A MIXED METHODS STUDY OF THE MOTIVATIONAL INFLUENCES UPON DIETITIAN CHANGE OF COUNSELLING PRACTICE

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Abstract

Patients’ motivation to sustain healthy habits is a key determinant of patient health management in chronic disease. Their motivation is expected, yet health-care providers may not have the tools or skills to inspire behavioural change. As key health-care providers, dieticians are pivotal in motivating patients to apply nutrition in their self-care yet are not consistently trained in counselling or coaching to assist patients. In particular, Motivational Interviewing (MI) is an evidence-based practice, and in this study is newly learned by dietitians who participated in an online course and then applied their skills in practice. Self Determination Theory underpins the study’s focus on dietitians’ perceptions of their own personal motivation and barriers to apply MI to practice. This explanatory mixed methods study showed that phronesis—dietitians’ professional insight into practice—overcame barriers to MI application in the workplace.

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List of Definitions

Motivational Interviewing

Motivational Interviewing (MI) is an evidence-based practice of counseling developed three decades ago by psychologists Bill Miller and Stephen Rollnick (Miller & Rollnick, 2013). The goal of MI is to guide the patient to acknowledgement of barriers to change of desirable behaviours and assist them to build their self-confidence of commitment to change (Markland et al., 2005; Resnicow & McMaster, 2012). An explanation of the process in provide in the text on pages 26-27.

Patient Centered Care

Patient Centered Care is a term used around the world to refer to the team approach in healthcare that positions the patient as the director of the services and treatments they receive from health professionals and systems. It does imply the system has provided health-care education to patients required to manage their own healthy lifestyle over time (Health Council of Canada, 2011, 2012; Institute for Healthcare Communication, 2013).

Patient Self-Management

This term refers to a person with a medical diagnosis is able and confident to manage their health issues related to living with a chronic health condition (The Stanford Patient Education Research Center, 2017). A short discourse on the term is provided in the text on pages 10-11.

Self Determination Theory

Self Determination Theory was published as a behavioural theory in 2002 by psychologists Edward Deci and Richard Ryan. It has proposed to understand a that a person's

motivation is reliant upon autonomy that is built by internal and external influences (Deci & Ryan, 2012). The theory is discussed fully in the text on pages 13 and 18.

Prologue

I will tell a story in which my experience of professional development in woven with the stories of others on a similar journey. Storylines provide a lens to see more deeply into real life situations and for some instances in my life I have used cartoons to reveal more than what can be said easily said, to help diffuse a sensitive topic, and as a tool of catharsis. In my teen years, I developed a cartoon character of myself called *The Adventures of Christine,* in which the heroine was involved in various episodes that included binge drinking, car crashes, and first steps into academic university life; thirty years later the character re-entered academia to work towards a PhD. Now in the completion of the thesis, this heroine reveals herself in my imagination once again.

She follows a path out of the forest to a university which she attends while simultaneously working full time as a dietitian. Her PhD pursuit and work life require the bravery of the knight character she played in a cartoon years ago when she discovered the Excalibur sword in the river at Trent University while studying philosophy and politics. Now, she travels with a small backpack lightened from the load of extraneous items she discarded in a cartoon drawn for a PhD course two years ago when she first ventured across the bridge of knowledge into the sunset.

Her current quest is to find what is it is to be *professional* and includes expectations of dependability, knowledge and humane action. In the context of being a dietitian professional - does dependability mean homogeneity? does knowledge mean being immersed in clinical research outcomes or wisdom? can humane action include love in the workplace?

I knew from my life experience as a dietitian that there was an ingredient of good care missing from my patient approach. The role of the social polity, pressures by national

trade and commerce, and impacts of poverty upon access to food were always important in my career positions that were often themed around the social determinants of health. I felt that I had holistic understanding of how food was played and used as ploy by others in the human experience.

The right to choose lifestyles for health inclusive of healthy food options was important in my career position as Coordinator for Chronic Disease Self-Management Programs in a region of Ontario healthcare. In this role, my commitment to work on behalf of the patient, to not "blame the victim", aligned with the new directives in Ontario Health of patient centered care.

In this role, my dietitian status fulfilled the need to be a health professional yet gave me reprieve from the role of nutrition educator and counsellor where I had become weary of the lack of lifestyle change patients could maintain. I wondered why some patients could not make sustaining nutrition changes so important for their own health. I educated, coached, and encouraged; I wondered what "tricks of the trade" were missing from my professional repertoire.

It was in my training in Motivational Interviewing that I began to understand how people can change. The process of conversation with the intention to lead another through ambivalence to change towards a sustainable goal allowed for long lasting behaviour change. The risk of the conversation was in my ambition because the skill of the conversation was in my ability to follow the thoughts of the patient and reflect them back for the person to find their own way through their resistance to change. The barrier to change could be me if I took the conversation in a direction of my own professional goals rather than those of the patient.

Embedded in this challenge is the professional's commitment to health directives and our need to see changes that are measured as successful by health systems.

Journal Entry. Sept 15, 2014

Learning requires time. Didactic teaching manages that problem by informing, directing, and testing. Didactic teaching is an efficient way of managing learning – force feeding and demanding retention. How to teach a person who already has the answer? But time has not been the problem to the application of new knowledge. Traditional ways of teaching are not useful in the context of applying a new way of living into years of different habits. The problem is how to assist the to change their habits.

Journal Entry. Dec 22, 2014

I have talked to professors and dietitians about the topic of my thesis. They talk about creating tools for practice. I see this as an indication that we want to get things done. Our need for corrective action to assist others to make health change is apparent. The root of Motivational Interviewing is the acknowledgement that the attitude of the professional and relationship they forge with the patient is what advances change. I am interested in the professional's attitude towards change.

Let's research this - and so begins my quest to determine whether others might have similar counselling experiences and what impacts us in our self discovery.

Chapter 1: Introduction

Chronic health conditions are on the rise around the world with approximately half of all Canadians living with at least one chronic condition (Health Council Canada, 2011, 2012, 2013; Royall, 2009). Health professionals working in chronic health care management are challenged to show evidence of good patient outcomes in a population whose disease is likely to increase in complexity rather than improve over time. Provision of care, then, requires an approach that can evolve with the patient. The patient is the one constant entity within their own changing health environment of different health professionals in various health services who apply treatments that may change over time. If the patient is included by the professional care team in medical and treatment decisions throughout the course of the disease, and is knowledgeable about the lifestyle required for self-care, then the patient is positioned to be successful in their own self-management. This requires the role of health-care professionals (HCP) to include that of educator and coach; a position that supports and inspires patient motivation for sustainable self-care in the day-to-day challenges of living with chronic disease. As members of the multidisciplinary HCP team, dietitians assist patient change of nutritional behaviours but are not consistently trained in psychological theories or practices to counsel patients for behavioural change. Some dietitians are responding to patient need by learning and including Motivational Interviewing (MI) in their scope of practice.

MI has been shown to be an effective therapeutic conversational method that does not require psychological training but does require a disposition to support patient self-management (Institute for Healthcare Communication, 2013). MI's support of patient centredness aligns with Self-Determination Theory (SDT) that states HCPs who are highly motivated themselves will support the same in patients (Deci & Ryan, 2012). This two-part

study first investigated the self-scored motivational attributes of dietitians who had completed a MI training and secondly investigated those dietitians who scored the highest internal motivation of autonomy but felt unsuccessful with MI in their practice. There has not been a study to date that considered the predisposition of dietitians' autonomy with change of counselling practice in relation to their work experiences.

The remainder of this introductory chapter provides a personal context for my interest in the research topic and then presents background information on the health-care education culture as a rationale for how dietitians learn and teach. Patient-centred health education is explored in the context of self-management, and health and nutrition literacy.

