain. It was becoming standard practice in the addictions field there, which I expect was due in no small part to Steve's own extensive training efforts. I had no idea that this was so." Rollnick encouraged Miller to write more about the implementation of MI. "I told him in no uncertain terms how potentially valuable this method had become. I was very blunt with him, I told him – 'You ought to write about it a bit, so people can use it, because it could make a real contribution'" (Moyers, 2004, p. 295). The meeting with Rollnick prompted Miller to become more serious about describing and explaining elements of MI in greater detail. The two of them collaborated on the first book on MI, *Motivational Interviewing: Preparing People to Change Addictive Behavior*, which was published in 1991. The book included a description of the first principles of MI.

Research and practitioner interest in MI grew steadily during the 1990s. Requests for training and evaluation soon outstripped Miller and Rollnick's abilities to respond. They realized that there was a need for a pool of qualified MI trainers and decided that training teachers of MI in workshops would be the best way to promote appropriate use of the approach (Moyers, 2004). To this end, they formed Training New Trainers (TNT) and organized the first training conference in 1993 in Albuquerque, New Mexico, USA. In 1995, the Motivational Interviewing Network of Trainers (MINT) was established. This

network comprised those who had completed TNT training and wanted a network to exchange ideas for research and training (MINT, 2008). The first international meeting for MI trainers was held in Malta in 1997. These meetings have alternated between Europe and America since then. The MINT network has grown each year, enrolling an influential group of clinicians, teachers, and researchers. Recent years have seen a proliferation of MI training resources, including textbooks, manuals, training video tapes, a supervision manual, and websites (Martino, Ball, Nich, Frankforter, & Carroll, 2008).

During the 1990s, MI was increasingly used in various health care settings other than those dedicated to the treatment of addictions. This development led to the publication of a second book on MI in 1999, *Health Behavior Change – A Guide for Practitioners*, written by Rollnick, Mason, and Butler (1999). The book was geared towards MI work by general health care professionals. In 2002, a second, thoroughly revised edition of *Motivational Interviewing – Preparing People for Change* was published. Miller and Rollnick delayed publishing it until they felt they had a substantial body of evidence to support the efficacy and effectiveness of the approach (Moyers, 2004). The book further developed the definition and principles of MI. The first part was translated into Swedish in 2003, and was the first book on MI in Swedish.

Since then, further books have been published; *Motivational Interviewing in the Treatment of Psychological Problems* by Arkowitz, Westra, Miller, and Rollnick is the first book to apply MI to mental health issues. The first world conference on MI was held in Interlaken, Switzerland, attracting 222 participants from 25 countries. Hence, 25 years after Miller's original article, MI research and practice show no signs of slowing down, instead continuing to expand and following a steep diffusion curve.

2.2. WHAT IS MI?

2.2.1. Definitions and general characteristics

MI was developed in part as a reaction to patient and provider dissatisfaction with the prescriptive nature of many addiction treatment approaches. Treatment at the time typically involved overt, aggressive confrontation, often in group and family settings, particularly in the United States, where 12-step approaches were predominant (Sellman, MacEwan, Deering, & Adamson, 2007). Confrontational therapies require that therapists should challenge

people with the strongest negative effects of their current situation to emphasize the threat. The resultant fear is thought to be the energizer of the change process. Another approach, rational-emotive therapy, involves confronting clients with their irrational cognitions, as defined by the therapist, and pressuring the client to change them (Miller, 1983). Commenting on such approaches, Miller believed that fear-inducing or pressuring communications can immobilize the individual, making the possibility of change more remote (Miller, Benefield, & Tonigan, 1993).

Although MI was first described in 1983, it was not until 1995 that Miller and Rollnick provided the first explicit definition of MI. They described MI as a directive, client-centred counselling style for eliciting behaviour change by helping clients to explore and resolve ambivalence (Rollnick & Miller, 1995). Miller and Rollnick revised this definition slightly in 2002, now defining MI as “a client-centred, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence” (Miller & Rollnick, 2002, p. 25). The definition of MI was further revised in late 2008 as “a collaborative person-centred form of guiding to elicit and strengthen motivation for change” (first announced by Miller on a MINT discussion forum in late December 2008 ahead of an article that was in press in *Behavioural and Cognitive Psychotherapy*) (Miller & Rollnick, 2009 p. 137).

MI assumes that most people hold conflicting motivations for change and often vacillate in their degree of motivation and ambivalence (Arkowitz & Miller, 2008). MI allows clients to openly express their ambivalence in order to guide them to a satisfactory resolution of their conflicting motivations, with the aim of facilitating desired behavioural changes (Rollnick & Miller, 1995).

It is not the MI counsellor’s function to directly persuade or coerce the client to change. Attempting to directly persuade a client to change will be ineffective because it entails taking one side of the conflict that the client is already experiencing. The result is that the client may adopt the opposite stance, arguing against the need for change, thereby resulting in increased resistance and a reduction in the likelihood of change (Miller & Rollnick, 1991). Hence, an important objective of MI is to increase a client’s intrinsic motivation to change, which arises from personal goals and values. This approach emphasizes helping a client to make their own decision to change, rather than the client being pressured from external sources such as others’ attempts to persuade or coerce the person to change (Arkowitz & Miller, 2008).

Clients must bear the responsibility of deciding for themselves whether or not to change and how best to go about it. The intention is to transfer the responsibility for arguing for change to the client by eliciting what is termed “change talk” (originally referred to as “self-motivating statements”), that is, overt declarations by the client that demonstrate recognition of the need for change, concern for their current position, intention to change, or the belief that change is possible (Miller & Rollnick, 2002). There is a good relationship between what people say they will achieve and what they actually achieve (Raistrick, 2007). The counsellor’s role in the process is to help clients clarify their motivations for change; provide information and support; and offer alternative perspectives on the present problem behaviours and potential methods for changing these behaviours (Miller & Rollnick, 2002).

There are typically two phases of MI sessions. The client is often ambivalent about change in the first phase and may be insufficiently motivated to accomplish change. Hence, the aim of this phase is to resolve the client’s ambivalence and facilitate increased intrinsic motivation to change. The client shows signs of readiness to change and this is the start of the second phase. This may be manifested by talk or questions about change and descriptions that suggest that the client is envisioning a future when the desired changes have been made. The focus in the second phase shifts to strengthening the commitment to change and supporting the client to develop and implement a plan to achieve the changes (Arkowitz & Miller, 2008).

MI is a relatively brief intervention, typically delivered within one to four sessions. However, there is no “pure” MI, as many studies have described modified MI approaches (Burke *et al.*, 2003). MI can be delivered as a freestanding intervention or as part of other treatments (Hettinga, Steele, & Miller, 2005). MI is often combined with other approaches such as cognitive-behavioural therapies.

2.2.2. *The spirit of MI*

Rollnick, Miller, and Butler (2008) have defined the so-called MI spirit in terms of three key characteristics:

- collaborative
- evocative
- honouring client autonomy

The MI spirit can be seen as the style or intention of the counsellor's disposition with the client. The spirit provides the foundation for the skills (also referred to as methods or techniques) of MI practice. Although the skills of MI can be taught, the MI spirit is more elusive and comes from within the practitioner. The spirit of MI involves an ability and willingness to be with a client enough to glimpse their inner world (Wahab, 2005).

According to Rollnick *et al.* (2008), MI assumes a collaborative partnership between the client and the practitioner. MI addresses a situation in which client behaviour change is needed, thus having a more specific goal than the client-centred method, which is a broad approach to the consultation. MI involves an active collaborative conversation and joint decision-making process between the practitioner and the client (Rollnick *et al.*, 2008).

Rollnick *et al.* (2008) posit that MI practitioners seek to activate clients' own motivation and resources for change instead of just giving them what they might lack, for example, medication or information. This involves connecting behaviour change with a client's values and concerns. This requires an understanding of the client's own perspective, by evoking the client's own arguments and reasons for change (Rollnick *et al.*, 2008). Rollick *et al.* (2008) argue that a certain degree of clinical detachment from outcomes is required when practicing MI. This detachment is not an absence of caring, but rather it is an acceptance that clients can make choices that may not result in the desired health improvements. It is important to recognize that the practitioner may inform or advise, yet it is ultimately the client who decides what to do. Recognizing and honouring the client's autonomy is an important element in facilitating behaviour change (Rollnick *et al.*, 2008).

2.2.3. *The principles of MI*

MI consists of four principles that underpin its skills (Miller and Rollnick, 2002):

- expression of empathy
- development of discrepancy
- rolling with resistance
- supporting client self-efficacy

The expression of empathy by a counsellor is a fundamental and defining feature of MI (Miller & Rollnick, 1991). It is assumed that behaviour change is only possible when the client feels personally accepted and valued. The counsellor's empathy is seen as crucial in providing the conditions necessary for a successful exploration of change to take place (Miller & Rollnick, 2002).

Developing discrepancy involves exploring the pros and cons of the client's current behaviours and of changes to current behaviours, within a supportive and accepting atmosphere, in order to generate or intensify an awareness of the discrepancy between the client's current behaviours and their broader goals and values. Developing discrepancy elicits movement towards consistency between the clients' behaviours and their core values (Miller & Rollnick, 2002).

Avoidance of arguing with a client about their need for change, that is, rolling with resistance, is seen as critical in MI. It is proposed that direct confrontations about change will provoke reactance in clients and a tendency to exhibit greater resistance, which will further reduce the likelihood of change. Clients may actively dispute the need for change, but the aim in MI is not to try to subdue clients and render them passive recipients of a counsellor's point of view through force of argument. Instead, the MI counsellor should reframe statements and invite clients to consider new information and perspectives (Miller & Rollnick, 2002).

Support for clients' self-efficacy in change is important because even if clients are motivated to modify their behaviours, change will not occur unless clients believe that they have the resources and capabilities to overcome barriers and successfully implement new ways of behaving. The MI counsellor supports self-efficacy by helping clients believe in themselves and become confident that they can carry out the changes they have chosen (Miller & Rollnick, 2002).

2.2.4. MI skills

Five foundational MI skills (also known as techniques or methods) that are consistent with the principles and spirit of MI have been described by Miller and Rollnick (2002):

- asking open-ended questions
- reflective listening
- affirmations

- summarizing
- eliciting change talk

Open-ended questions are used to allow clients to do most of the talking in MI counselling sessions. Reflective listening from practitioners helps clients verbalize and make their meanings more explicit. This is necessary because people do not always express their thoughts clearly because of concerns or they are simply not able to find the proper words to convey their experience. Open-ended questions help clients gain better access to their true feelings and thoughts, so that they can better be recognized (Arkowitz & Miller, 2008).

An MI counsellor should frequently affirm the client in the form of statements of appreciation or understanding in order to encourage and support the client during the change process. Summary statements are used to link and draw together the material that has been discussed, showing that the counsellor has been listening. Summaries are particularly useful to collect and reinforce change talk. Eliciting change talk is important to provide the client with a way out of their ambivalence (Miller & Rollnick, 2002). Change talk consists of statements reflecting desire, perceived ability, need, readiness, reasons or commitment to change (Arkowitz & Miller, 2008). Change talk is found to be associated with improved client outcomes in substance abuse treatment (Amrhein *et al.*, 2003; Baer *et al.*, 2008; Gaume, Gmel, Faouzi, & Daeppen, 2008). Several researchers (Catley *et al.*, 2006; Moyers & Martin, 2006) are investigating if there is a link between counsellor's MI consistent behaviour and clients' change talk. However, the body of evidence is small.

2.3. THEORETICAL INFLUENCES CONTRIBUTING TO THE DEVELOPMENT OF MI

There is no satisfactory explanation as to *how* and *why* MI can be effective. MI was not derived from theory, but rather arose from specification of principles underlying intuitive clinical practice (Hettinga *et al.*, 2005). MI has been criticized for essentially lacking a theoretical base (Draycott & Dabbs, 1998). Indeed, Miller and Rollnick (2002) have acknowledged that so far little attention has been paid to developing a theoretical underpinning to MI. However, although MI lacks a coherent theoretical framework, there are many theoretical influences contributing to the development of MI.

2.3.1. *Rogers' client-centred counselling*

The basis for the empathic counselling style of MI can be found in Carl Rogers' school of therapy, variously known as client- or person-centred therapy. First described in 1957, Rogers developed principles of reflective listening and believed that significant learning is only possible when the individual has confidence in his learning ability. The main agent of change in this approach was the therapist rather than a specific treatment method (Rogers, 1959). In essence, Rogers described what is now called a therapeutic relationship (Raistrick, 2007). However, MI differs from the traditional Rogerian approach in that it is also intentionally directive in seeking to move a client towards change by selectively eliciting and strengthening the client's own reasons for change (Miller & Rollnick, 1991).

2.3.2. *Cognitive Dissonance Theory*

MI's principle of developing discrepancy between a client's behaviours and their core values was first couched within the framework of Leon Festinger's Cognitive Dissonance Theory (Festinger, 1957). Cognitive dissonance occurs when an individual experiences some degree of discomfort resulting from an incompatibility between two cognitions or between a belief and a behaviour. The theory suggests that this conflict will cause an uncomfortable psychological tension, leading people to change their beliefs to fit their behaviour instead of changing behaviours to fit their beliefs, as conventionally assumed. Dissonance theory applies to all situations involving attitude formation and change. It is especially relevant to decision-making and problem-solving (Aronson, Fried, & Stone, 1991; Cooper, 2007).

2.3.3. *Theory of Psychological Reactance*

The MI principle of avoidance of arguing for change that is, rolling with resistance is influenced by the Theory of Psychological Reactance, first proposed by J.W. Brehm in 1966. The theory holds that a threat to, or loss of a freedom, motivates the individual to restore (or maintain) that freedom. When people perceive an unfair restriction on their actions a *state of reactance is activated*. Reactance is an intense motivational state. A person with reactance is emotional, single-minded, and somewhat irrational.