A Dietitian's Perspective

Like thousands of health professionals, I trained in dietetics with a desire to help others. After years in the job I was discouraged by the lack of health change patients were making. I doubted my skill to assist them and I doubted their sincerity to try. However, a conversational exchange with a colleague prompted me to change the way I was interacting with patients, leading to a subsequent change in the ways in which my patients behaved. My memory of that event is vivid:

> I was in a course for MI training and during a paired activity I told my partner about a patient situation. I know she was listening because she smiled encouragingly when I hesitated, paused to let me think, leaned in and genuinely said, "Tell me more." (McIntosh, 2016a, p. 16)

After 15 minutes of discussion, I felt better about the situation and had voiced my own solution. My colleague applied her new skills in MI to our conversation and I had learned something new for myself. Today I can give an academic explanation of the skills

that were used in that interchange but it is the memory of being heard that stays with me (McIntosh, 2016a).

I went on to learn more about the psychology of behavioural change. I saw clearly the limitations of the typical health-care education approach that, instead of using the patients' own goals to establish a new action, relies on a one-size fits all approach that assumes that the practitioner's role is to pass knowledge on to patients.

Liberated by my new knowledge I felt a consequent imperative to understand how this specific psychological approach of MI could be applied in my profession of nutrition and dietetics. I wanted to lead other dietitians in this professional change to be more effective in health care so that they could foster patient self-respect and reduce patient reliance on health-care systems.

And after the training, the reflection, and the application, I changed my professional practice. Now the patient—my partner in change—is guided by me to be motivated for her own reflection and application of new health habits. Because of my personal experience with MI, I became intrigued as to what it might mean for other dietitians.

Background to the Problem

Chronic disease is becoming a significant concern given an aging population and limited health-care funding (Health Council Canada, 2011, 2012; Health Quality Ontario, 2016). Chronic diseases are in their nature incurable and therefore necessitate a change in the way in which they are managed. Yet all too often practitioners in the field, trained in didactic methods within positivistic teaching environments that work well with curable disease management, applied the same care strategies of directives and treatments (Lee, Kerry, Stone, Freedberg, & Bangsberg, 2011; Peregrin, 2014; Plack, 2005). Consequently,

education strategies in the health-care field were similarly didactic and consisted of HCPs giving lists of risks associated with certain health behaviours and instructions on how to apply new medications, treatments, and habits (Hancock, Bonner, Hollingdale, & Madden, 2012; Horton, 2010; Williams, 2002).

Often a didactic approach did not impact sustainable patient change because its intention was to treat symptoms and expected compliance to directives in the short term. In any case, patients did not change behaviour just because they were told to do so (Institute for Healthcare Communication, 2013). Health habits, like many others, are difficult to alter and several attempts are required to change a habit with various degrees of success (Institute for Healthcare Communication, 2013; Prochaska & DiClemente, 1983). Outcomes improve, however, when patients feel supported in their own goals and have a rapport with the HCP (Elwyn et al., 2014; Ferguson, Ward, Card, Sheppard, & McMurtry, 2013; Health Council of Canada, 2011; MacLellan & Berenbaum, 2007). A more recent approach in health-care education, patient-centred care methods, indicates that patients' learning improves when they show self-motivation and take the lead on management of their own healthy lifestyle over time (Elwyn et al., 2014; Health Council of Canada, 2011, 2012; Institute for Healthcare Communication, 2013).

Government mandates now set the standard for health associations to reduce chronic disease through public health and primary health-care education initiatives (Dietitians of Canada, 2016; Goodman, 2010; Health Council of Canada, 2011; Health Quality Ontario, 2016). In Canada, there is a recognition of the multifactorial pressures on individuals to manage a healthy life (Liddy & Mill, 2014; World Health Organization, 1986). The Ottawa Charter, founded at a World Health Organization meeting in Ottawa in 1986, established the

foundation to support disease prevention and control as a human rights issue that required empowerment of individuals and their communities (World Health Organization, 2013a). The Charter signified a shift of a perception from that of health being the absence of disease to health being degrees of wellness within a host of personal, social, and environmental factors—known as the determinants of health—that have an impact on individuals as players, sometimes activists, for their own wellness (McQueen & De Salazar, 2011). Years later, in 2015, the Global Commission on Education of Health Professionals for the 21st Century report set out a manifesto for transformation in the education of health professionals calling for a "renaissance to a new professionalism—patient-centred and team-based" (Horton, 2010, p. 1875). The Commission's assessment and vision on global health education reform included a need to embrace teamwork, uphold a strong service ethic, and be centred around the interests of patients and populations (Stigler, Duvivier, Weggemans, & Salzer, 2010). Spanning 30 years, these two international documents provided a consistent message that health management required a holistic approach managed by an effective partnership between workers and consumers of the medical system (Hancock et al., 2012). But the question remains: What does this mean for practitioners and patients?

Patient-Centred Care

Traditionally the medical model has expected patients to behave like students who understand medical information and obey provider directives (Plack, 2005; Williams, 2002). The medical cultural norms have been centred on systems management and anticipate that patients will adapt and navigate themselves through the system (Goodman, 2010). The medical health culture has been founded upon positivistic philosophic traditions. This has meant there has been a dominance of the following: teacher-directed

learning rather than student-directed learning (i.e., lectures rather than peer-assisted learning with use of case studies); preference for quantitatively informed evidence-based practice directives rather than patient self-management programs; and higher value of quantitative research than qualitative research (Cojocaru, 2010; Mackeracher, 2004; Plack, 2005). In contrast, the constructivist norms of patient-centred care have positioned patients as their own authority on decisions (Mackeracher, 2004; Plack, 2005).

The goal of patient-centred care in primary health care has resulted in changes to health-care delivery models. Across Canada, primary health organizations have been leading programs in Patient Self-Management (Health Council of Canada, 2012). The Stanford Patient Education Research Center (2017), a leading international health education organization, notes that the goal of self-management is “to help people gain self-confidence in their ability to control their symptoms, better manage their health problems, and lead fuller lives … and is learned in environments that are highly interactive, focusing on building skills, sharing experiences, and support” (paras. 1- 2).

The success of self-management programs has been due to the raised self-awareness and the inspiration participants give one another when guided by sound principles of the self-management program curriculum. Patients learn to consider their health as more than the control of symptoms to include all aspects of life—such as managing sleep, stress, exercise, and nutrition. In a well-functioning health-care environment, HCPs would support patients in their self-management in the therapeutic relationship with suggestions and recommendations that build the patients’ motivation. Yet, it is the directive style of care that continues to dominate in conversations between HCPs and patients (Bonvicini et al., 2009; Charon, 2010; Elwyn et al., 2014; Health Council of Canada, 2012; Hanna, 2010; Plack, 2005).

Dietitians are taught their craft within the epistemology of biology and physiology, which has determined the nutritional clinical directives provided to patients (Dietitians of Canada Diabetes, Obesity and Cardiovasular Network, 2012). Dietitians have been trained to "obtain a diet recall or perhaps the litany of foods and lifestyle circumstances ... which serve … as fuel for our work, a verbal diary and lifestyle stethoscope … that we need to hear to construct our therapeutic advice and strategies" (Habash, 2015, p. 124). Such information is essential in assessing the nutritional status in order to assist the patient, but the dietitian–patient interaction often stops short of helping the patient to identify both their deeper incentives and barriers that can self inspire them to develop a personal lifestyle that will lead to their own success. There have been changes in recent years, however, in pre-professional dietitian education at the university level to introduce the importance of the therapeutic relationship with the patient, but dietitians in the field have been trained as far back at the 1980s when this was not the norm (AbuSabha, 2013; Clifford, Fennessy, & Neyman Morris, 2011; Dietitians of Canada, 2017).

Without an understanding of the therapeutic relationship, a dietetic professional armed with nutritional facts and traditional education techniques may operate from a position of authority rather than partnership. Given this perspective, a dietitian might equate patient self-management to patients' adaption of behaviours established by the dietitian. In other words, a dietitian might consider education as a kit of techniques and tools that help patients choose from a list of closed options of healthy nutrition behaviours. On the other hand, dietitians who take a more constructivist perspective would have an expectation of a learning partnership for health-care decisions (Bluman, Jarvis-Selinger, & Hotz, 2007). Education philosopher Jerome Bruner (1973) proposed in the *Relevance of Education* that learning

occurs when the topic is not restricted to the expertise of the teacher but opened to the learner to make it personally and socially relevant and open for exploration. Positioned in partnership, the learner can be self-reflective and take ownership of new knowledge. Bruner (2008) explains that reflection necessitates an ongoing self-narrative, whereby education becomes self-inspired as we reflect upon what we gain and apply throughout our life. A health professional with a similar perspective might inspire patients to dictate their own behaviour change based upon their developing understanding of risks associated with no change. If not trained initially in a constructivist framework, the dietitian may necessarily undergo a fundamental thought transformation in their practice to embrace a collaborative practitioner–patient partnership (de Silva, 2011). A change of educational approach requires both a philosophical and skill shift but as many have noted, it is not easy to change the attitudes acquired during initial professional training and such change requires motivation to enrol in professional development courses (Dietitians of Canada Diabetes, Obesity and Cardiovasular Network, 2012; Peregrin, 2014; Williams, 2002).

This perspective is supported by the systematic review of 400 studies of patient-centredness from around the world (Scholl, Zill, Härter, & Dirmaier, 2014). Scholl et al. (2014) found that although the term *patient-centredness* was found to be differentiated by 15 uses, themes emerged related to the clinician–patient relationship. Clearly, patient self-management required new skills on both sides of the teacher–learner relationship. If patients are to be active partners in their own care, then there is a need for increased health literacy.

Health Literacy

In health-care education, health literacy is foundational to self-management and refers to patients' knowledge of disease and the system that assists in the management of

their health. Sørenson et al. (2012) provided a model of health literacy informed by a comprehensive review of definitions found in public health and health systems around the world. The model presented four stages of patients' knowledge acquisition developed by their experience in different parts of the health-care system (Sørenson et al., 2012). Knowledge was developed through stages of access, understanding, interpretation, and application of information in any of three roles as patients in the health system, as individuals interpreting public health messages, and as citizens experiencing the determinants of health (Sørenson et al., 2012). As a working model of health literacy, Sørenson et al.'s model served both as a conceptual basis from which to create effective education and strategies to support learner responsibility. In its *Health Literacy: The Solid Facts* report, the World Health Organization (2013b) built comprehensive strategies from Sørenson et al.'s model for public application initiatives at sites such as the community, educational institutions, health organizations, and media. Together these two hallmark international reports established health literacy as fundamental and a human right (Horton, 2010; Stigler et al, 2010). A HCP commitment to patient literacy is a primary step to assist behavioural change.

Patient-centred care, then, requires changes for HCP communication skills and shared decision-making as well as changes in patients' health knowledge and ability to be a self-advocate (Goodman, 2010). Changes of this magnitude might require a different way to think of "care." It is interesting to note the non-clinical perspective presented over a decade ago by health anthropologist Annemarie Mol and sociologist John Law (2004) who referred to "care" as effective patient–practitioner interaction; "care" is both verbal and non-verbal and is contained in care practice, self-care, and care settings. Health system care is improved and most ethical when it anticipates highly informed patients and supports the rights of patients to

choose their own care (Mol & Law, 2004). Mol (2008) explains patient care to be either of two domains: the *logic of choice* or the *logic of care*. This delineation creates the rationale that self-management can limit care if it supports the rights of an individual to the exclusion of the health system. Mol suggests that if we think of patient self-management only in terms of patient choice, where concepts of self are valued as independence and isolation from the influence of others, then we default to the logic of choice. But because chronic disease management in a well-lived life relies upon the health-care system, patient self-management in the context of this study is supported by Mol's logic of care where the patient has the locus of control of their body and decisions for disease management in balance with the system at large (Mol, 2008). I propose that this relationship between the health-care community and the individual is experienced in the therapeutic relationship.

The interaction between the HCP, the health system, and the patient functions well if health literacy is defined as a patient-centred concept that assumes that when we teach or talk with patients about health they have body and lifestyle expertise of their own (Mol & Law, 2004). In dietitian practice, health literacy specific to nutrition has been evaluated as food and nutrition knowledge status (Carbone & Zoellner, 2012; Gibbs & Chapman-Novakofski, 2010). *Nutrition literacy* is a term based on the assessment of clients' macronutrient knowledge, numeracy skills for label reading, household measurement skills, and food group identification (Carbone & Zoellner, 2012; Gibbs & Chapman-Novakofski, 2010). This information ensures dietitians and patients have common language for discussion but may not establish common ground. Patients understand they need education but if they were given information that is related to the dietitian's agenda and not their own they are less likely to be inspired to make a change (Hancock et al., 2012). Mol (2009) says of disease management, "As control is

illusionary, as all the elements involved (bodies, technologies, food, colleagues, what have you) are capricious, the task is that of attuning everything to everything else" (p. 1757). Health literacy, then, includes the responsibility and skill of managing physical, emotional, environmental, and varying motivational conditions of living with chronic disease. For example, a client experiencing high blood sugars of diabetes complicated by poor access to food likely does not benefit from a typical dietitian-led conversation about carbohydrate content of foods. Instead, a therapeutic conversation that meets the criteria of health literacy would anticipate discussion of pertinent topics such as how safe they feel and what, when, and where they have access to food, but only after first establishing patient goals regarding their blood sugar control. Nutrition literacy defined in this way underlies patient-centred health education based on a mutually agreed education agenda. This foundation for therapeutic conversation is established in the first steps of an MI.

Nutrition Education That Meets Patients' Needs

MI is one of varying counselling perspectives known among dietitian organizations that is supported by education frameworks for chronic disease management (Barr, Yarker, Levy-Milne, & Chapman, 2004; Health Council of Canada, 2012; Hollis, Williams, Collins, & Morgan, 2014; Rhea & Bettles, 2012; Thorpe, 2003). The regulatory standards in Australia, Canada, New Zealand, and the United States include an expectation of counselling skills to part of dietitian practice and served to support MI as a patient-centred dietetic practice (Hollis et al., 2014; Williams, Hollis, Collins, & Morgan, 2014).

Dietitian skills development in MI has been an exciting therapeutic option based on evidence that patient motivation for behaviour change is related to practitioners' application of MI skills (Bonvicini et al., 2009; Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010).

Interest in MI training for dietitian practice has increased around the world (Dietitians of Canada, 2016, 2017; Health Council of Canada, 2012; Hollis et al., 2014; Spahn et al., 2010; Thorpe, 2003). One such professional development program that is featured in this study, *Counselling for Behaviour Change*, has served to teach dietitians counselling skills and introduce MI to many dietitians across Canada.

The Counselling for Behaviour Change Course

Counselling for Behaviour Change was designed by dietitians in counselling leadership to provide a skills development course for dietitians in practice of chronic disease management. The online course featured a comprehensive program of video vignettes, readings of the *Instigating and Implementing Eating and Physical Activity Behaviour Change: A Lifestyle Intervention Manual & Toolkit*, and reflective writings (Dietitians of Canada Diabetes, Obesity and Cardiovasular Network, 2012). Education modules included topics about therapeutic relationships, basic skills, theoretical counselling models, and a stepped approach of application of new skills and knowledge. Two theoretical models commonly taught in dietitian training programs, the Trans-Theoretical Model and Cognitive Behavioural Therapy, are reviewed in the course but it is the addition of the values and skills of MI that are of specific interest in this study because it is new information to many dietitians. Dietitians of Canada Diabetes, Obesity and Cardiovasular Network (2012) stated the following in the course introduction:

> The reality of developing a healthy lifestyle means not only recommending diet and physical activity goals that helps a client meet recommendations but also providing clients with tools that aid with change in and maintaining new behaviours. … For most individuals, providing education alone does not promote behaviour change.