The theory associates reactance with emotional stress, anxiety, resistance and struggle for the individual, and assumes that people are motivated to escape

from these feelings. The motivational qualities of reactance are so strong that the person feels impelled to take action. People with reactance will try to get unfair restrictions removed or they will try to subvert restrictions (Brehm, 1966). The theory has received considerable attention within the field of mental health, where it has been widely tested. Reactance has been shown to play a useful role in boosting the efficacy of psychotherapy and in dealing with client resistance (Dowd, 1993; Fogarty, 1997).

2.3.4. Bandura's self-efficacy concept

The MI principle of supporting clients' self-efficacy draws on Albert Bandura's Social Learning Theory, first described in 1977. Self-efficacy is the belief that one is capable of performing in a certain manner to attain certain goals. An important principle of Social Learning Theory is that self-efficacy is more strongly learned, and mastery of the new behaviour more durable, when an individual is an active participant in behaviour change (Bandura, 1977).

The self-efficacy concept is also part of Bandura's Social Cognitive Theory, first explained in 1986. The theory proposes that behaviour is determined by incentives and expectancies. It predicts that behaviours are changed when a person perceives control over the outcome, encounters few external barriers, and feels confidence in their own ability, that is, self-efficacy (Bandura, 1986). High self-efficacy has been shown to be an important predictor of behaviour change (Armitage & Conner, 2000).

2.3.5. Stages of Change model

MI has been closely aligned with James O. Prochaska and Carlo C. DiClemente's Stages of Change model, first described in 1983 (Prochaska & DiClemente, 1983). In fact, Miller made reference to the model in his original paper on MI that same year. There are obvious similarities between MI and the Stages of Change model, although they were developed independently (Arkowitz & Miller, 2008).

The Stages of Change model posits that individuals progress through five distinct stages while undergoing behavioural changes: pre-contemplation (no intention to change the behaviour in the foreseeable future); contemplation (consider making a change in the next 6 months); preparation (preparing to make a change); action (actively engaged in making a change); and maintenance (the change has been maintained for 6 months). All individuals

are held to move through these changes, but it is assumed that the rate of progression will vary dramatically between individuals and behaviours (Armitage & Conner, 2000). The model gives helpful guidance in understanding the tasks that need to be accomplished for motivational and behavioural change (Raistrick, 2007).

Miller has described MI and the Stages of Change concepts as “kissing cousins” (Rollnick, Miller & Butler, 2008). They have shared characteristics, including the approach to motivation as a process of change and the view of ambivalence as an integral part of the change process (Tober & Raistrick, 2007). However, MI is primarily concerned with the early stages of change, by resolving ambivalence for enhanced motivation in the direction of action (Arkowitz & Miller, 2008).

2.3.6. Self-Determination Theory

More recently, Self-Determination Theory has been proposed as a theoretical rationale for an improved general understanding of how MI works (Markland, Ryan, Tobin, & Rollnick, 2005; Vansteenkiste & Sheldon, 2006). Self-Determination Theory is a theory of personality development and self-motivated behaviour change and maintenance that has been under development since the 1970s, with particularly important contributions by Edward L. Deci and Richard M. Ryan. It assumes that people have a natural tendency to be curious about the world and are innately motivated to explore it, and to better themselves and right themselves when something is wrong. The theory proposes that all behaviours can be described as lying along a continuum of relative autonomy (or self-determination), reflecting the extent to which a person endorses and is committed to what they are doing. Self-Determination Theory focuses on autonomy support as a crucial determinant of optimal motivation and positive outcomes. Autonomy is the need to perceive oneself as the source of one’s behaviour (Deci & Ryan, 2002). Autonomy support, then, is the practitioner’s support of independence in the client.

Three components of autonomy support have been differentiated: the person in authority (counsellor, teacher, parent, etc.) should acknowledge the perspective of the person being motivated; there should be as much choice as possible within the limits of the context; and there should be a meaningful rationale in those instances when choice cannot be provided (Deci, Eghrari, Patrick, & Leone, 1994). It has been suggested that many MI principles and

skills are consistent with this concept of autonomy support, including reflective listening and summarizing, which help increase the client's self-awareness, thus facilitating making more autonomous choices (Vansteenkiste & Sheldon, 2006). It has been shown that clients who experience autonomy-supportive counsellors benefit most from treatment (Williams, 2002; Sheldon, Joiner, Petit, & Williams, 2003).

2.4. THE EVIDENCE BASE OF MI

The efficacy and effectiveness (the terms are often used interchangeably in studies) of MI in achieving behavioural changes have been examined in a large number of randomized controlled trials (RCT) on behavioural changes published since the late 1990s. These studies have been conducted in various settings and for a number of health-related behaviours, including alcohol, drugs, diet, exercise, and smoking. The largest body of literature concerns the use of MI to address alcohol abuse and dependence, which was the original purpose of the approach (Miller, 2004).

The cumulative evidence regarding the efficacy and effectiveness of MI concerning behavioural changes has been documented in nine systematic reviews and six meta-analyses of MI study data. Three of the systematic reviews and meta-analyses, Burke *et al.* (2003); Rubak *et al.* (2005) and Lundahl *et al.* (2009), have particular relevance to this thesis because they covered all RCTs that had been conducted at that time (further RCTs have been conducted since then although no new systematic reviews have been published).

The 2003 meta-analysis/systematic review by Burke *et al.* (2003) encompassed 30 RCTs of MI efficacy. A meta-analysis is a technique for quantitatively integrating findings from multiple studies on a given topic (Polit & Beck, 2006). Burke *et al.* (2003) noted that few of the MI studies could be described as being "pure MI", as they modified the method in some way, and hence should be considered adaptations of MI. However, all of the studies included in the analysis incorporated the four basic principles of MI (expressing empathy, developing discrepancy, rolling with resistance, and supporting client self-efficacy). The meta-analysis showed that MI interventions were equivalent to other active treatments in terms of comparative efficacy and superior to no treatment or placebo controls for problems involving alcohol, drugs, diet, and exercise. However, there was no support for the efficacy of the interventions in the areas of smoking cessation and HIV-risk behaviours (Burke *et al.*, 2003).

The meta-analysis/systematic review by Rubak *et al.* (2005) included data from 72 RCTs. Nearly two-thirds (64%) of the studies in which MI was used for counselling lasting 15 minutes or less were effective in changing behaviour. The meta-analysis demonstrated significant effects for MI for reducing body mass index, total blood cholesterol, systolic blood pressure, blood alcohol concentration, and standard ethanol content. However, MI approaches were not significantly effective for reducing smoking or for reducing blood glucose levels (Rubak *et al.*, 2005).

Lundahl and Burke (2009) reviewed the support for MI from three meta-analyses (Burke *et al.*, 2003; Hettema *et al.*, 2005; Vasiliki, Hoiser, & Cox, 2006) and a fourth constructed by the authors (Lundahl, Kunz, Brownell, Tollefson & Burke, 2010) that included 119 studies. There was overlap between the four meta-analyses. They found that MI is significantly (10–20%) more effective than no treatment and generally equal to other treatments for problems such as substance abuse (alcohol, marijuana, tobacco and other drugs) for reducing risky behaviours and increasing client engagement in treatment. MI has been applied to other health behaviours. There are few studies in each of these areas and the evidence is still limited.

Suarez and Mullins (2008) published the first systematic review that investigated the effects of MI with regard to health behaviour change in paediatric populations (age 18 years and younger). Their study covered nine RCTs specific to health-related MI interventions, including diabetes, healthy eating, dental care, increased contraceptive use among adolescents and reduced second-hand smoking (studies on substance use behaviours and treatments were excluded). The authors concluded that MI appeared to be feasible for a wide range of paediatric issues. However, they regarded the evidence for its efficacy to be preliminary. Furthermore, the breadth of behavioural domains in which there was proven effect for paediatric populations was considered limited.

2.5. DIFFUSION, DISSEMINATION, AND IMPLEMENTATION OF MI

MI has spread very rapidly in the past two decades, with an ever-growing number of studies since Miller's first article was published in 1983 (figure 1). Several hundred publications are now available. The large research interest in

MI has been paralleled by widespread implementation, that is, actual usage in practice. MI was first used in the addiction field before spreading to various health care and health promotion fields. More recently, MI has expanded into schools and correctional systems (Arkowitz & Miller, 2008).

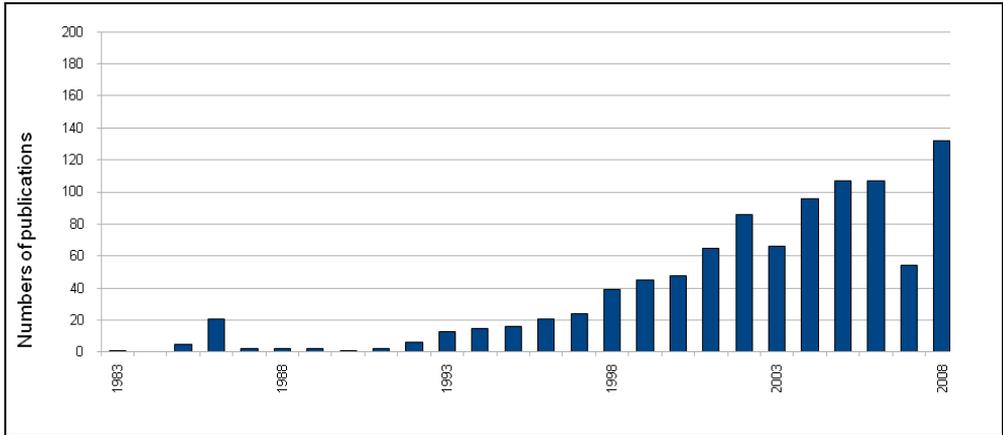


Figure 1: Publications on MI between 1983 and 2008. Source: Data reported by MINT Library Bibliography (2008).

MI has spread to various health care settings through diffusion (i.e. the passive, unplanned, and informal spread of innovations) and dissemination (which is the more active, planned, and formal spread of innovations (Greenhalgh, Robert, Bate, Macfarlane, & Kyrkiakidou, 2005). In Sweden, the use of MI has been actively supported by several state agencies and advocated in various governmental initiatives. The Swedish National Institute of Public Health, which is a state agency under the Ministry of Health and Social Affairs, has encouraged the use of MI for counselling on smoking, alcohol, physical activity, gambling, by providing financial support for MI training for health care professionals and by housing a website with manuals and interactive training programmes (The Swedish National Institute of Public Health, 2009).

More than half of all practitioners in Swedish primary health care, child health care, maternity health care, and occupational health services participated in MI training programmes during 2005–2010 as part of the Risk Drinking

Project, supported by the Swedish National Institute of Public Health. The project was aimed at giving questions about alcohol consumption an obvious place in everyday health care (Swedish National Institute of Public Health, 2010). The Swedish National Food Administration has promoted the use of MI in an action plan for healthier dietary habits and increased physical activity in primary health care, child health care, maternity health care, dental care, and school health care services (National Food Administration, 2005). A Swedish government bill for a “renewed public health policy” advocates the use of MI in the field of physical activity, smoking cessation and alcohol (Swedish Government Bill, 2008). The state-owned pharmacy chain, Apoteket AB, has promoted the use of MI, and the Swedish correctional system has implemented an adaption of MI (Farbring & Johnson, 2008).

The foundation of the Motivational Interviewing Coding (MIC) Lab in 2005 represents another step towards implementation of MI in Sweden. This lab has been established at the Department of Clinical Neuroscience, Division of Addiction Research, Karolinska Institute, Sweden, as a resource for coding MI counsellor behaviour in taped MI sessions. The lab can be used as part of MI training efforts or provide a quality control function of MI use (Forsberg, Källmén, Hermansson, Berman, & Helgason, 2007).

Multiple factors contribute to the diffusion and dissemination of MI, both in Sweden and around the world. Although the scientific evidence base for the approach is growing, the primary appeal of MI may be its wide application in many different behavioural domains and client populations. MI is also compatible with many different treatment approaches, which permits its integration into many clinical practices (Baer, Kivlahan, & Donovan, 1999; Ball *et al.*, 2002; Steinberg *et al.*, 2002). A further appeal is that MI is a brief intervention, which is important for its use in the many settings where time is highly restricted (Rubak *et al.*, 2005). The use of MI usually results in at least modest success within relatively few sessions (Burke *et al.*, 2003; Hettema *et al.*, 2005). It has also been noted that health care professionals find MI intuitively appealing because they tend to view the MI principles and skills as consistent with how they work, that is, they consider themselves as highly empathic, reflective, and collaborative with clients (Ball *et al.*, 2002).

The rapid diffusion and dissemination of MI has raised questions about protection of MI so that it does not evolve into a method that is not MI. The MI coding systems described earlier, MITI and MISC, make it possible to control

for proficiency in MI, and they were the first steps to certification of MI counsellors. The MI certification question has been engaging the MINT society for several years and there is still no mutual consent about MI certification (IAMIT/MINT listserve, 2010). But prominent MI researchers and trainers have supported MiCampus, which is a company offering services via the internet and its offices in the Netherlands and the United States. MiCampus provides a range of training, practice development and certification opportunities (MiCampus, 2010).

3. LEARNING MI: A THEORETICAL FRAMEWORK

This chapter begins with descriptions of how MI training is usually conducted in workshops and what elements are involved in learning MI. This is followed by a discussion of challenges involved in learning MI that have been recognized in research. Different learning theories and perspectives are described for improved understanding of how general health care providers learn MI. The chapter ends with a section on the application of different learning theories in the context of MI.