> However, moving away from education-based intervention strategies can be difficult to implement in practice. (p. 5)

I chose this course as the only MI course from which to gain the study population because I could be assured of the quality of the course and as a participant myself, I knew what these dietitians had been taught. As someone interested in MI and who had a personal understanding of the impact of MI, I wanted to discover to what extent personal motivation would have an impact on an individual dietitian's acceptance and use of MI in practice.

Purpose of the Study

Given the aforementioned factors that create effective health care, I considered the way dietitians might impact patient self-management. The purpose of this study was to develop an understanding of the dietitian's professional inclination to the practice of MI and investigate the complexities of dietitian motivation to become change agents. There has been limited scholarly investigation of dietitians' application of MI (Brug et al., 2007; Marley, Carbonneau, Lockner, Kibbe, & Trowbridge, 2011; Spahn et al., 2010) but none that has examined dietitians as students of the new professional practice. SDT proposes that a person's intrinsic motivation is measured by the trait of autonomy and determines an ability to motivate others (Deci & Ryan, 2002; Williams, 2002). I wondered whether, if this held true, what motivation dietitians have in the application of the skill set (Williams, 2002). I wondered whether a subpopulation of dietitians who were either unmotivated and successful, or motivated but unsuccessful, provided a source of information to more fully explain motivational factors and other conditions that had an impact on a dietitian uptake of MI skills. The problem led to three research questions.

Research Questions

To test motivational theory, investigate additional internal and external impact upon motivational interviewing skills, and then integrate the theoretical and experiential findings, three successive questions were posed:

1. Quantitative research question: In what way might autonomy orientation, as a measure of motivation to change, influence dietitians' success in applying MI with patients?
2. Qualitative research question: What other factors might affect the successful application of MI skills and outcomes after taking the online course called *Counselling for Behaviour Change* (Dietitians of Canada, 2017)?
3. Integrated research question: What emergent factors influenced the learning and application of MI by dietitians?

Research Design

To explore the questions, I used an explanatory sequential mixed method design that involved initial quantitative data collection through a survey followed by qualitative interviews. I used the Global Motivation Survey completed by dietitians across Canada who enrolled in the online professional development course, *Counselling for Behaviour Change* (Dietitians of Canada, 2017). In the qualitative phase, interviews conducted online with GoToMeeting.com explored additional internal and external influences with dietitians who were either unmotivated and felt successful, or autonomous and felt unsuccessful. Details of the methodology are presented in chapter 3.

Assumptions

Educational research as the study of phenomena is related to ways in which psychological, social, environmental, and sociological factors have an impact on learning

(Christensen & Johnson, 2012). This study was conducted upon human experience and therefore anticipated any combination of predicted or dynamic and complex experiences (Christensen & Johnson, 2012). An underlying assumption of this study was that dietitians who are autonomously motivated themselves felt that they could motivate patients.

Limitations

Statistical measures were limited by the result of the small population of dietitians who answered the survey of the group that had completed *Counselling for Behaviour Change*. The respondents were from across Canada so findings were not specific to provincial regulations or scholastic preparation; it was a broad stroke of generalized dietitian experience. Since only a small percentage of dietitians completed the survey and only two dietitians were interviewed, transferability of study outcomes was limited.

Scope

The study focused on dietitians' perceptions of their own personal motivation and impact upon patient motivation. It does not measure actual professional change outcomes but was intended to illuminate dietitians' professional insight into practice.

Chapter Summary

In this chapter I provided the health education context for the study, outlined the patient self-management perspective of chronic health conditions, and highlighted MI to provide a patient-centred approach. I also established my research queries about the influences that may impact dietitians' use of MI. In the next chapter I provide a literature review of the supportive framework of SDT and the clinical practice of MI that feature motivation for sustained behaviour change.

Chapter 2: Literature Review

In order to provide a theoretical framework for the study, this chapter examines the effectiveness of motivational communication to support patient-centred learning. It presents an overview of Self-Determination Theory (SDT) and Motivational Interviewing (MI) in the literature as well as application to practice. I discuss *autonomy* as the underpinning for self-direction and as a key aspect in the clinical practice of MI. The literature indicates that motivation in health-care professionals (HCP) is susceptible to internal and external factors. Motivation and self-efficacy of dietitians to use MI is reviewed.

Self-Determination Theory

SDT posits that a person's autonomy is built by internal and external influences (Deci & Ryan, 2012). SDT emphasizes that autonomous patients are good self-managers when they are affirmed by communication patterns between the HCP and patient (Deci & Ryan, 2012; Ten Cate, Kusurkar, & Williams, 2011) and underpins the need for MI. Without autonomy support by the HCP, patient outcomes rely on compliance to HCP instructions and medical orders (Charon, 2010; Cole, Davis, Gutnick, & Reims, 2014; Peregrin, 2014; Plack, 2005).

In the present study, the position of a HCP as both a student and teacher was considered important. I was interested in the influence of the number of years of practice upon a dietitian's autonomy. I wondered also about the influence of training at the pre-practice level upon autonomy. This idea was initially tested by researchers in Australia who conducted a multicentre randomized controlled trial of 107 medical, physiotherapy, and occupational health students to test a method of training on shared decision-making with patients (Hoffman, Bennett, Tomsett, & DelMar, 2013). The intervention improved student clinician attitude, confidence, and ability in shared decision-making, and the initiative showed that these skills

could be taught early in practice just as are other evidence-based practices (Hoffman et al., 2013). The fact that it was important to teach how to *not* be directive to patients at the pre-practice stage indicated that people either develop directional styles more naturally than assistive styles, or that this attitude of instruction was embedded in universities. SDT researchers have considered these as internal and external influences upon student learning and practice.

The Self-Determination Model for Medical Education shown in Figure 1 illustrates the flow of autonomy, as an indicator of personal motivation, throughout the education system. The study considered the position of "Provider Autonomy Support" in the model.

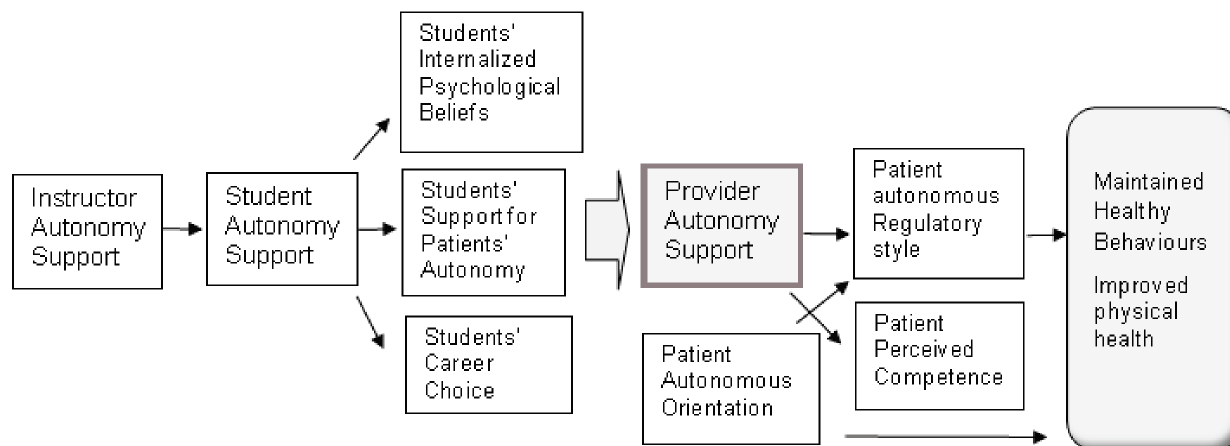

Figure 1. Self-determination model for medical education. Adapted from: "Self-Determination Model for Medical Education" by G. C. Williams (2002). "Improving Patients' Health Through Supporting the Autonomy of Patients and Providers." In *Handbook of Self-Determination Research* (p. 240). Copyright 2002 by University of Rochester Press. Permission granted for model use.