3.1. TRAINING TO LEARN MI

Most MI training for clinicians is provided in the form of workshops lasting one or two days. Such workshops usually include an introduction to the philosophy and principles of MI, demonstration of the method, and a variation of guided practice in learning the skills (Bennett, Hayley, Vaughan, Gibbins, & Rouse, 2007). These workshops mix didactic, observational, experiential, and practice activities (Rosengren, 2009).

The importance of practicing MI with feedback and response from the MI trainer has been emphasized in the MI literature. For example, Rosengren (2009, p. 2) has the following example in his book about training MI: “practicing MI without receiving response is like hitting golf balls in the dark”, “one may know how the swing feels, but there is no information about what happened and what adjustments need to be made”. Rollnick *et al.* (2008, p. 178) emphasized that “you learn this method by doing it in a situation in which you can get feedback about how you’re doing”. Learning how to react to client responses is also considered an important part of becoming proficient in MI. Rosengren (2009) believes reactions to client behaviour indicate the extent to which an MI practitioner is applying MI skills and principles in a consistent way.

Rosengren (2009), who has been an MI trainer for approximately 15 years, has summarized his experiences of MI training in five elements:

- Tell – using brief didactic or exercise to elicit information
- See – observe or recognize the skill in action
- Do in slow motion – often writing task or skill in isolation, many times done in a group situation
- Perform – isolate skills and do them in real time
- Build – work from easier to more complex skills and chain more complicated skills together

Rosengren (2009) does not explain the five elements in further detail, but he provides a number of reasons for his approach. He advocates the use of multiple training modalities because it engages different learning styles, such as learning by imitating others and reflecting upon interactions with others. Slowing down is important to allow people to experience the complexity of the skills. Stepping people through the skill, before asking them to produce it in real time builds confidence in their ability to do so.

The process of learning different MI components has been described by Miller and Moyers (2006). Based on their own experiences from MI training, they have identified eight stages that MI practitioners progress through to become competent in the use of MI:

- Becoming familiar with the underlying philosophy of MI (collaboration, evocation, and autonomy)
- Acquiring basic MI skills to become proficient in the ability to use open questions, affirm the client's responses, apply accurate reflections and provide summaries when necessary
- Recognizing and reinforcing change talk
- Eliciting and strengthening change talk
- Rolling with resistance to avoid confrontations and argumentation
- Developing a plan, which may be initiated by the client and counsellor asking "what next?"
- Helping the client to commit to the change plan, and
- Ability to switch between MI and other intervention styles

This model is intuitively designed, but there is some empirical support for these stages. Miller & Moyers (2006) have found that the understanding of the MI spirit is a predictor of other MI skills, which suggests that the logical initial focus of MI training should be the MI spirit. Although the steps seem logical,

Rosengren (2009) believes that the sequential structure implies that there is one correct order and that one completes one stage before moving on to the next. Instead, he suggests re-conceptualizing the steps as eight tasks of learning MI rather than eight stages.

3.2. CHALLENGES OF LEARNING MI

Research has shown that MI workshops usually result in some immediate gains in MI proficiency, such as improvements in the participants' knowledge concerning attitudes to and confidence in working with clients (Baer *et al.*, 2004; Miller & Mount, 2001; Miller, Yahne, Moyers, Martinez, & Pirritano, 2004; Rubel, Sobell, & Miller, 2000). However, research also suggests that it may be difficult to unlearn or suppress prior counselling behaviours, including practices that may be inconsistent with MI. Hence, it has been suggested that learning MI involves at least two processes, adding preferred behaviours and unlearning of non-preferred behaviours (Miller & Mount, 2001).

A common finding is that participants self-report larger increases in MI skills than what is reflected in observational measures (Miller & Mount, 2001). However, these gains have not been shown to endure over time and, hence, may have limited impact on client outcomes (Martino, Carroll, & Ball, 2007). Systematic post-training support, supervision or training appear to be necessary for long-term adoption of skills (Martino *et al.*, 2008; Miller *et al.*, 2004; Sholomskas *et al.*, 2005; Walters, Matson, Baer, & Ziedonis, 2005). Rosengren (2009) suggests that MI proficiency does not guarantee maintenance of these skills, because maintenance and proficiency are not the same. He believes that maintaining MI skills requires further coaching and institutional support.

It has widely been recognized that MI is a difficult counselling approach to learn and master. For instance, Simpson (2002) placed MI at the complex end of a continuum of interventions when evaluating the complexity of different substance abuse interventions. Hence, insufficient fidelity to the MI spirit, principles, and skills may simply be due to the inherent complexity of MI (Miller & Mount, 2001; Tober & Raistrick, 2007). Rollnick and colleagues (including Miller) believe that practitioners should adopt a lifelong learning approach to MI, as they view MI as "a complex clinical skill that is developed

and refined over the course of one's career, much like learning to play chess or golf or the piano" (Rollnick *et al.*, 2008, p. 177).

3.3. LEARNING THEORIES

Theories of learning may contribute to an improved understanding of how MI is learned. Theories can have different meanings in different contexts, but they can generally be seen as a set of formulations designed to understand or explain facts and observable events (Punch, 1998). Hence, a theory can be seen as an analytical tool for understanding and explaining a given subject matter.

Many different theories about learning exist. The concept of learning has been defined and understood differently by different researchers, with variation across time and traditions. Three main categories of theories or perspectives on learning are usually distinguished:

- Behaviourism
- Cognitivism
- Constructivism

Constructivism is usually described as a variety of cognitivism. This is because constructivism assumes that learning involves cognitive processes. Social constructivism is sometimes grouped together with various socio-cultural approaches to learning that emphasize the interdependence of social and individual processes in the construction of knowledge.

Behaviourism views learning in terms of behaviour change. Cognitive theories emphasize the connection between learning and internalizing knowledge. In cognitive theories, learning is seen as a means of obtaining knowledge from outside the learner, whereas constructivism assumes that learning occurs when knowledge is constructed by the learner (Illeris, 2006). Regardless of many differences, however, it is widely acknowledged across different learning theories that learning implies some sort of *change* and that the individual in some way is different from before this learning took place (Crow, 1972).

The learning content (i.e. what is learned) has traditionally been viewed in terms of knowledge, skills, and, to some extent, attitudes. However, more recent perspectives consider the content more broadly, including aspects such

as insights, understanding, opinions, and personal characteristics such as self-confidence and social and cooperative skills (Illeris, 2006).

3.3.1. *Behaviourism*

Learning in behaviourism is viewed as behavioural changes that result from an individual's response to a stimulus, for instance, the provision of information or showcase of a skill. Behaviouristic learning approaches are usually understood in terms of an expert such as a teacher or counsellor transmitting knowledge to the learner. This learning may take the form of questions (stimulus) and answers (response) that expose the learner to a subject in gradual steps. The learner is conditioned to respond as they receive immediate feedback. Progress is typically achieved in small incremental steps that build towards a positive learning outcome (Phillips & Soltis, 2009). Reinforcement is a key feature of behaviourism. This reinforcement may be anything that enhances the desired response, for instance, positive feedback on a test (Caley, 2006).

Behaviourism achieved a great deal of importance from the 1920s to the 1960s. Researchers in behaviourism had a desire to transform psychology into a natural science by focusing the research on events that were visible and measurable. They claimed that knowledge about what goes on in the mind was unnecessary to understand or explain behaviour (Hunt, 2007).

3.3.2. *Cognitivism*

With time it became increasingly evident that behaviourism could not explain all behaviour. There were new discoveries concerning phenomena that behaviourists chose to ignore, such as memory, perception, motivation, personality traits, creativity, child development, and interpersonal relations. These new findings paved the way for the so-called cognitive revolution in the 1960s (Hunt, 2007). This meant that the behaviouristic focus on behaviour was replaced by an interest in cognitions and the active involvement of the mind in learning. Cognitivism thus represented a paradigm shift from behaviourism (Hunt, 2007).

Cognitivism regards an individual's behaviour as the thoughtful outcome of perceptions, beliefs, motivation, memory, and understanding. The learner is sometimes seen as an "information-processing machine", whose task is to internalize knowledge that exists "out there" (Ally, 2004). Learning is aided by

a process of facilitation and support, so that the learner is supported to acquire knowledge and skills through the appropriate exposure to learning materials and by solving given problems (Caley, 2006). Piaget was an early proponent of a cognitivist approach to learning that focused on mental processes rather than observable behaviour (Phillips & Soltis, 2009).

3.3.3. *Constructivism*

The idea that there exists knowledge “out there”, independent of the person who has the knowledge, is challenged in constructivist approaches to learning. Constructivism posits that the only knowledge we have is personal to ourselves and that learning is the meaning we construct out of our own experience (Phillips & Soltis, 2009). The act of learning becomes inseparable from the construction of meaning because learning is closely linked to personal experience (Karlsson Vestman, 2004).

Individual constructivism has been described as a process of knowledge construction that takes place individually, within each learner. In contrast, social constructivism is concerned with people working together to construct their understanding. Social constructivism presumes that knowledge is socially constructed and that our knowledge is closely associated with the social circumstances in which we exist. Dialogue is seen as an important way to construct knowledge, which means that opportunities for discussion and debate are seen as important to the process of learning (Caley, 2006).

Vygotsky was an early proponent of social constructivism. He was active in the 1920s, working with collaborators in Russia, but his work first became widely known in the 1960s. Vygotsky rejected certain assumptions in cognitivism. He did not believe, for example, that it was possible to separate learning from its social context. Vygotsky instead emphasized that knowledge is a part of the context (Phillips & Soltis, 2009). Carl Rogers was another early proponent of social constructivism. He did not think it was possible to teach a person directly, but believed that a teacher can only facilitate learning by contributing to creating an environment in which people can be stimulated to think and act beyond their current level of competence (Säljö, 2000).

3.3.4. *Formal and informal learning*

Social constructivism and other socio-cultural approaches to learning assume that learning takes place continuously in everyday experience. This type of

learning in the course of daily life is usually referred to as informal learning. This type of learning has been contrasted with formal learning, which is assumed to take place off the job and in classroom-based educational settings outside the working environment (Lee *et al.*, 2004).

Behaviouristic and cognitive approaches to learning have traditionally been more associated with formal learning, in which knowledge is transmitted from an expert to a learner. Constructivism instead views learning in terms of a personal experience that must be supported by others, but it does not require an expert (Caley, 2006).

The importance of informal learning for acquiring and developing the skills and competencies required at work has been increasingly recognized (Conlon, 2004). Marsick and Watkins (1990) concluded that four-fifths of what employees learn comes from informal workplace learning, whereas more formalized, structured training represents only 20%. Other estimates claim that closer to 90% of workplace learning occurs through informal means (Sohoran, 1993).

Informal and formal learning can be distinguished in terms of four attributes (Malcolm, Hodkinson, & Colley, 2003):

- Learning process
- Location and setting
- Purposes
- Content

Informal learning implies learning processes that are incidental to an everyday activity such as work, whereas formal learning usually is characterized by involvement in tasks that a teacher has structured. Informal learning occurs wherever people meet, such as in the family, in the workplace and in the community. Informal learning has few time restrictions, no specified curriculum, and no particular learning objectives. In contrast, formal learning usually takes place in educational institutions and this learning involves time restrictions, a curriculum, and predetermined learning objectives. Learning is the deliberate aim and the focus of activity in formal learning. Development of something new is implied in informal learning, whereas formal learning typically involves the acquisition of established expert knowledge and practices (Malcolm *et al.*, 2003).

Informal learning tends to be described in positive terms. However, some researchers have also pointed to negative aspects associated with this type of learning. For instance, Dale and Bell (1999) argue that it is difficult to accredit or use formal learning for formal qualifications. They also express concern that practitioners may learn poor habits or the wrong lessons if they become too dependent on informal learning. Meanwhile, Conlon (2004) suggests that informal learning can leave practitioners without direction. He emphasizes the importance of having a strong mentor or a supportive colleague to support learning at work on the basis of informal learning. Svensson, Ellström, and Åberg (2004) believe that informal learning, which is experience-based, is not enough to achieve sufficient competence at work. They argue that learning also requires explicit knowledge that cannot be acquired by experience. The learner must have access to conceptual tools and explicit knowledge about the task and processes involved in work to be able to identify and interpret their experiences.

3.4. APPLYING LEARNING THEORIES TO MI

Different theories about learning can be discussed in the context of learning MI. Learning MI in workshops can be seen as formal learning of MI, whereas the clinical use of MI in everyday health care practice provides opportunities for informal learning of MI. The knowledge base for this section is the research literature and the author's own experiential knowledge concerning MI training.

Certain elements of typical MI workshop training can be understood from a behaviouristic perspective (Miller & Moyers, 2006). Participants in workshops are usually guided by an MI trainer to practice small steps, and each step is a prerequisite for the next. Achievement of proficiency in a certain skill depends on all skills that have been acquired before this skill.

MI workshops also include specific training on how to respond to reactions from clients, for example, their change talk or various forms of resistance, thus allowing the MI practitioner to build a repertoire of behavioural responses to client stimuli, very much in accordance with behaviouristic emphasis on learning through stimulus and response.

Using feedback from skills assessment instruments (such as MITI, MISC, etc.) to ensure that practitioners adhere to the basic practices of MI is another means of reinforcing MI-consistent behaviours. Rollnick *et al.* (2008, p. 178) have emphasized that "practice without feedback is not particularly helpful and can easily produce bad habits".

Informal learning of MI could also be said to have some behaviouristic characteristics. For instance, the practitioner's positive or negative response to reactions from clients can affect the clinical use of MI in different situations. Pleasant experiences with clients are more likely to lead to increased interest in using MI than if client responses are negative.

Formal learning of MI in workshops can also be understood from a cognitive perspective. MI workshops use deliberate step-by-step procedures to facilitate the participants' active assimilation and accommodation of new information, which can be seen as a cognitive approach to acquiring knowledge. The focus of MI workshops is on acquiring knowledge and skills. The workshops present knowledge that is established and agreed upon by experts to be correct, in accordance with cognitive approaches to learning. The expert is a facilitator or guide to help the learners internalize knowledge and skills. An important aspect of MI training in workshops is learning by doing to obtain MI skills that can be transferred into clinical practice.

Informal learning of MI can also be supported by keeping up with advances in the field through reading books and articles on the subject. Critical reflection upon one's own and colleagues' experiences with clients in health care practice provides an important means to improve MI proficiency. Rollnick *et al.* (2008) suggest using peer consultations and support groups that meet regularly to discuss MI and each other's practice.

Individual and social constructivism provides further understanding of elements of both formal and informal learning of MI. Participants in MI workshops actively construct new personal knowledge by combining new information and knowledge about MI with their own prior knowledge, experiences, and ideas concerning MI, counselling, and related issues. New knowledge typically goes through processes of interpretation, negotiation, and social influence before it leads to changes in thinking and behaviours. This suggests that practitioners may create their own unique versions of MI and

that the practice and clinical use of MI may therefore differ between individuals.

Social constructivism is also relevant for understanding how MI is learned in health care practice. Clinical cooperation and teamwork provide learning opportunities for the MI practitioner to both observe and reflect upon others' way of handling different situations with clients. Group norms and role expectations can be powerful influences on individuals' attitudes, beliefs, and behaviours in a group or team, thus impacting on the degree to which MI is actually applied in clinical practice following workshop training. There are also workplace norms and culture that may influence practitioners' thinking and behaviour concerning when and how to use MI.

Social constructivism implies that the delivery of MI will differ depending on the context due to the context-dependent nature of knowledge and learning. This is something that is debated in the MI community, as many have expressed concern that the method is not applied with sufficient fidelity to the MI spirit and principles. Many studies concerning clinical use of MI lack verification to ensure that MI was in fact delivered as intended (Brown & Miller, 1993; Burke *et al.*, 2003; Handmaker, Hester, & Delaney, 1999).

4. AIMS

This chapter describes the overall aim of the thesis, followed by a description of the specific aims of the four studies that comprise the thesis.

4.1. OVERALL AIM

The overall aim of this thesis is:

To contribute to improved understanding of factors that influence the learning and clinical use of MI in general health care.

4.2. SPECIFIC AIMS OF THE FOUR STUDIES

The four studies had the following aims:

Study I: Feasibility of using motivational interviewing in a Swedish pharmacy setting

To identify barriers, facilitators and modifiers to the use of MI with pharmacy clients in community pharmacies.

Study II: Applying motivational interviewing to counselling overweight and obese children

To identify the barriers and facilitators to use of MI with overweight and obese children accompanied by their parents in child welfare and school health services.

Study III: Applying motivational interviewing (MI) in counselling obese and overweight children and parents in Swedish child health care

To evaluate the attitudes towards MI and the clinical use of MI with children's weight issues one year after child health care nurses' participation in an MI training course.

Study IV: A systematic review of motivational interviewing training for general health care practitioners

To evaluate the contents and outcomes of MI training for general health care professionals.

5. MATERIALS

This chapter describes the materials, that is, the study subjects, for the three studies that involved study participants (studies I, II, and III). Details about the MI training content and the use of MI are provided for these three studies. Study IV did not include study participants as this was a systematic review of 10 studies.

5.1. STUDY PARTICIPANTS

The participants in study I were 15 community pharmacy pharmacists in Östergötland, Sweden. Interviews were also conducted with a project leader from Apoteket AB and managers from the two pharmacies involved (the managers also worked as pharmacists).

The participants in study II were five child welfare centre nurses from the County Council and six municipally employed school health service nurses, all from Östergötland, Sweden.

In study III, the study participants were 76 nurses, who were recruited from 33 different child health care centres in Östergötland, Sweden.

5.2. MI TRAINING AND PRACTICE

This section describes the training and subsequent practice in studies I, II, and III.

5.2.1. Study I

In study I, an agenda chart was developed (Stott, Rollnick, Rees, & Pill, 1995) for the MI counselling. This chart presented a menu of health behaviour options based on good eating habits and physical activity (Rollnick *et al.*, 1999) to guide the discussion and help with setting priorities. An importance ruler was used to determine the perceived importance of behaviour change to the client and a confidence ruler assessed how confident the client was to make the change (Rollnick *et al.*, 1999). These rulers were presented to the parents for

their assessment of the importance of and their confidence in the child's weight reduction.

A project team was formed in study I consisting of an MI trainer from the County Council of Östergötland (first author of the study), a project leader from Apoteket AB, and two pilot pharmacists from two community pharmacies in Östergötland County, Sweden. The MI trainer held a 2-day workshop for the three other project team members. The training consisted of the following elements: what is motivation?; the philosophy of MI, asking open questions; reflective listening; affirmation; summarizing; eliciting and responding to change talk; asking permission to give advice; responding to resistance and working with ambivalence. Training was based on descriptions in Rollnick *et al.* (1999) and Miller and Rollnick (2002).

The pilot pharmacists and the MI trainer in study I assembled a two-sided pocket-sized card to adapt MI for use in pharmacy settings. The card included pointers on how to open up communication about lifestyle issues with certain client groups, for example, smokers and people with high blood pressure or high lipids. The card also included examples of questions to encourage clients to talk about their desired health and behaviour changes. There were also examples of selected skills such as open-ended questions, summaries, and assessment of clients' importance attached to behavioural changes, and client confidence in making these changes. The back cover of the card showed an importance and confidence ruler to be used with clients, as described by Rollnick *et al.* (1999).

Following the initial project team training in study I, the MI trainer and the project leader from Apoteket AB introduced the MI project at the two community pharmacies where the pilot pharmacists were recruited. All 15 pharmacists at the two pharmacies were invited to participate in two 2-hour MI training sessions using material from the assembled card. All agreed and took part in the two sessions. The pharmacists then began using MI at the two pharmacies. One pilot pharmacist at each pharmacy worked side by side with the other pharmacists at the counters, applying MI with clients and providing informal feedback on their colleagues' use of MI as a means of improving their MI skills and their overall client communication. The pharmacists were also offered hands-on training from the pilot pharmacists with whom they could also discuss any difficulties they encountered when practicing MI.

A formative evaluation in study I was conducted shortly after the second of the two training sessions for the pharmacists. This involved the pharmacists answering some questions, with the aim of assessing their initial experiences of using MI. The questions focused on the clients that the pharmacists had communicated with, including the lifestyles under discussion, and the pharmacists' confidence in carrying out the counselling. Based on the responses from this assessment, the MI trainer supervised the pharmacists in small groups in their MI use for approximately 2 hours with the intention of achieving improved MI skills through direct feedback on their practice.

5.2.2. Study II

In study II, the five child welfare centre nurses and six school health service nurses were trained for 2 days in MI. The basic content of the training was as follows: what is motivation?; asking open questions; reflective listening; affirmation; summarizing; eliciting change talk; respond to change talk; permission to give advice; responding to resistance; working with ambivalence; and using agenda charts (Miller & Rollnick, 2002).

A manual based on Miller & Rollnick (2002) was assembled in study II for the nurses' practice in MI. It contained guidelines on the following counselling aspects: establishing interest in the child's weight after the weight check-up; encouraging the parents to describe their knowledge about obesity, overweight, and behaviour change; provision of clear, non-judgemental information that the client can absorb and reflect upon; introduction of the agenda chart; building motivation for change by using the readiness and confidence rulers.

The nurses in study II practised MI for 6 months in their routine work after the 2-day training. They counselled overweight and obese children aged 5 and 7 years in health controls. The children were usually accompanied by one or two parents. The nurses attended four follow-up sessions during this 6-month period to discuss problems that they had encountered in their counselling practice and to receive feedback on how to handle difficult counselling situations.

5.2.3. Study III

The training in study III lasted 2 days. The first day comprised lectures and seminars devoted to children's weight progress and various health aspects of

overweight and obesity. The second day focused on MI theory, and hands-on training on the philosophy of MI, what is motivation, asking open-ended questions, reflective listening, summarizing, eliciting and responding to change talk, permission to give advice, responding to resistance, using agenda charts, and developing a change plan with the parent.

For 12 months the child health care nurses practised MI in discussions in their regular work with parents and their children about weight issues and related habits such as physical activity and eating habits. They were supported by their leaders to use the MI method for weight issues.

5.3. ETHICAL CONSIDERATIONS

In study I, all respondents were sent a letter with information about the interview a few weeks before the interviews. The respondents were offered confidentiality. Ethics Committee approval was not required in study I because there was no research conducted on clients. The pharmacists gave mutual consent before the interviews.

Study II was approved by the Ethics Committee of Linköping University. The nurses in the study received a letter explaining that the interview would be recorded on tape and that their confidentiality would be respected. Everyone agreed to participate although one person was unable to attend the interview because of illness.

In study III, all respondents were informed about the purpose of the study by letter. Participation was voluntary and confidentiality was guaranteed. This study was not assessed by an ethics committee because patients were not involved.

There was no need for ethical consent in study IV, as it was a systematic review of studies.

6. METHODS

This chapter describes the methods of the four studies comprising the thesis. The research methodology, that is, the overall approach to studying a topic, is described. This is followed by a description of the data collection in the studies. The chapter ends with information about the analysis of the data in the four studies.

6.1. RESEARCH METHODOLOGY

The studies of this thesis used different research methodologies. Studies I and II relied on qualitative methodology (interviews); study III used a quantitative methodology (questionnaire). The systematic review in study IV applied elements of both methodologies, as some of the reporting in the studies was quantitative whereas other data were qualitative.

6.1.1. *Studies I and II*

A qualitative research methodology was deemed most appropriate for studies I and II. This approach is considered useful for exploring the full nature of phenomena that are not fully understood (Polit & Beck, 2008). The study investigated the clinical use of MI by general health care practitioners, which is not a well-researched topic. A qualitative methodology was considered the best approach to obtain new knowledge about and insights into practitioners' use of MI with overweight and obese children, and about using MI in community pharmacies. The overall aims of the two studies were consistent with the goal of most qualitative research, that is, to develop a rich understanding of a phenomenon as it exists in the real world and as it is constructed by individuals in the context of the world (Polit & Beck, 2008).

Qualitative research does not seek to quantify or enumerate. Generally, it deals with words rather than numbers. It tries to interpret social phenomena in terms of the meanings people bring to them. People are studied in their natural environment rather than in experimental settings (Polit & Beck, 2008).

Data were obtained for studies I and II through interviews. Interviews are a well-established research technique in qualitative research. The qualitative

research interviews attempt to understand the world from the subjects' point of view (Kvale & Brinkmann, 2009). Both studies used semi-structured interviews. This type of interview has a loose structure, consisting of open-ended questions that define the area to be explored (Britten, 2006). The research team wanted to be sure that specific topics of interest were covered in their interviews (Polit & Beck 2008), and used a prepared interview guide to help direct questions. The interviewer's function was to encourage participants to talk freely about all the topics on the list and for participants to tell stories in their own words.

Studies I and II used focus groups. This approach has been well described and is extensively used in health care research to investigate concepts, ideas or professional responses to changing methods. Focus group interviews are useful for exploring people's opinions, views, and attitudes regarding a certain topic in an interactive setting (Kvale & Brinkmann, 2009). In group settings, issues are explored through interaction among the participants, rather than between the interviewer and the participants, which leads to greater emphasis on the participants' points of view (Morgan, 1988). The interpersonal processes in focus group interviews can help people to explore and clarify their views in ways that would be less easily accessible in one-to-one interviews. Focus groups are well suited for exploratory studies in a new domain, such as the studies in this thesis, because the collective interaction may bring forth more spontaneous views than individual interviews (Kvale & Brinkmann, 2009).

In addition to focus group interviews, study I also included five individual interviews, with the aim of achieving a better understanding of all aspects of the project by obtaining information from key informants who had been involved with the project from the outset. This was a strategy to yield the fullest possible understanding of the phenomenon of interest.

6.1.2. Study III

Study III investigated the attitudes towards MI and the clinical use of MI among child health care nurses 1 year after they had participated in an MI training course. A quantitative research methodology was considered most appropriate for this study. This type of methodology is often used in studies to search for relationships between attributes (Bowling, 2002). The study examined the relationship between participation in the training and the practitioners' attitudes and practice. Quantitative research methodology usually requires pre-existing knowledge for which reliable measurement have

been or can be developed (Bowling, 2002). Study III was conducted after the completion of studies I and II, and the researchers behind study III argued that they had obtained sufficient knowledge to approach the subject of clinical use with quantitative methodology. Several research papers have examined aspects related to the clinical use of MI, which facilitated the development of the questionnaire.

For quantitative research, reality exists driven by real natural causes. By disciplined procedures the researcher seeks information that is usually numeric and then analysed by statistical procedures (Polit & Beck, 2006).

6.1.3. *Study IV*

Study IV was a systematic review of existing studies that have evaluated the content and outcomes of MI training for general health care practitioners. General health care was operationalized in this study to include the first tier of health provision, that is, primary health care level facilities covering a broad range of patients presenting with various problems and which can be accessed on demand by patients (Kaner *et al.*, 2007).

It was considered important to conduct this study to provide a picture of the state-of-the-art of research into various aspects of MI training for general health care practitioners, including the clinical use of MI following such training, both in terms of the actual findings and the quality of the methodology that has been used in individual studies.

6.2. DATA COLLECTION

This section describes how the data were collected in the four studies of the thesis.