The diagram in Figure 1 illustrates that the position of the provider, who has obtained autonomy support through educational experience, interplays with the patient's ability to maintain health behaviour by both regulating the interactive style and by supporting the patient's feelings of competence to change. The provider, then, is in a key position to influence patient autonomy and may also have barriers to their motivation.

Autonomy in SDT

SDT is a psychological theory about human motivation that spans from autonomy to controlled behaviour (Deci & Ryan, 2002, 2012). Autonomy is a full sense of volition and choice compared to controlled behaviour that is activated by pressure from a demand or offer (Williams, 2002). A person can be volitional only when feeling competent to make a choice; a person can only feel competent when feeling supported (Deci & Ryan, 2012). SDT asserts that these three elements—*autonomy*, *relatedness*, and *competence*—referred to as nutriments, are basic needs for growth and well-being (Deci & Ryan, 2002). Relatedness includes caring for self and others as well as a need to feel integrated and accepted (Williams, 2002; Williams & Niemiec, 2012). Competence is the feeling of effectiveness in one's environment and includes opportunities to express self-capacity; the need for competence leads people to seek, maintain, and challenge their capacity (Deci & Ryan, 2002). The degree to which these nutriments are perceived within oneself has an impact on internal motivation.

The nutriments are conducive to social interaction. The word autonomy infers self-sustaining behaviour and does include freedom of choice, but it has a relational quality for the purposes of SDT. Change in health behaviour, such as increasing exercise, may not be something a person can do independently so when working with the HCP, the autonomous patient is willing to expose their need for change and potentially accepts assistance. This differs from *independence* which would include the freedom to not change behaviour (Williams, 2002). Independence also includes the concept of isolation, which implies an external relatedness to others but autonomy is determined from within. A HCP who supports autonomy engages the patient to enhance volition and competence (Williams, 2002). The greater the influence of internal psychological well-being, the more intrinsic the autonomy. Conversely, external factors create extrinsic influences upon autonomy.

Researchers use autonomy as a measurable indicator of patient health behaviour change. Pelletier and Sarrazin (2007) applied a reliable measurement scale of six components of motivation along the spectrum of extrinsic to intrinsic motivation related to sport. At one end is a-motivation, sided by four types of extrinsic motivation, that become increasingly introspective (*external*, *introjected*, *identified*, and *integrated*) and at the other end is intrinsic motivation, also referred to as autonomy. These measures were applied to motivation of a specific behaviour, to assess the impact of coaching along the motivation continuum (Pelletier & Sarrazin, 2007). Results indicated that in coaching environments outcomes were decreasingly positive from intrinsic motivation to a-motivation when clients had low perceived competence, and perceptions that coaches were not autonomy supportive. Research tools of SDT that have been developed since that study have continued to include measurements of this cascade of motivation types (Slovinec, Pelletier, Reid, & Huta, 2014). The types of motivation are summarized in Table 1.

Autonomous Motivation for Teachers and Learners

A study on the teaching motivation of professors showed the value of intrinsic motivation compared to external influences of university mandates on teaching performance (Wilkesmann & Schmidt, 2013). Professors across disciplines of German universities were not motivated by external impetus nor by well-meaning campaigns to provide work incentives (Wilkesmann & Schmidt, 2013). The study analyzed 1,119 surveys that used verified SDT measurement scales to test motivation types with job duties and work incentives. There was a positive correlation between intrinsic motivation to teach in academia and the existence of a supportive institutional environment for professors including reinforcement of perceived competence (Wilkesmann & Schmidt, 2013).

Table 1

Types of Motivation

Type of motivation	Definition	Experience of the type
A-motivation	No interest	No motivation
Extrinsic motivation	Satisfaction of social constructs; obedience	Compliance
Introjected motivation	Internalized external goal; assent	Self-control; internal rewards and punishments
Identified motivation	Agreement with the value or goal	Personal importance; choice of values
Integrated motivation	Ideas aligned with personal values	Harmony with the self and other activities in one's life
Intrinsic motivation (autonomy)	Internally motivated	Interest; curiosity; inherent satisfaction

Note. Adapted from "The Self-Determination Continuum" by E. L. Deci & R. M. Ryan (2002). "Overview of Self-Determination Theory: An Organismic Dialectical Perspective." In E. L. Deci & R. M. Ryan (Eds.), *Handbook of Self-Determination Research* (p. 16). Copyright 2002 University of Rochester Press.

Intrinsic motivation has been shown as central to the performance of young students as well. In a study of 61 adolescent school boys, their motivation towards physical education predicted their measured level of exercise intensity (Owen, Astell-Burt, & Lonsdalectic, 2013). Also, their teachers' directive styles of instruction negatively impacted the athletic performance of students (Owen et al., 2013). Researchers concluded that personal motivation was important for individuals' activity intensity in leisure time while the teacher's autonomy support influenced student motivation in class time.

In a study of 218 Greek high school teachers, autonomous motivation predicted teachers' intentions to participate in a training program of a new teaching strategy, as well as

application of the new strategy in their classrooms (Gorozidis & Papaioannou, 2014). Although results showed that both internal and external reasons for participation existed in teachers' minds, descriptive results from part 1 of the study showed that *intrinsic* and *identified* motivation predicted teachers' intention to participate in training. Teachers' responses to the open-ended questions in part 2 of the study were categorized into *intrinsic* (69%) and *identified* (34%) subthemes indicated that these attributes were predictors for teachers to apply the new strategy. The findings substantiated the Self-Determination Model for Medical Education (shown in Table 1), that whether teacher or student, and when teacher is a student, their autonomous motivation along the continuum of learning is a determinant for changed practice (Gorozidis & Papaioannou, 2014). Additionally, this two-part study which included a SDT survey and was followed by secondary open-ended questions served as a methodological example of my research design.

Motivation for learning, specific to web-based education, was investigated by Chen and Jang (2010) in a population of 267 school teachers who completed professional development certificates. Surveys identified their autonomous attributes, instructor support experience, and learning outcomes. Results indicated that the instructors who supported autonomy impacted the teachers' scores of perceived relatedness, competence, and autonomy. Chen and Jang concluded that online instruction needed to incorporate strategies that supported students when they were free to express their feelings and concerns. Of interest to researchers was participants' "perceived support" but not "received support" (Chen & Jang, 201, p. 750). It was not the actual technical or instructional support that influenced autonomy but the sense of being personally supported that increased autonomy scores. Additional relevance to this study was that SDT measures were validated in a study of online curriculum.

In a SDT study of medical students, researchers identified motivational risk in high achieving students who were oriented to intrinsic motivation but discouraged from learning when external controls, such as curriculum design and grades, were applied to manage the students (Ten Cate et al., 2011). In medical education, SDT indicated that these internally motivated students overcompensated for the highly directive instruction in medical school to succeed (Ten Cate et al., 2011). It seemed that when the stakes were high, intrinsic motivation was redirected into compliance. Most health professional curriculums are taught in similar academic environments and this pressure to perform has been replayed in the clinician–patient relationship so that there has been an expectation from clinicians for patients to comply with medical directives (Charon, 2010; Peregrin, 2014). Yet, patients may have low intrinsic motivation and little inclination to compliance (Institute for Healthcare Communication, 2013). Faced with this scenario, it is clearly beneficial to include training in motivational conversation in education of health-care professionals.

Thus far, studies have concluded that when autonomy was supported by others it determined engagement with change and when fostered further activated more change. This has an impact on the HCP–patient relationship. Consider now the patients' experience.