6.2.1. *Study I*

An interview guide was constructed in study I consisting of a number of themes and corresponding open-ended questions related to the aim of the study. Focus group interviews were conducted with the 15 pharmacists from the two pharmacies. There were two focus groups at the first pharmacy (with six and four respondents, respectively) and one focus group at the second pharmacy (with five respondents). In addition, five individual interviews were conducted with the Apoteket AB project leader, the two pilot pharmacists, and

managers from the two pharmacies (who also worked with clients in the pharmacies and used MI themselves).

6.2.2. *Study II*

An interview guide was also prepared for the interviews in study II. The guide contained a number of open-ended questions concerning the nurses' experiences with applying MI to counselling overweight and obese children. Topics of interest were generated by the research team with reference to the existing literature and to the aim of the study. Focus group interviews were conducted with the 10 nurses. There were two focus groups, with five nurses in each.

6.2.3. *Study III*

The research team constructed a questionnaire with 25 questions, 16 of which were used in this study. Four questions concerned the characteristics of the respondents: sex, age, duration of employment in child health care, and whether the respondent had participated in other MI training.

Four questions dealt with the respondents' routine use of MI in clinical practice. The questions asked whether the MI training had led to changes in the content and structure of the respondents' weight consultations, whether the nurses routinely used MI for issues other than weight, if they felt they had sufficient time to use MI in routine practice, and whether they believed they had support from the leadership and colleagues for using MI in routine practice.

Eight questions concerned attitudes towards MI as a method, asking the respondents to assess MI in terms of important innovation attributes, as summarized by Rogers (1983). These questions asked to what extent MI was perceived as being consistent with the respondents' values and norms about how child health care should work (compatibility), to what extent they believed MI was better than traditional advice-giving practice in influencing clients' motivation and behaviour (relative advantage), to what extent they saw MI techniques as being adaptable for their work (reinvention), to what extent they observed visible results on children's weight development from using MI (observability), and how difficult they felt it was to apply four key MI techniques (Miller & Rollnick, 2002): to listen actively, ask permission to provide information, summarize parents' opinions, and pay attention to

clients' change talk, that is, self-motivational statements in favour of behaviour change (complexity).

All child health nurses ($n=76$) who had participated in the MI course and were still active in the Östergötland region were contacted in February 2009, 1 year after the training was held. An e-mail was sent to inform them that they would be approached for participation in a questionnaire survey administered by telephone. The questionnaire was administered by telephone by two of the authors of the article (the author of this thesis and J.M.) and a research assistant. The questionnaire took about 10 minutes to complete.

6.2.4. *Study IV*

The studies for the systematic review in study IV were obtained through database searches up to May 2010. Searches were made in the following electronic databases: Ahmed, Cinahl, Eric, psycINFO, Medline databases, and Scopus. The following terms or relevant combinations thereof were used: "MI", "training", and "education".

Furthermore, a thorough review of the bibliography page on the Motivational Interviewing Network of Trainers website (<http://www.motivationalinterview.org/>) was also conducted. In addition, reference lists of selected publications and two previously published systematic reviews dealing with MI training (Madson, Loignon & Lane, 2009; Walters *et al.*, 2005) were searched to identify further studies.

The data collection process yielded 94 potentially eligible abstracts. These abstracts were then screened against the inclusion criteria to determine which papers were eligible for inclusion. This abstract screening process produced 22 articles for potential inclusion. These articles were obtained and read in full. Following a review against the inclusion criteria, 11 articles reporting results from 10 studies were selected for inclusion in the review.

6.3. DATA ANALYSIS

This section provides information on the analysis of the assembled data in the four studies.

6.3.1. *Studies I and II*

The analysis of the interviews in studies I and II was carried out in multiple steps. First, the researcher who conducted the interviews read the transcriptions while listening to the audio recordings of the interviews, making corrections as needed. The text was then coded line-by-line for substantive content.

In study I, data were categorized with the purpose of identifying the nurses' perceived barriers and facilitators in applying MI with overweight and obese children. In study II, factors were identified as facilitators, barriers and modifiers to the pharmacists' use of MI.

Data were interpreted from a phenomenological perspective, with the intention of being true to the participants' descriptions of their life world and as free as possible from preconceived assumptions. Phenomenology is rooted in a philosophical tradition developed by Husserl around 1900, and further developed by Heidegger. It is concerned with the lived experiences of humans. In focusing the interview on experienced meanings of the subject's life world, phenomenology is relevant for clarifying the mode of understanding in a qualitative interview (Kvale & Brinkmann, 2009; Polit & Beck, 2008).

In the interpretation of the findings in studies I and II, quotes were selected on the basis that they were succinct examples of consensual views. No attention was paid to which person in an interview made a certain comment. The research team then discussed the findings among themselves. For increased trustworthiness, the results were verbally presented to all focus group participants in subsequent meetings. Participants then provided feedback on the results during subsequent discussions in smaller groups. This input verified the results and no further revisions were needed.

6.3.2. *Study III*

Results for the questionnaire were calculated using descriptive statistics. The data were analysed using SPSS version 16.0.

6.3.3. *Study IV*

Analysis of the 10 identified studies (described in 11 articles) was performed as a structured review of each study. Data pertaining to the following aspects were extracted from the studies and entered into a data table:

- Participants
- Intended MI use
- Setting and country
- Study design
- MI training characteristics, including number of sessions, follow-up sessions, duration, type of training
- MI training contents
- MI training outcomes, including details on data sources

The MI training content was categorized according to the eight stages for becoming competent in the clinical use of MI described by Miller and Moyers (2006) (please see section 3.1. Training to learn MI).

MI training outcomes were classified into four categories, based on the basic structure of Kirkpatrick's widely applied training evaluation model, originally published in 1959:

- (1) Participants' reactions to the different aspects of the training, for example, the extent to which participants felt the training was applicable to their everyday clinical practice
- (2) MI competence, for example, did the training yield greater empathy and improved ability to use MI elements?
- (3) Clinical use of MI, for example, did the training change practitioner's behaviour concerning the use of MI elements in routine practice and what barriers to using MI existed?
- (4) Patient health outcomes such as effects on patients' weight and dietary habits.

Category (1) was essentially the same as Kirkpatrick's "reaction" level, that is, what course participants think and feel about the training. Category (2) closely resembled Kirkpatrick's "learning" level, defined as participants' changes in attitudes, knowledge, and skills as a result of attending a course. Category (3) was similar to Kirkpatrick's "behaviour" level, which involves assessment of the extent to which participants change their behaviour back in the workplace

as a result of the training. Category (4) was inspired by Kirkpatrick's "results" level, and can be defined as the final results that occurred because the participants attended the training; this outcome is typically the reason for having the course.

As a separate analysis, the study quality of the studies included in the review was assessed using a checklist of seven questions that was constructed by the research team behind the study:

- (1) Were the study population and setting clearly described?
- (2) Was the recruitment of participants clearly described?
- (3) Was the participation (or refusal) rate reported?
- (4) Were differences between participants and non-participants assessed?
- (5) Was a power analysis reported?
- (6) Were *p*-values reported?
- (7) Did the study use any validated instrument(s) for outcome measurement(s)?

The assessments are reported in table 1 as "+" for affirmative answers, "-" for negative answers to these questions, and "NR" when the assessment is not relevant, for example, reporting a power analysis for an interview study or reporting a response rate when participation was 100%. Sargeant, Valli, Ferrier, and Macleod (2008) included a quantitative questionnaire study and a qualitative interview study, which were assessed independently.

The study design of the individual studies was assessed using the Maryland Scale of Scientific Methods (MSSM) (Sherman *et al.*, 1998) which has been widely applied in systematic reviews (Wells & Litell, 2009). The MSSM describes five levels of designs, which are ranked in terms of their ability to handle threats to internal validity, from the lowest to the highest internal validity: (level 1) correlation between an intervention and an outcome at a single point in time; (level 2) temporal sequence between the intervention and the outcome clearly observed or the presence of a comparison group without demonstrated comparability of the intervention group; (level 3) intervention comparison between two or more comparable units of analysis, one with and one without the intervention; (level 4) intervention comparison between multiple units with and without the intervention, controlling for other factors or using comparison units that show only minor differences; (level 5) random assignment of comparable units to intervention and comparison conditions.

6.4. THE RESEARCHER'S PRE-UNDERSTANDING

The researcher's views and understanding are subjective and influence how results emerge from studies and how results are presented. It is therefore important for researchers to account for their opinions and biases (Polit & Beck, 2006). I, Lena Lindhe Söderlund, would like to make the following statements about my own views of the research:

"I am a behavioural scientist and have worked in different fields for about 30 years in community social welfare centres, county councils and rehabilitation centres. My basic clinical work has been conducted in the alcohol field, in which I have been involved in both secondary and tertiary prevention. I have worked with different professions, although primarily with nurses and physicians."

"I experienced my first MI education in 1997, delivered by Professor Stephen Rollnick. Since then I have practised MI in my own clinical work. Since 2002, I have been an MI trainer and a member of the Motivational Interviewing Network of Trainers (MINT). I have trained different health care professionals, perhaps most notably nurses who work with lifestyle issues (blood pressure, diabetes, and obesity). I have also worked extensively with social workers. In addition, I have worked with public health administration for about 8 years."

"I trained the participants in studies I, II and III. The focus group and individual interviews in both studies were conducted by interview specialists (Marlene Ockander in study I and Cecilia Nordqvist in study II) who had limited knowledge of MI. I was not present at any of the interviews. We argued that my presence could have introduced considerable bias with the interviewees telling me what they thought I wanted to hear."

There is some debate over whether an insider is a better interviewer than an outsider. An insider shares special knowledge with the interviewees and might have insight into matters obscure to others. On the other hand, it has been argued that unprejudiced knowledge is only accessible to outsiders. However, it has also been claimed that outsiders are no less likely to be free of prejudices, but will just possess different prejudices. The insider must guard against taking things for granted and not probing for details (Kvale & Brinkmann, 2009).

7. RESULTS

This chapter presents the results of the four studies in slightly abbreviated form. The complete results of all studies can be found in the appended papers in the second part of the thesis.

7.1. STUDY I

The results pertaining to the pharmacists' use of MI are reported under three sub-headings: facilitators, modifiers and barriers. Factors identified as facilitators were those that positively affected the quantity and/or quality of the use of MI. Barriers acted negatively on the quantity and/or quality of MI use. Modifiers acted in a dual sense, either increasing or decreasing the quantity and/or quality of the use of MI.

7.1.1. *Facilitators*

Pharmacists who had participated in continuing professional or other education that included elements of the MI method, for example, asking open questions, viewed this as an advantage as it made it easier for them to learn and use MI: "We've had other training, [such as] customer communication and medication problems. They are quite similar and overlap. That has strengthened us."

The opportunity to choose appropriate clients and/or health-related behaviours for MI counselling was viewed as a facilitator: "You choose those [customers] who are easy to talk with, or if they begin to talk or if you notice that it's easy to talk with them." Diabetes was cited as a suitable subject: "[If the person is] has type 2 diabetes, then you don't have to wait for the patient to bring something up. Instead you can ask if the doctor has asked if there is something she can do herself." Smoking was also considered a health-related behaviour that lent itself to MI counselling: "You're very happy if it's a customer who wants to quit smoking because then you feel safe and have a lot of ideas and there won't be any problems." Pharmacists did not want to address certain health-related behaviours. Sex was deemed a particularly sensitive topic: "It's difficult to broach the subject and I don't feel I have anything to do with it [i.e. the customer's sex life]." Concern about addressing

alcohol was also expressed: “The difficulties in advising on alcohol issues would be greater than advising on smoking, which we have worked with previously.”

Pharmacists believed that the pharmacy setting was a natural environment for MI counselling, with adequate space to talk with clients. They felt that the pharmacy layout made counselling less dramatic than conventional health care settings: “It’s a very good atmosphere for having a conversation at this pharmacy.” Clients turned to the pharmacy when they could not get an appointment for regular health care: “They are referred to us when they call the health care. We have more to offer today, including many products that can be self-administered.”

7.1.2. Modifiers

The use of MI required the pharmacists to adopt a somewhat new professional role, which entailed relinquishing the expert role in favour of being more of a coach or partner to the client. This factor functioned as a modifier. Some pharmacists saw it as a positive challenge that influenced their learning and practice of MI positively: “This [using MI] is close to us, it belongs to a lot of what we do. It feels like you can be more helpful since it works the same way as in health care.” Another pharmacist observed: “It’s relevant these times that we should become better communicators at pharmacies. I think the customer views us as better advisers if we adhere to this method [MI] than if we don’t.” Other pharmacists expressed uncertainty about the new role: “The traditional way of doing things was to tell people what to do. Now you have to make them think and decide what they want to do. That’s a hell of a difference.” One pharmacist provided a historical explanation for difficulties in adjusting to the new role: “For many years, our profession was a craft. We mixed medicine based on the recipes we received. It was a deadly sin to inform because then you disturbed the relation between the patient and the doctor. This project has shown me a brand new professional role and that’s why it takes so long for us to change the behaviour.”

The use of the importance and confidence rulers functioned as a modifier for the pharmacists’ use of MI. Some pharmacists felt the ruler provided a structure for conversations that made their MI counselling easier: “You must learn to use the manual. It’s not that advanced. And when you master it there are no problems at all. It doesn’t require all that much training, although it does take time to get good at it.” However, the importance and confidence

ruler was also seen as being somewhat unnatural to use, thus inhibiting the MI counselling: “It was awkward to present the manual [with the importance and confidence ruler presented on the back cover] and say, ‘Can you see this scale?’ It felt unnatural.”

Feedback from clients was also a modifier, encouraging or discouraging MI use depending on client reaction. It facilitated pharmacists’ MI use when the feedback they received from clients was positive: “Some customers are very grateful that we care. They shake your hand and ask if they can come back.” However, negative client feedback posed an obstacle for further MI use: “One of the customers told me to shut up, because [he felt] everybody was nagging and nagging.”

7.1.3. *Barriers*

Pharmacists felt it was difficult to initiate MI counselling and engage in conversation with many clients: “It’s particularly the beginning that’s difficult, especially with a customer who doesn’t say that much.” Concluding the counselling was also found to be difficult as pharmacists felt it contrasted with the normal procedure of giving advice and then confirming that a client has understood the message: “The wrap-up is also difficult, to just get a conversation going isn’t that satisfactory.” Another pharmacist opined that: “The conclusion is difficult if you have a customer who doesn’t speak much, unless you’re satisfied with having planted a seed. But that doesn’t feel so satisfactory. On the other hand, maybe you don’t need more for it to be a motivational conversation.”

Pharmacists mentioned that long queues and crowded premises often restricted the time that was available for MI. Conversations had to be very brief and/or were frequently interrupted: “The time aspect is important and how much you have to do at the pharmacy. That has influenced the whole thing. Being short of time is difficult when you’re going to change your behaviour.” Another pharmacist simply concluded that: “The number of customers we have determines everything.”

The implementation of MI was a top-down decision that did not involve the pharmacists who were going to learn and use the method. This created some animosity among some pharmacists and acted as a barrier to their use of MI: “I think it depends a lot on how you start the project, that you feel you have a

choice. You need to feel that it's fun and that it's something you *want* to do. I think that determines how it turns out."

A strained organizational climate constituted another barrier to the learning and use of MI by the pharmacists. There had been staff cut-backs in both settings and the pharmacists were experiencing a heavy work load, which had a negative effect on their motivation to learn and use MI: "[There has been] a lack of understanding from the employer. It doesn't work with a smaller staff, and it's important that they [the employer] understand the impact of that. Sometimes you don't think they know what kind of work we're doing."

7.2. STUDY II

The results of study II concerning the nurses' use of MI to counsel overweight and obese children accompanied by their parents are reported under the sub-headings of facilitators and barriers. The meaning of these terms is the same as in study I.

7.2.1. *Facilitators*

Recognition by the nurses of the advantages of the MI technique and their embracing of its spirit was a critical factor facilitating the use of MI to counsel overweight and obese children. Hence, despite the barriers found in using this approach, nurses believed that MI was a potentially efficient problem solver because it is particularly useful for addressing sensitive topics such as overweight and obesity. For example, one nurse said that "it is a relief to be able to ask the question using this method, 'Do you want to tell me more?' You get a 'yes' or 'no' and then you can save a great amount of work if they do not want you to." Another nurse stated that "earlier we informed and informed and listened, and informed again, but now we try to encourage the patient to re-think instead." MI was considered particularly beneficial for dealing with serious health problems such as anorexia. "It is better with this method when there are sensitive problems. The responsibility rests on the person's shoulders to reflect and to put their thoughts into words instead of following your pointers and suggestions. They have to understand that they are responsible for their own lives, and then this is the [most appropriate] method."

Another important factor that facilitated the application of MI by nurses was the participation of cooperative and knowledgeable children and parents who recognized the problem of overweight or obesity. One nurse simply concluded

that “if you have a motivated parent it is much easier to have an MI with the child.” Nurses believed that most children and parents have considerable knowledge concerning food. “Often they [parents and children] know a lot and have some solutions if you ask them, if you can refrain from starting to provide advice,” one nurse said. Another nurse observed, “I am surprised that kids in the first grade know so much about food and sweets, even about soft drinks. They say they know that this is not good for their health, yet they eat it! You might think that young children do not reflect on such things, but they really do.”

Nurses believed that working with obese children, rather than those who are merely overweight, helped the application of MI counselling. This was because parents of obese children recognized the significance of their children’s health problems due to overweight to a larger extent and appeared to be more willing to find solutions and accept help. The following example illustrates this facilitator: “Parents who bring already obese children are somehow already prepared that we will bring it up and often anticipate this, and bring it up themselves.”

7.2.2. *Barriers*

Some statements about childhood obesity made by nurses were categorized under problem denial, that is, there was a lack of recognition among some nurses that overweight and obesity among children constitutes a real problem. Nurses argued that these children would naturally “grow out of it” and would not remain overweight, and thus did not consider using MI because they did not view the children’s weight as a significant problem. Illustrating this barrier, one nurse believed that they “have too weak ground to be able to discuss this, because many of them will grow and lose weight.” Another nurse described the children as “healthy fat children,” implying that MI counselling or other interventions were not necessary.

A similar barrier to applying MI in counselling children was problem ambivalence among nurses, who had a feeling that children’s weight *might* be a problem and that something *ought* to be done about it although they felt no immediate motivation to do anything. Nurses seemingly accepted that today’s children weigh more than they did in the past, a development that has led to an increased tolerance for overweight children. For example, one nurse said it was only natural with “a little flesh on the body,” which meant that she did “not think of it as obesity or overweight; you accept that they are rounder

around the stomach area.” Because the rates of overweight and obesity have increased, nurses said that they hesitated to bring up weight issues unless a child was clearly obese. Contributing to the nurses’ ambivalence about the problem was their impression that experts have not agreed on definitions of overweight. One nurse contrasted this with smoking, an issue on which society communicates a unified message.

Parents’ problem denial and ambivalence hindered nurses’ application of MI to counselling overweight and obese children. Parents who were obviously overweight or obese, yet considered themselves perfectly healthy and fit, argued that their children too were “big but healthy,” and hence not in need of any weight counselling. Nurses overwhelmingly viewed overweight and obesity as a family problem. “Really, you should start with the parents,” stated one nurse. “You should teach them [the parents] to eat better and then, I think, the children will follow suit, when you influence the parent to eat in the right way and to develop the right habits.” However, if parents were not convinced that their child’s weight was a problem, nurses felt it was difficult to apply MI counselling with the child and parents.

Still another barrier arose when the nurses perceived that the parents lacked the willingness or motivation to deal with the child’s weight problem even though they were aware of the problem. Nurses complained that many parents seemed to pay lip service to their information, but did not really consider making any changes. The following example illustrates this barrier, “Sometimes the patient can be sitting there and saying ‘yes, hmm, yes’ and then you think that the patient understands, but they really haven’t.” Some parents did not want to assume responsibility, instead blaming their child. In contrast, some parents were overly protective of their child and did not want to discuss weight issues in the presence of the child for fear of inducing feelings of guilt or shame.

7.3. STUDY III

The results of study III are divided into the child health care nurses’ use of MI in clinical practice and their attitudes towards MI 1 year after participating in an MI course.

7.3.1. Routine use of MI in clinical practice

The MI course had a considerable effect on most of the nurses' weight discussions. Nearly half of the nurses (48%) said that the content or structure of their discussions on weight had changed as a result of the course to a quite or very large degree. However, 10% stated that the course had not led to any changes in the structure or content of these discussions.

Three-fifths of the nurses (60%) had used MI techniques with issues other than paediatric weight to a quite or very large degree. The nurses experienced support for their application of MI in routine practice to a large extent. Three-fourths of the nurses (74%) said that they had sufficient time for using MI in routine practice to a quite or very large degree. Most nurses felt supported by leadership and colleagues in using MI, although 11% expressed uncertainty as to whether their use of MI use was supported or not.

7.3.2. Attitudes towards MI

Nearly all the nurses, 91%, believed that MI is compatible to a quite or very large degree with their values and norms on how paediatric health care should work. The nurses also believed that MI had a relative advantage over traditional advice-giving methods, with 45% saying that MI is much better and 45% somewhat better for influencing clients' motivation and behaviour.

Nearly half of the nurses (46%) reported that they had adjusted MI techniques for their own work to a quite or very large degree. Thirty-six per cent of the nurses stated that they had been able to observe visible results on children's weight development from using MI to a quite or very large degree, although as many as 26% of the nurses said that they did not know whether they had been able to observe such results.

Concerning the complexity of using four key MI techniques, 78% of the nurses felt it was very or quite simple to listen actively. This can be compared with 63% who believed it was very or quite simple to summarize parents' opinions and the same proportion who considered it very or quite simple to pay attention to parents' change talk. Sixty per cent of the nurses thought it was very or quite simple to ask permission before providing information, but 15% stated that they did not use this technique when applying MI.

7.4. STUDY IV

The results of this systematic review are presented under four sub-headings: study characteristics, study quality, MI training details, and MI training outcomes.

7.4.1. *Study characteristics*

Ten studies were found to assess the effectiveness of MI training for practitioners in general health care and were included for analysis in this review. Study results were published in 11 papers between 1999 and 2009, most in the last 4 years. Results from one of the studies were published in two separate papers (Rubak, Sandbaek, Lauritzen, Borch-Johnsen, & Christensen, 2006, 2009). The studies were conducted in eight countries: three from the United States, one from Canada, and six from Europe (two in the Netherlands, and one each in Denmark, Ireland, Sweden, and Wales).

The number of health professionals in the studies ranged from 7 to 87. Physicians and nurses were the most common professional categories, although there was considerable variety. The studies were mostly set in primary health care, but there were also studies that described MI training for staff in settings such as acute care, home-care organization, maternity care, and child health care and school health services. The intended or actual use of MI encompassed counselling on many different issues, including general lifestyle issues, diabetes, smoking, alcohol, medication adherence, weight, diet, and physical activity.

Three of the studies (Lane, Hood & Rollnick, 2008; Rubak *et al.*, 2006; Handmaker, Hester & Delaney, 1999) were randomized controlled trials, using random allocation of study participants, usually to an MI training group and a control group who received some other form of lifestyle or health-related training that lacked MI elements. All studies used post-training measurements, ranging from immediately after completion of the training to up to 5 years later, although most studies conducted post-measurement at 1 to 6 months after the training.

7.4.2. *Study quality*

The study quality varied among the 10 studies, but was generally low. Although the study population and setting characteristics and recruitment of

participants (i.e. health care practitioners) were sufficiently described in all the studies, two studies failed to report on participation rates and none of the studies reported on potential differences between the participants and those who did not participate. Power analysis was reported in one study, and reporting of *p*-values was lacking in three studies. Four of the studies used one or more validated instrument to measure outcomes.

Five of the 10 studies assessed MI training outcomes at a single point in time, that is, level 1 study design according to the MSSM instrument. One of the studies investigated a temporal sequence between the MI training and the outcome (level 2) and four of the studies used the design with the highest internal validity, that is, random assignment of study participants to the MI training and one or more comparison conditions (level 5).

7.4.3. *MI training details*

Duration of the MI training varied considerably, from a 20-minute video to a 2-day workshop followed up by another day, that is, a total of 24 hours. The median length was approximately 9 hours, that is, slightly more than 1 day. Three studies investigated MI training lasting 4 hours or less, whereas four studies examined training efforts that lasted 16 hours or more.

All the studies characterized the training as being MI except for studies that described training as behaviour change counselling (Broers *et al.*, 2005) and adaptation of MI (Casey, 2007). However, the training focused on MI elements and the descriptions were sufficiently detailed to warrant inclusion.

Concerning the contents of the training, the most commonly used training elements in the studies were the MI spirit (stage 1), basic MI skills (stage 2), recognizing and reinforcing change talk (stage 3), and rolling with resistance (stage 5). No study addressed stage 8, switching between MI and other counselling methods.

7.4.4. *MI training outcomes*

Participants' reaction to the training was assessed in four of the studies, using questionnaires (three studies) or interview (one study). Although the studies examined heterogeneous outcomes, the participants' reactions were generally favourable. Broers *et al.* (2005) reported beneficial results concerning the training participants' opinions of different training elements and perceived

relevance of different MI-related skills. The participants in the study by Velasquez *et al.* (2009) considered the training as effective in preparing them to deliver smoking cessation interventions. Lane *et al.* (2008) noted a positive development over time concerning the perceived applicability of the training to clinical practice. The participants in the study by Handmaker *et al.* (1999) perceived the MI video that was used in the training as clear in explaining and demonstrating the principles and skills of MI.

MI competence was investigated in four studies. Three studies relied on analysis of recorded MI sessions. The studies by Handmaker *et al.* (1999) and Brug *et al.* (2007) reported significant differences between experimental and control groups in the participants' ability to show empathy, use reflections, and support patients to change behaviour. Lane *et al.* (2008) did not observe a significant difference in skill levels between participants learning MI by using a simulated patient or by training with a colleague. Rubak *et al.* (2006) used self-reporting questionnaires and knowledge of skills tests, and showed that participants trained in MI adhered more to MI-consistent elements than did the control group.

Different aspects of the clinical use of MI were investigated in seven studies. Several of the studies reported positive findings. Saitz, Sullivan, and Samet (2000) showed that training had a significant effect on practice as the participants screened and asked more patients about their substance abuse. Similarly, Sargeant *et al.* (2008) observed that participants made specific changes in their counselling approaches and felt more comfortable interacting with patients. The participants in the study by Rubak *et al.* (2006) considered MI usable in daily practice and more effective than traditional advice-giving. Broers *et al.* (2005) concluded that brief client counselling was feasible within the time frame of a normal consultation. The participants in the study by Casey (2007) valued the MI skills acquired, found them relevant to practice, and were confident in using them. Participants in the study by Lindhe Söderlund *et al.* (2009 – study II) felt that the use of MI with sensitive topics was an advantage over traditional advice-giving approaches.

Some of the studies reported barriers to the clinical use of MI. Velasquez *et al.* (2000), Broers *et al.* (2005), and Sargeant *et al.* (2008) reported time constraints for using MI effectively; Casey (2007) and Lindhe Söderlund *et al.* (2009 – study II) noted the difficulties that participants experienced with unwilling or otherwise resistant patients.