Motivation in the Patient Experience

A meta-analysis of SDT applied to health-care contexts showed that instructional styles of health management resulted in patient compliance, while relational styles resulted in greater patient change (Ng et al., 2013). Different autonomy measurement scales were used in studies but all showed the same results of types of motivation upon patient outcome. This meta-analysis of 166 sources examined health behaviours such as physical activity, diabetes care, tobacco cessation, and weight control. Correlations indicated the act of autonomy

support within health-care environments positively predicted higher levels of patient autonomy in biological and psychosocial domains; applications of SDT could assist patient change in glycemic and cholesterol control, and improvement in activities such as exercise and medication regimens (Ng et al., 2013). The meta-analysis showcased high scores of patients' autonomy as a reliable measure of well-being—a health outcome now accepted with the same status as biological indicators (Ng et al., 2013). Certainly, SDT has been a reliable framework for determining specific elements of motivation in a patient population.

Williams and Niemiec (2012) in a review of three SDT trials that increased physical activity and medication demonstrated that adherence occurs when patients were self-affirmed and positive in outlook. The review indicated that motivation was a precursor for change. But it was unclear in these trials whether patients were externally motivated by such things as professional attention or peer pressure, or were internally motivated by personal decisions brought on by the educational interventions (Williams & Niemiec, 2012). All change is good; yet the results were clear that motivation is sustained only when stimulated by internal factors (Williams & Niemiec, 2012).

Specific to eating behaviour, SDT studies concluded that the support of autonomy was positively associated with healthy eating behaviours and controlled regulation was positively associated with dysfunctional eating behaviours (Pelletier, Dion, Slovenic-D'Angelo, & Reid, 2004; Teixeira, Palmeira, & Vansteenkiste, 2012). Pelletier et al. (2004) applied a 7-point Likert-type scale to measure the types of motivation in three different studies to assess eating behaviours and sustained change. Two studies calculated correlations and the third study used linear regression analysis to show that psychological measures on the continuum of motivation predicted adherence to improved dietary change and even

showed maintenance of change over time (Pelletier et al., 2004). The discussion of the studies reiterated the predictability of greater autonomy to change in eating behaviours such as bulimia. The contribution to my research is the reference to the tested Global Motivation Scale SDT survey tool that can anticipate what element of autonomy most impacts the action of change.

In the sphere of dietetics, another study compared SDT methods to directive support for weight loss in 201 patients over a 6-month and 18-month timeline (Gorin, Powers, Koestner, Wing, & Raynor, 2014). Weight change compared with time, gender, education level, and age were assessed in relation to type of autonomy, level of behaviour change, and perceived level of support by a significant other. Partners for support were trained to model healthy eating, to make contracts for goals, to create co-led strategies to reach weight goals, and to praise and not criticize or punish weight management efforts. The research found that these autonomous supportive methods provided better outcomes than directive forms of support (Gorin et al., 2014). Also, autonomy support from a family member helped sustain weight loss. Interestingly, concerned comments by others were not always perceived by the participant as autonomous-sensitive. Comments of concern were thought to be supportive and therefore empathetic, a foundation of MI, but concern was expressed at times in ways that impeded change. Of significance to this study is first, the importance of both word choice and empathic intention when building a therapeutic relationship, and secondly, the reiteration of the point that significant others influence positive behaviour change.

Relationship Between SDT and MI

In the article "Meeting in the Middle: Motivational Interviewing and Self-Determination Theory," Miller and Rollnick (2012), co-creators of MI, wrote about the

agreement with Deci and Ryan, co-creators of SDT, regarding how each framework supported the other. Since MI is a clinically based practice developed from the ground up, practitioners felt the intuitiveness of MI when they started to use it (Miller & Rollnick, 2013). Miller (2015) also said that although it is a formalized human interaction with training practice, it is just two people talking. As far back as 2005, originators of SDT and MI had agreed that the two brought together theory and practice (Markland, Tobin, & Rollnick, 2005). SDT researchers agree that for MI clinicians, SDT's core needs of autonomy, competence, and relatedness provided a theoretical framework to structure and support counselling; MI provided an evidenced-based framework for SDT theorists who applied the concepts clinically (Resnicow & McMaster, 2012; Teixeira et al., 2012). Table 2 illustrates the alignment of theory and practice.

Table 2

Synergy Between Self-Determination Theory (STD) and Motivational Interviewing (MI)

Spirit of MI	Outcomes of acceptance in MI	Autonomy defined in SDT
Partnership (a position)		
Acceptance (an attitude)	Absolute worth Accurate empathy Affirmation Autonomy support	Engagement Relatedness Autonomy
Evocation (a skill)		
Compassion (a value)		

Note. Created by summarized book content by E. L. Deci & R. M. Ryan (2002), *Handbook of Self-Determination Research* (Copyright 2002 University of Rochester Press), and book content by W. Miller & S. Rollnick (2013), *Motivational Interviewing: Helping People Change* (Copyright 2013 The Guilford Press).

MI is a clinical approach developed in counselling practice, and although also verified in research as an evidence-based approach in health care, it is a method and not a theory (Hettema, Steele, & Miller, 2005; Miller, 2015; Miller & Rollnick, 2009, 2013). Both MI and SDT are person-centred, nonjudgmental, and supportive; they provide information that is responsive to what the patient seems to be saying, attempt to bring together the person's inner experiences and motivations, and work to bring a person to accept responsibility for their own healthy ways (Deci & Ryan, 2012). As stated by Resnicow and McMaster (2012),

> Autonomy support is central to the practice of MI and promoted through strategies such as eliciting and acknowledging (reflecting) client values and perspectives, shared agenda setting, providing an effective menu of choices for what is discussed and what goals are set, and an overall lack of coercion and direct persuasion throughout the encounter. (p. 2)

The outcome of such a conversation would be what MI refers to as *change talk*, that is verbalized inner intentions to make positive changes in behaviour (Miller, 2015; Miller & Rollnick, 2013).

MI Counselling

MI, defined by SDT and MI creators, "can foster self-motivated behaviour by promoting internalization and integration of the regulation of a new behaviour in accord with the person's broader ... sense of self" (Markland et al., 2005, p. 822). The goal of MI is to guide the patient to acknowledge their positive inclinations towards change to build their self confidence to change (Markland et al., 2005; Resnicow & McMaster, 2012). The process is underpinned by empathy, development of discrepancy, and support of self-efficacy

(Markland et al., 2005). The strategy is to prompt and elicit patient statements of commitment to change by listening for phrases or words that indicate Desire, Ability, Reasons, and Need (shortened into the acronym DARN), in the beginning stages of the conversation and then mobilizing the change talk to become Commitment, Activation and Taking Steps, shortened to the acronym CATS (Miller, 2015; Miller & Rollnick, 2013).

There are two levels of skill sets in MI. The first includes increasing empathy, asking open-ended questions, and listening (AbuSabha, 2013; Miller & Rollnick, 2013). The second set of skills is evoking DARN into change talk and then leading patients to CATS. Miller (2012) does recognize the risk of inadequately skilled health practitioners applying MI as though it is a systematic method. When used as a series of techniques without the foundational attitude of partnership and respect for autonomy, the practitioner may be conversationally directive rather than autonomy-supportive (Deci & Ryan, 2012). Miller and Rollnick (2013) assert that directive counselling is not possible when therapists operate in the "Spirit of MI": partnership, acceptance, evocation, and compassion.

The flow of MI conversation ensures that the more a HCP supports autonomy, the more a client provides change talk (Miller, 2015). Autonomy is supported by three main conversational actions: Affirmation builds trust and client self-respect, reflection exposes clients' positive thoughts, and summaries provide a "bouquet of change talk" (Miller, 2015, p. 19). It is the role of the motivational interviewer to assist the decisional movement from no motivation to full intrinsic motivation. Any movement is considered success. A person who is fully self-determined is intrinsically motivated, a person who acts on personal directive or self-discipline applies *introjected* motivation (see Table 1: Types of Motivation), and a person who acts in obedience to an external directive applies *extrinsic* motivation. All levels

of motivation equate to learning but intrinsic motivation inspires learning and sustains behaviour change (Deci & Ryan, 2002). MI supports the patient to move along the continuum of motivation.