Two studies analysed the effects of the MI training on patient health outcomes, using patient self-reporting questionnaires. Both studies concerned diabetes. Brug *et al.* (2007) observed that patients of the MI-trained dieticians had significantly lower saturated fat intake levels than patients of control dieticians 5–6 months after the training took place. However, no effects on glycated hemoglobin, body mass index or waist circumference were observed. Rubak *et al.* (2009) found that 1 year after the MI training, the patients of the MI-trained general practitioners were more motivated towards behaviour change than the patients of the control group professionals. The patients also had a better understanding of factors that would help prevent complications and ensure relevant disease control.

8. DISCUSSION

In this chapter, the results of the four studies of this thesis are discussed. The overall aim was to contribute to improved understanding of what influenced the learning and practice of MI. The studies have investigated aspects of the use of MI in general health care, including the pharmacy setting (study I) in a broad definition of this term. These aspects are discussed first followed by a discussion of methodological issues related to the four studies. My final thoughts from my work with this thesis are presented in section 8.3 and future research is discussed in section 8.4.

8.1. INFLUENCES ON LEARNING AND CLINICAL USE OF MI

The four papers of this thesis have pointed to a number of factors that affect the learning and clinical use of MI. These may have had negative or positive effects on the use of MI; some acted in a dual sense, influencing the use negatively in some circumstances and positively in others. Instead of dividing all into facilitators or barriers to the use of MI, they are discussed here simply as factors that influence the quality and quantity of learning and practicing MI.

The factors are discussed in accordance with a model proposed by Illeris (2003, 2006), which can be seen as an exponent of a socio-cultural approach to learning. This model is based on the following two assumptions. The first assumption is that learning involves different types of processes: (1) an external interaction between the learner and their social, cultural and material environment; (2) the internal psychological process of acquisition and elaboration in which new impulses are connected to the results of prior learning. When both processes are involved, learning occurs. The second assumption is that learning includes three dimensions: (1) the cognitive dimension of knowledge and skills; (2) the emotional dimension of feelings and motivation; (3) the social dimension of communication and cooperation, all of which are embedded in a social context.

The influences on learning and clinical use of MI from study I to IV are discussed according to Illeris's three dimensions of learning.

8.1.1. Cognition

Cognition of learning means the *learning content*, also described as knowledge, skills, insights, opinions and attitudes. The learner builds up their personal understanding, meaning and ability to handle issues in practical life (Illeris, 2003, 2006), in this case at work.

The content of formal learning, according to the review in study IV, describes that the most frequent topic was learning MI in relation to diabetes, alcohol and smoking. Duration of training varied considerably with the average length slightly longer than 1 day. The participants seemed generally positive about the training offered. The most commonly trained elements were basic MI skills, the MI spirit, recognizing and reinforcing change talk and rolling with resistance. That suggested that more time is spent on work with phase I of MI (Arkowitz & Miller, 2008), resolving the ambivalence and facilitating the inner motivation for change, than on phase II. The second phase with the client involves strengthening the achievement for change, for example, working with a change plan.

MI is regarded in all four studies as practical and useful. Health care practitioners overall expressed a positive attitude on the usefulness of MI. Seven of 10 studies in the review showed that it had an effect in clinical use; MI had a substantial effect on daily work and health care providers felt more comfortable with clients and asked them more questions. MI was regarded as more effective than traditional methods and relevant for sensitive topics.

MI contributed to the health care provider's confidence in working with health-sensitive subjects such as obesity and alcohol. Nurses in study III reported that MI training affected their clinical work with weight discussions but also on issues other than weight. Visible results on children's weight was a critical issue, however change in children's weight may take time to observe. After practicing MI for a year, 36% of the nurses reported that the results were visible compared with 26% of the nurses who did not know whether they achieved results.

There were also negative findings such as difficulties in handling clients who were unwilling or expressed resistance to discussing lifestyle, behaviour and change (studies I and II).

MI attracts health care providers. In study III, the attitudes to MI of most nurses were positive. They believed that MI is compatible with their values and norms about how paediatric care should work. They also expressed that MI had advantages over traditional methods. Miller, Sorensen, Selzer, & Bringham (2006) raised concerns about attitude changes; from their research they observed that attitudes are easy to change but they not followed by changes in practice.

A more problematic issue is unlearning, which may occur in learning and means leaving old and incorrect knowledge behind and replacing it with what is presently known (Rushmer & Davies, 2009). This was illustrated in study II in nurses' work with childhood overweight and obesity. Several nurses had incorrect knowledge about children's weight issues, and this was identified as a barrier in practicing MI in this context. They also expressed ambivalence about working with children's weight issues, which must be viewed as an effect of incorrect knowledge.

8.1.2. *Emotion*

The emotional dimension provides knowledge about energy, feelings and motivation and is more a result of a process than an obvious physical result; it means mobilizing the learner's drive for learning (Illeris, 2003, 2006).

Feedback from clients to counsellors has been described, as "thanking for a good meeting" in study II or the opposite reactions from meetings filled with denial or resistance from customers at pharmacies described in study I. Another important response becomes clear in the nurses' descriptions about discussing children's overweight and obesity with unwilling or resistant parents in study II. The results of those meetings may create positive or negative feelings, which increase or decrease the learner's energy or motivation for practicing MI. This relates to the relational part of MI, which seems to be an important factor in creating the energy and motivation to learn MI, a complex method to master (Rollnick *et al.*, 2008; Simpson, 2002). Illeris (2003, 2006) describes the need for an inner balance to be able to learn complex skills.

Miller and Moyers (2006) reported that clients' resistance reactions may be problematic to respond to in the initial stage of learning MI. The learner must manage to handle several important MI skills before they are competent to avoid resistance in a MI situation.

Learning becomes less complicated if the learners have an open mind to MI and have a positive attitude towards MI. Such attitude motivates learning and minimizes the eventual resistance reactions. A cognitive basis about what affects change facilitates the learner's adaption to MI and performance of the skills. Findings from study I show that previous participation in training that included MI elements facilitated learning MI.

There are several examples of the use of coded instruments, such as MITI coding, in learning to control for proficiency in MI. Such instruments may cause resistance from the learners as they do not like to be controlled (Sobell, Manor, Sobell, & Dum, 2008; Farbring, 2010). The circumstances when coding is used are important to control for to create a positive atmosphere for learning (Sobell *et al.*, 2008).

8.1.3. *Environment*

The social dimension may be identified in participation, communication and cooperation (Illeris, 2003). The social dimension aims for integration, first between the individual and the close workplace surroundings in relations with colleagues and staff. Second, there are interactions between the individual and society as a whole. This dimension aims to build up sociality (Illeris, 2003, 2006).

Professional identity may be an important factor, especially if the basis for a practitioner's work is changing. An example from study I is ambivalence among pharmacists to use MI, although in recent years there have been several calls for pharmacists to provide more counselling and to shift from a product to a patient focus (The International Pharmaceutical Federation. Community Pharmacy Section, 2008). An explanation for this is that the identity of a profession is formed during years of education, by work experiences and culture at the workplace and within the profession (Thunborg, 2004).

Changing behaviour within a profession has to follow the development of praxis in the profession and changes built on research from within the profession are found to be easier to implement (Grol, Wensing, & Eccles, 2005). Going from a prescription to a more client-centred approach may be a challenge as described in study II, "earlier we informed and informed and listened and informed again, but now we encourage the patient to re-think instead". Nurses have for generations been advice and information givers

(Ternstedt & Norberg, 2009) and changes in their occupation are an ongoing process influenced by society (Andersson, 2010).

Influences from the context, such as support from leaders and colleagues, are important for informal learning as described earlier. Nurses in studies II and III reported receiving support from colleagues and leaders but the pharmacists in study I were negative about the top-down way that MI was implemented in their work. They missed having an in depth dialogue with their leaders about arrangements for using MI in their work. Opinions about the time for using MI differed; MI was found to be time consuming in study I; others reported that they had no problem with time for and practicing MI (study III).

Influences from society are important. This aspect may be observed in laws and policies about health, health promotion and prevention. Organizations such as the World Health Organization and Health Promoting Hospitals have been important visionaries (Kristensson & Nilsson, 2010).

In Sweden public health has been pointed out as important to reduce ill-health and socio-economic inequalities. In the Swedish public health objectives, MI is exemplified as a method to work with risky behaviours, as risky drinking, smoking and physical inactivity (The Swedish National Institute of Public Health, 2010). As part of the health care system, health care providers are exposed to the debate and norms about these issues, described in terms of learning the perspective. The interplay at this level is difficult to find in data from the studies in this thesis. But it is relevant to understand this overall goal in society about health and that policies have a daily effect on the health care system and the health care providers in their work.

Different guiding principles from different authorities on MI may cause frustration and insecurity about how to view MI. In Sweden, there has been debate on a report about MI and diabetes care based on a literature assessment from The Swedish Council on Health Technology Assessment (Swedish acronym, SBU). SBU has advised against using MI in diabetes care after they have established that “there is no difference in effects on glucose (HbA_{1c}) between usual care and MI (SBU, 2010). Their strongest argument is that MI education is cost consuming and there is no evidence for improved effects of MI in diabetes care.

8.2. METHODOLOGICAL CONSIDERATIONS

8.2.1. *Studies I and II*

Strategies for enhancing the integrity of qualitative studies need to be applied throughout a research project (Polit & Beck, 2008). Validity and reliability of research in qualitative studies may be examined in different ways than in quantitative studies. Lincoln and Guba (1985) have suggested five criteria for examining the trustworthiness of qualitative research:

- credibility
- dependability
- confirmability
- transferability
- authenticity

These criteria cover aspects of internal and external validity, reliability, and objectivity.

Credibility refers to confidence in the truth of the data and its interpretations. It is important to carry out a study in a way that enhances the believability of the findings and to take steps to demonstrate credibility to external readers (Lincoln & Guba, 1985). The intention in both articles has been to provide comprehensive descriptions of how the studies were conducted and to show transparency in all steps of the research process. The aim was to allow the readers to decide for themselves if the researchers have done enough to ensure that the conclusions are valid.

Dependability refers to the stability (reliability) of the data over time and across conditions. Would the findings be repeated if the study was replicated with the same participants in the same (or similar) context? (Lincoln & Guba, 1985). The important steps in the research process were: to conduct literature searches on what has already been published, describe the content and form of MI training and practice, describe the study participants, and provide details about the data collection and the process of data analysis.

Confirmability refers to objectivity. This can be achieved if the findings truly reflect the participants' voice, meaning that they are not the outcome of the subjectivity or bias of the researcher (Lincoln & Guba, 1985). The results in

both studies were discussed among the research team and were verbally presented to all study participants in meetings especially organized to ensure that confirmability was achieved in this research.

Transferability refers to the generalizability of the data, that is, the extent to which the findings can be transferred to or have applicability in other settings or groups (Lincoln & Guba, 1985). It is obvious that the findings of studies I and II have somewhat limited transferability because studies in other settings may yield different factors modifying, hindering or facilitating the use of MI. It is even possible that other studies conducted in the same settings could identify different factors. However, it is also possible that some of the findings, in particular the finding that it is difficult to raise certain health topics with clients, may be generalizable to similar practitioner groups.

Readers are better able to understand the responder's history if a text achieves authenticity. This refers to the researcher's way of showing truthfulness in the description of the world of the respondents (Lincoln & Guba, 1985). Both articles include several quotations, which should contribute to giving the readers a sense of the respondents' experiences and language.

8.2.2. Study III

Participants were self-selected to attend the MI course, which may have increased the likelihood that they had favourable attitudes to MI. The lack of a control group limits the ability to causally attribute changes to the course. However, the questions very specifically referred to the MI training and asked about changes that were a result of participation in the course.

Self-reports of the effect of the course in an interviewer-administered questionnaire survey could bias the results towards more favourable findings because of social desirability effects, that is, the respondents provide the answers they believe make them appear socially responsible (Brace, 2004). To reduce this risk, the respondents were guaranteed confidentiality. In addition, two of the three interviewers did not have any previous involvement in the course to reduce the risk of respondents searching for approval from the researcher. Furthermore, all three interviewers read the questions exactly as they were formulated in the questionnaire, only making clarifying explanations when the respondents requested this.

A potential shortcoming of telephone surveys is difficulty in reaching respondents (Hocking, Lim, Read & Hellard, 2006). We could not reach five nurses despite several attempts to contact them by telephone and e-mail. However, the response rate was high (82%) and would likely have been considerably lower using a postal questionnaire, judging by the response rate of local county council surveys, which tends to be approximately 50%.

Telephone surveys also have distinct advantages. The accuracy of responses is usually high, because the interviewer can provide clarifications to help the respondents describe precisely what they mean. The interviewer can also make sure that all questions are answered, thus reducing internal drop-out. A further advantage is the ability to ascertain a greater proportion of eligible subjects³⁴. We identified 13 nurses who were not eligible to participate who might have been missed with a postal questionnaire approach.

8.2.3. Study IV

The inclusion criteria used in this study meant that we found a limited number of studies. Despite using a systematic and comprehensive search strategy, it is possible that we missed studies that should have been included, for example in the grey or unpublished literature, including dissertations. It may be considered a shortcoming that studies had to be published in English, but it is questionable whether there are many non-English studies that describe and evaluate MI training for general health care professions. Publication bias also has to be considered, but may be of little influence because there are so few studies. There were some differences regarding the transparency of the MI training elements. However, we were able to verify the content of most studies.

8.3. FINAL THOUGHTS

As described earlier, MI is a bottom-up movement built on Miller's experiences from alcohol-dependency treatment from 1980s, which at that time was based on confrontation and prescription. Miller was pragmatic and interested in finding new ways of being with his clients to support them to change their alcohol habits. He was well informed and interested in several theories about what affects change, and tested and investigated his knowledge and ideas in meetings with his clients. After more than 25 years MI seems to

attract clinicians as well as researchers but still we know very little about the mechanism of change and MI (Apodaca & Longabaugh, 2009).