MI, as a counselling method, is used across the health-care field. It originated from trial and error in Bill Miller's substance-abuse counselling practice and clinical trials with Stephen Miller and others (Miller & Rollnick, 2013; Rubak, Sandbaek, Lauritzen, & Christensen, 2005). For over 25 years, and now in 49 different languages around the world, MI has been used and tested in many scenarios including smoking cessation, weight loss, diabetes management, exercise uptake, and many more to become an evidenced-based practice (Lundhal et al., 2010; Miller, 2015). However, it has not been consistently practiced in dietetics.

Counselling in Dietetics

An investigation into the counselling skills of 4,202 British dietitians by Rapoport and Nicholson Perry (2000) called for research regarding the relationship between dietitian confidence and impact for patient behaviour change:

> In the current health service climate, where evidence-based practice is crucial for all practitioners with the emphasis on improved quality of care with measurable outcomes, research must be funded and undertaken to support attempts to improve dietitians' effectiveness as behaviour change agents. (p. 297)

The study found that dietitians were most satisfied with their academic training in active listening but unsatisfied with training in theories of cognitive behaviour therapy (CBT), motivational techniques, and group work skills (Rapoport & Nicholson Perry, 2000). Sixteen years ago, dietitians understood the value of the first stages of counselling and felt skilled in

creating a therapeutic relationship but did not feel confident with their application of any type of counselling method available to them at that time.

Since then, MI has emerged as an effective style of counselling used in health care. The Institute for Healthcare Communication (2017) offers MI training to HCP throughout North America called *Choices and Changes: Motivating Healthy Behaviors* that aligns MI with Stages of Change. Prochaska and DiClemente (1983), originators of Stages of Change theory, liken behaviour change to a staircase where a person is at various steps that range from pre-contemplation to behaviour maintenance (Institute of Healthcare Communication, 2017). Dietitian counselling training has relied upon Stages of Change theory to ascertain patients' stage to accurately provide encouragement, education, or strategies as needed (Spahn et al., 2010). Miller (2015) recently has noted: "one reservation I have of Stages of Change Theory is that there is a belief that stages are stable or linear. In any counselling session, patients move in and out of all stages" (p. 1).

Stages of Change theory has also been paired with CBT in nutrition counselling whereby the patient was brought to a point of awareness and decision to learn a skill or apply a new action as a commitment to a new behaviour (Dietitians of Canada Diabetes, Obesity and Cardiovasular Network, 2012). CBT was patient-centred in that it offers a menu of healthful strategies but differs from MI in that it did not evoke the solution from the patient herself. CBT discussed the negative rationale of behaviour choices while MI asked open-ended questions to expose the contradictory beliefs and discrepancy between thoughts and actions (Dietitians of Canada Diabetes, Obesity and Cardiovasular Network, 2012). MI aimed to have the person say aloud their desires for change (Resnicow & McMaster, 2012). In MI, the patient did much of the psychological work to create their own rationale for

change (Resnicow & McMaster, 2012). A systematic review conducted by the American Dietetic Association Evidence Analysis Library Nutrition Counseling Workgroup found that positive patient change was more successful when dietitians applied CBT and even more successful when applied with MI (Spahn et al., 2010). CBT supported the action plan for dietary behaviour strategies while MI was used as the conversational style to elicit goals.

A conversational style has been valued by patients. In a two-part mixed methods study by Cant and Aroni (2008), the questionnaire developed from dietitian and patient focus groups to identify needed counselling skills was returned to researchers by 258 dietitians who unanimously agreed on the following criteria for excellence in nutrition counselling: empathy, responsive nonverbal communication, respect for the client, and ability to listen well and collaborate on a plan. A qualitative investigation of patients' experience with dietitian counselling concluded that patients felt motivated when the dietitian provided support and built rapport (Hancock et al., 2012). Hancock et al.'s (2012) patient-centred study revealed a variance in patients' expectation of patient-centredness. Those who preferred a more directional style and those who preferred a more conversational style both felt supported by the dietitian when their style preference was met. This meant that nutrition counselling was most effective when the dietitian recognized variance in learning styles. The success of MI was due to having met the primary objective of following the patient's needs.

MacLellan and Berenbaum (2007) undertook a study to explore dietitians' understanding of the client-centred approach to nutrition counselling. In-depth qualitative interviews were conducted with 25 Canadian dietitians from a variety of practice areas. Interview transcripts were analyzed using a form of inductive, thematic analysis. Results suggested that although participants believed that practicing in a client-centred manner was

important, they were conflicted in their attempt to balance their practice values and beliefs with the realities of their work environments. Meeting clients' needs and wants was critical to the client-centred approach but there was some indecision around who in the counselling relationship determines these needs and differentiates between patients' needs and wants. This study recognized the expertise that clients bring to the counselling relationship (MacLellan & Berenbaum, 2007). Results indicated that dietitians struggled with letting the patient set the learning agenda because of their training to set it for the patient. It is the intention of MI to assist with this professional dilemma by led discussion to establish a negotiated realistic sustainable health goal. Research in dietetics, therefore, needed to continue to explore the way that dietitians learn how to counsel.

A U.S.-based study of 612 dietitians considered whether overall counselling skills were impacted by type of employment (Lu & Dollihite, 2010). The researchers were interested in the impact of various counselling methods that promote dietary change. A verified survey was sent via the Internet to dietitians around the country. A scaled survey tool investigated dietitians' self-efficacy in 25 different counselling skills used to promote dietary behaviour changes (Lu & Dollihite, 2010). The skills list included aspects of engagement, listening, and patient-centred goal clarification—items that are contained in the first skill set of MI but not MI specific. Results showed that regular use of skills required for the job type had influence on self-efficacy but not length of practice. In fact, the younger dietitians who had exposure to counselling skills in pre-registration university training demonstrated self-efficacy more than experienced dietitians of the same job descriptions. My study builds on Lu and Dollihite's (2010) findings to investigate the experience of counselling skills taught to experienced dietitians in practice and looks further to barriers of perceived success.

AbuSabha and Achtergerg (1997) studied dietitians in practice by comparison of self-efficacy to other psychological constructs such as *locus of control* and *self-esteem* to understand how self-impression or self-judgement impact new behaviours or aspects of self. The term self-efficacy is to Social Cognitive Theory as autonomy is to SDT. They are both attributes a person uses to act within an environment; Social Cognitive Theory relies upon self-assessment while SDT relies upon internal nutriments. Larson and Daniels (1998), psychology researchers of counselling skills, explain self-efficacy as a counsellor's beliefs about his/her ability to perform counselling-related behaviours or to negotiate clinical situations. Dietitians who feel self-efficacious claim counselling knowledge and confidence in their skills (Lu & Dollihite, 2010). Self-efficacy, then, is not the same as autonomy but may contain elements of it. Self-efficacy can include intrinsic motivation elements such as interest, curiosity, enjoyment, and inherent satisfaction but could just as easily contain elements of two other types of motivation (Bandura, 1994). For example, self-efficacy could include the feeling of personal importance, a characteristic also found in *identified motivation*, or include feelings of choice and valuing of identified motivation, or congruence, characteristics found in *integrated motivation* (see Table 1: Types of Motivation; Bandura, 1994). Thus far, studies have established that dietitians have had confidence and commitment to use counselling and sometimes MI skills, but there is more to understand about dietitians' own motivation.