In recent years there have been some changes in the descriptions of MI that may be fundamental for the development of MI in the near future:

- Changes in the definition of MI
- View on ambivalence
- MI described as a guiding style
- The certification process

First, a discussion about the three definitions of MI. The first definition was described as late as 1995, the second in 2002 and the third in 2009. There are significant differences between the first two definitions (I and II) and the third definition (III). The definition from 2002 is described as “a client-centred, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence” (Miller & Rollnick, 2002, p. 25). The first two definitions both use ambivalence as an important issue to explore and resolve. But in the third definition the concept of ambivalence is removed. Instead MI is viewed as “a collaborative person-centred form of guiding to elicit and strengthen motivation for change” (Miller & Rollnick, 2009 p. 137). What do the differences mean for the practice and learning of MI?

For a counsellor, to work with the ambivalence against behaviour change, means to encourage the client during the meeting to explore their inner world of thoughts and feelings about change. The clients must see the possibilities but also the barriers to change for themselves. This process is supported by the counsellor by creating an atmosphere of safety and acceptance in which the client hopefully feels accepted as the person they are and free to explore and change (Miller & Rose, 2009). This is both a conscious-raising and autonomous process. If it is well worked out, the natural sequel for the client is to take a step forward to some way of change. There are links between this way of relating to clients and Carl Rogers’ person-centred therapy (Rogers, 1959).

To remove ambivalence from the definition raises questions about whether this process is not regarded as important as it was earlier? Does it mean that the autonomy process is replaced by the new focus on behaviour change which now is set in the definition? Switching back to the theories of learning perspectives may give a deeper understanding of what is going on. The

concept of working with client's ambivalence can be seen as a constructivistic approach to learn and to reach behaviour change. The client constructs their understanding of their mixed feelings towards change during their conversation with the counsellor and takes the steps ahead. The opposite is the behaviouristic style, which is more of a skilful way from the counsellor's side to lead the client towards change. The goal is observable behaviour change and consciousness-raising is not necessary to reach the goal.

The next observation is how MI is described in the textbook, *Motivational Interviewing in Health Care*, written by Rollnick *et al.* (2008). In the preface, the authors state that "this book has a new synthesis on how to bring the heart of motivational interviewing into everyday health care practice" (p. ix.) A new concept is introduced and described as follows: "a guiding style, often used to help other people particularly with changing their behavior or learning new skills ... we believe when time is short and behavior change is vital, a guiding style is most likely to efficiently produce better outcomes for patients and practitioners alike" (p. ix). This text points directly to a behaviouristic approach with changing behaviour or observable skills as goals. It is obvious that in recent years MI is moving closer to the behaviouristic perspective, and to measurement. Maybe it is a sign of our times to search for the evidence-based medicine (Johansson & Östergren, 2010). Concerns about the quality of health care are an ongoing discussion, and it is not unusual to control for effects of training (Maxwell, 1984). The next step is often quality control and there is a lot of engaging work with coding of MI, which may be regarded as an expression for striving in that direction.

Expression of MI has been formulated in coding systems such as MITI coding. Today it seems the leading MI experts have taken several steps closer to the behaviourist ideals with the focus on experts and searching for signals from clients (e.g. change talk) to decide when and how to use certain skills. The next logical step in this ideal is quality control and certification. These days one of the most engaging discussions in the MINT society is about certification of counsellors in MI proficiency.

What do we know about the reactions from counsellors to coding of their conversations with clients? Farbring (2010) gives several examples in his new book to suggest that counsellors do not like to be controlled by coding. Another example of this problem was presented by Teresa Moyers, in a workshop at the Second International Conference on Motivational

Interviewing (ICMI) in Stockholm in June 2010. Moyers described that she found it hard to get clinicians to record their consultations with clients on tape, and she even found that counsellors lied about their way of working. This is a good example of how resistance is worked out and how researchers and counsellors may have different motivation about these issues.

At a time when evidence and results are important, it is easy to underestimate the relational part of MI, the MI spirit, and push ahead with the technical part, techniques, skills and behaviour change. What about the results for learning MI? A likely development is that, in the future, we will have certification of MI skills as standard and also a standard for trainers or educators of MI. Why not take a step back to reflect upon what kind of MI we want to have? Will we have the freedom to test and discuss our findings of our work on motivation together with our clients? Or is it more important to have a “leading group” that defines what MI is, how it is worked out and formulate rules to get the best formal qualifications to train others in learning MI. Overall this is a question of what kind of learning perspective on MI we prefer. There is also a question of whether strict adherence to one “exact” way of learning and practicing MI will lead to development, improvement and innovations in MI over time or whether it might actually lead to stagnation.

The results from this thesis indicate that general health care providers find MI intuitively attractive for clinical use. They relate these both to the technical and relational part of MI. But at a time then when behaviour is highly valued, it is easy to underestimate the relational part of MI.

To sum up, relating my thesis to learning theories has both deepened and broadened my understanding about the challenges in training and practicing MI. The changeover from formal education to informal practicing MI in general health care is a complex and underestimated process. The responsibility for maintenance of MI proficiency in clinical work is an urgent task for health care organizations. Formal education provides learners with basic MI proficiency but the practice of MI is part of the health care providers’ workday and their workplace. Healthy synthesis between formal and informal learning may improve the maintenance of MI in practice, and ultimately, the health of many patients.

8.4. FUTURE RESEARCH

Now that this thesis has come to an end, some suggestions for future research can be given.

Research-questions

Research on MI has generally focused on formal learning of MI. Expanding the research to include studies on learning in workplaces would provide the opportunity to gain more in-depth knowledge of learning related to practice:

- How can a whole system, such as a workplace with different professions and belonging to an organization such as general health care, contribute to learning and practicing of MI?
- What factors within the workplace work as facilitators or barriers in the development and maintenance of MI proficiency?

Development of the aspects of learning is necessary but there is still a lack of knowledge about how to “best” learn MI.

- How is it possible to create an explorative synthesis between formal and informal learning of MI for health care providers at their workplaces?
- How can coding of consultations be used to support learners’ learning and clinical use of MI?

Health care providers have found MI to be practical and useful, and it seems to influence their learning and practice of MI in their clinical work. This leads to the following questions:

- What differences can be found between health care providers with MI competence and those without MI competence in relation to work with alcohol, tobacco, physical activity and weight issues in their clinical work?

- Is there a correlation between health care providers' confidence in MI and patient outcome?

MI is found to have best evidence in relation to work with alcohol and substance abuse. Several studies show attempts to apply MI to other lifestyle behaviours but there are still few studies and limited results.

- Are there any differences in health care providers' attitudes regarding work with clinical use of MI and alcohol/drug issues versus issues with less effect or no effect, for example, diabetes and physical activity?
- How effective is MI for problems such as physical inactivity, overweight/obesity, and mental ill-health?

9. CONCLUSIONS

The findings from the studies in this thesis support a number of conclusions with regard to the aims.

- MI training for general health care providers is generally of short duration and tends to focus on specific topics such as diabetes, smoking, and alcohol.
- MI training seems to focus more training on phase I elements, such as clients' inner motivation, than on phase II, which involves strengthening clients' commitment to change.
- General health care providers view MI as practical and useful in work with lifestyle and health promotion issues, especially with issues that may be perceived as sensitive, such as obesity and alcohol.
- General health care providers generally have positive attitudes to MI and view MI as being compatible with their values and norms about how they want to work.
- General health care providers experience some difficulties in handling clients' resistance reactions. Strategies to avoid resistance reactions are typically part of the last stages in MI training.
- General health care providers' learning and clinical use of MI general is influenced by interactions with their environment such as colleagues, leadership and organizational factors.
- General health care providers can have difficulties of unlearning of old knowledge in their learning and clinical use of MI.

SAMMANFATTNING

Livsstilrelaterade ohälsa utgör en stor belastning för hälso- och sjukvården liksom för samhället i stort. Motiverande samtal ("Motivational Interviewing", MI) har blivit en allt vanligare metod i hälso- och sjukvårdens arbete för att stödja människor att förändra sina levnadsvanor. Från att ha vuxit fram ur kliniskt arbete och ursprungligen tillämpats för alkoholproblem, har MI fått allt bredare tillämpning för arbete med olika former av beteendeförändringar av stor betydelse för folkhälsan. MI utgår från fyra principer om att uttrycka empati, utveckla diskrepans, dvs. att uppmärksamma brist på överensstämmelse mellan aktuellt beteende och egna värderingar, undvika att argumentera ("rulla med motstånd") och stödja klientens tro på sin förmåga att genomföra och lyckas med förändringen. Vårdgivaren har ett ledande förhållningssätt för att stötta klienten till att göra en förändring utifrån sin inre motivation, genom att ställa öppna frågor, lyssna, reflektera, bekräfta och summera vad klienten säger. Metoden har blivit alltmer populär och spridd såväl inom hälso- och sjukvården som i andra sammanhang.

Det övergripande syftet med denna avhandling är att bidra till en ökad förståelse om olika faktorer som har betydelse när Närsjukvårdens personal lär sig och praktiserar MI. Syftet med studie I var att identifiera hinder och möjligheter för att använda MI med kunder på apotek. I studie II, var syftet att på liknande sätt identifiera hinder och möjligheter att använda MI med barn som har övervikt och fetma. Studie III, syftade till att utvärdera sjuksköterskors attityder till MI och kliniska användande av MI i deras arbete med barns viktutveckling ett år efter att de deltagit i MI utbildning. Syftet med studie IV, var att systematiskt utvärdera innehåll och resultat av MI-utbildningar för närsjukvårdens personal.

Deltagarna i studie I var anställda vid apotek i Östergötland. I studie II, ingick fem sjuksköterskor från barnhälsovården i landstinget och sex kommunanställda skolsjuksköterskor, alla från Östergötland. Samtliga deltagare hade medverkat i MI-utbildningar för att lära sig metoden. Data från båda studierna insamlades genom fokusgrupper med deltagarna. Dessa gjordes utifrån intervjuguider vilka bestod av öppna frågor med utgångspunkt från studiernas syften. Studie II inkluderade även fem

individuella intervjuer. Data tolkades utifrån ett fenomenologiskt perspektiv. Studie III, var en enkätstudie till 76 sjuksköterskor inom barnhälsovården i Östergötland som 1 år efter deltagande i en MI utbildning besvarade frågor om MI. Studie IV, 10 studier inkluderas i studien efter att sökningar genomförts i 6 databaser utifrån sökorden, "MI", "education," och "training".

Studie I visade att farmaceuter som tidigare hade deltagit i utbildning som innehöll MI-liknande inslag ansåg att detta underlättade deras användning av MI. Farmaceuterna ansåg att den fysiska omgivningen på apotek var gynnsam för MI, men de upplevde tidsbegränsningar när det fanns många kunder i lokalerna. Återkoppling från klienter spelar en viktig roll för utförarnas MI-användning.

I studie II identifierades hinder som, sjuksköterskors brist på övertygelse om att övervikt och fetma bland barn utgör ett allvarligt hälsoproblem, problem med osäkerhet bland sjuksköterskor som upplevde att barns vikt kan vara ett problem fastän det inte fanns någon omedelbar motivation till att göra något åt det och föräldrar som sjuksköterskorna upplevde vara omotiverade att handskas med sina barns viktproblem. Underlättande faktorer inkluderade sjuksköterskors vidkännande av fördelar med att använda MI, föräldrar som var samarbetsvilliga och medvetna om hälsoproblemen, samt arbete med barn med fetma snarare än övervikt eftersom det innebar större probleminsikt hos både sjuksköterskor och föräldrar.

Studie III, visade att nästan hälften av sjuksköterskorna hade ändrat innehåll och struktur på sina diskussioner om barns vikt. Deras attityder till MI var positiva och speciellt viktigt upplevdes att MI överensstämmer med deras värderingar och normer över hur man vill arbeta och att MI ansågs fungera bättre än traditionell rådgivning.

I studie IV, identifierades 10 studier och medellängden för utbildningarna var 9 timmar. De vanligaste MI färdigheter som lärdes ut var; MI:s tekniker, att uppmärksamma och förstärka förändringsprat och att rulla med motstånd. Utbildningarna ansågs oftast vara positiva och de påverkade utförarnas vardagsarbete.

Slutsatser, en MI utbildning inom Närsjukvården är vanligtvis kort och omfattar i medeltal 9 timmar. De flesta utbildningar innehåller någon form av uppföljning som handledning eller återkoppling. En MI-utbildning kopplas

ofta till frågor som diabetes, rökning och alkohol. Det är mer vanligt att fokus i utbildningen härrör till frågor som berör arbete med klienters inre motivation, än till arbete med att stötta klienters genomförande av förändring. MI anses vara praktisk användbar, speciellt i arbete med livsstilsfrågor och hälsofrämjande arbete. I frågor som kan vara känsliga att ta upp med klienter som övervikt, fetma och alkohol kan det finnas en fördel med att använda MI. Närsjukvårdens utförare har en positiv attityd till MI och de anser att MI är samstämmig med deras värderingar över hur de vill arbeta. Klienters motstånd mot förändring är svårt att hantera i början av lärprocessen, men efterhand utvecklas utföraren så den kan hantera motstånd vilket brukar vara en del av den senare delen av MI lärandet. Omgivningen (kollegor, chefer och organisation) som finns runt den som lär sig MI har stor betydelse för hur MI kan praktiseras i den kliniska vardagen. Avlärande av gammal kunskap dvs. att byta ut föråldrad och inte effektiv kunskap mot ny och relevant kunskap kan vara ett problem när MI ska läras in.

Nyckelord: barn, rådgivning, motiverande samtal (MI), sjuksköterska, övervikt, farmaceut.

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