MI in Dietetic Practice

Although MI began as a practice used largely in psychology, dietitian professor Ellen Glovsky (2017) recognized its potential in dietetics as early as 1990. MI was trialled as a counselling method of choice in a Netherlands-based study in 2007 and provided evidence

that dietitians are indeed change agents (Brug et al., 2007). The comparative study of two groups of dietitians (19 control and 18 interventions with 147 patients at follow-up visits) found measurable changes ($p = 0.00$) in patient total saturated fat intake when dietitians used MI as their counselling style compared to usual education or counselling methods with patients newly diagnosed with diabetes (Brug et al., 2007). Patient outcomes did not include improved biological indicators of body mass index, waist circumference, or blood sugar indicators for diabetes management, but did impact a shorter-term life style behaviour. This Dutch study showed that dietitians trained in MI were significantly more empathetic and provided more patient reflection than did the control group that did not use MI (Brug et al., 2007). Researchers also suggested that newly diagnosed patients might have been in less need of MI related to their lack of experience of living with the disease, referring to MI as a good therapeutic method that has good outcomes when people were de-motivated or ambivalent towards change (Miller, 2015).

Results of a small study conducted with American university faculty did show biological improvements with MI dietary counselling (Krapcha, Molaison, & Madson, 2010). Weight loss, waist circumference, and Body Mass Index measures were reduced in university faculty and students by use of MI compared to counselling without MI. This very small study served to boost interest in the use of MI for those faculty and students (Krapcha et al., 2010). Thus, it seems that when presented with evidence that MI enables clients to succeed in making changes, dietitians were more likely to both demonstrate an interest in it and subsequently apply it in practice.

A random control trial study of 44 Australian pre-menopausal women aimed to prevent usual weight gain of women aged 44 to 55 years by the use of MI (Williams et al.,

2014). Women were randomly assigned to either a self-directed control group or a structured intervention of MI and followed over 12 months and a further 12-month monitoring for a sustained healthy weight. The MI intervention group received four consultations with a dietitian and one with an exercise physiologist who applied components of MI counselling to consultations with the women over a 12-month period. The self-directed control participants received print materials only. As the intervention results of the MI intervention did not differ significantly in the 12-month time period from the self-directed intervention in weight loss, Williams et al. (2014) postulated that the MI counselling intervention was not intensive enough in the shorter 12-month period to make a significant difference. It was suggested that overweight women in the short term responded better to extrinsic motivation such as the scale results. However, over the longer term of 24 months, the relatively low intensity intervention that incorporated MI into health professional counselling prevented weight gain for many in the group and resulted in significant weight loss for many women (Williams et al., 2014). Therefore, in controlled positive environmental conditions where dietitians had time to build rapport, MI had patient impact.

While MI studies established that dietitians can assist patient change when trained in MI, it has not been universally applied by dietitians in practice and there is more to understand on the aspects of their motivation to learn and apply this new skill set.

Dietitians' Learning of MI Skills

Dietitians continue to learn about skills and benefits of MI in different venues. There are online courses, journal articles, websites, and email lessons available to dietitians in Canada, the United States, Britain, and Australia. There are opportunities for trainings; MI courses have been offered to all health-care professionals in programs offered in provincial,

state, and private trainings in person and online. Research on dietitians using MI is scant but found worldwide; the aim for the profession of dietetics could be to encourage MI expertise for all dietitians and even train students at entry level. University programs in dietetics in Australia and the U.S. that introduced MI as a best practice in nutrition counselling reported that dietitian students can learn rudimentary counselling skills even in the first months of their training (Clifford et al., 2011; McIntosh, 2015; Smart, Clifford, & Morris, 2014). Even though the skills such as listening, building rapport, and providing positive feedback are not new life skills, students found that they had to resist their desire to be directive when they practiced nutrition counselling (Clifford et al., 2011; McIntosh, 2015).

A recent American university study of a 300-hour MI curriculum was based on dietitian materials created by Molly Kellogg, dietitian and psychologist expert in MI, and used videos, worksheets, case studies, and role play activities (Smart et al., 2014). The small quasi experimental controlled study of 15 controls and 23 in the intervention group evaluated students MI skills from surveys provided pre-training and post-counselling sessions. The results indicated significant change in MI knowledge but no significance in student self-efficacy of skills (Smart et al., 2014). It was evident that dietitian students were challenged by listening and providing positive feedback skills and needed to be practiced to gain proficiency.

A study of 65 nutrition counsellors in the United States confirmed that skills proficiency and confidence result in patient impact but can be negatively impacted by a low rapport (Marley et al., 2011). Multiple linear regression analyses of surveys completed by dietitians in a large government program in the U.S. showed positive association between dietitian confidence in their counselling impact when working with clients of their own

culture. Dietitian self-efficacy did not continue when used with patients of different ethnicity; however, the researchers proposed that dietitian confidence to their ability to effect similar results as working with clients of their own ethnicity was probable with cross-cultural communications training (Marley et al., 2011). It is evident, then, that rapport building is fundamental to the therapeutic alliance and had impact on both parties when not established.

Endevelt and Gesser-Edelsburg (2014) conducted focus groups with Israeli patients and one-on-one interviews with dietitians to investigate reasons for perceived nutrition counselling success. Six focus groups of patients who returned to see the dietitian and six of those who had not, were asked reasons for their attendance decisions simultaneously with surveys given to 12 dietitians to ask their perspective on barriers to counselling (Endevelt & Gesser-Edelsburg, 2014). The two-part qualitative study showed that patients who did receive an interactive counselling style compared to an instructional one were more likely to return to see the dietitian. Results from the dietitian interviews indicated they lacked counselling training and understood that the profession is now encompassing these skills to meet the needs of patients with chronic conditions. Researchers further stated that encouragement from other HCPs, mainly the physician, did inspire patients to continue with dietitian appointments. Results from both parts of the study indicated that support of the dietitian's role by other health professionals affected motivation to maintain counselling in both patient and dietitian interviews. Such extrinsic factors upon motivation are of interest for interview questions in part 2 of this study design.

Additional external influences upon MI training were evident in the results of two recent studies of nurses in Sweden. In one cross-sectional survey study, the researchers examined to what extent 673 nurses used MI and what prerequisites they had for using it

(Östlund, Wadensten, Häggström, & Kristofferzon, 2014). Goals of the study were to compare outcomes of users and non-users as well as learn what trainings and supports were most beneficial. The study identified the following independent factors for MI success: knowledge, training, follow-up to support of use, relevance to practice, and lack of time.

The second study within the same population used surveys to compare the experience of MI between two nursing groups to show outcomes of MI applied in primary health-care settings (Östlund, Wadensten, Kristofferzon, & Häggström, 2014). Similar barriers were found to MI as in the first study which included lack of training/education, support, and interest as reasons for not using MI. Of note in this Swedish nurses' study is the similar findings to the aforementioned Israeli dietitian study—that nurses and patients experience mutual benefit in using MI. The nurses stated that their use of MI advanced patients' desire to make lifestyle change. Barriers to MI uptake identified by Östlund et al. laid a foundation for interview insight and later analysis.

In summary, this section has provided a consideration of counselling in dietetics. While self-efficacy studies indicated aspects of internal motivation to learn MI, other studies affirmed that the external factors of continued training and supportive work environments led to conditions that maintain practice. Excellence in training and commitment to best practice supported external motivation while professional commitment, university training, and professional development training supported internal motivation (Lundahl et al., 2010; Söderlund, Madson, Rubak, & Nilsen, 2011). Dietitians have been positioned for counselling behaviour change, have recognized the need to apply an evidence based method, and have applied MI in patient care for positive patient outcomes (Hollis et al., 2013, 2014). Research has provided a list of optimal external conditions for dietitians to use MI but has not yet

shown the role of autonomy, the most intrinsic motivation, which is necessary for sustained MI practice. Certain conditions are needed to maximize internal and external conditions for dietitians to sustain MI practice.

Consistent with motivational theory, quantitative studies have established that high autonomy and perceived MI skill activate the use of MI with patients. Yet it is unlikely that all dietitians will be intrinsically motivated to change practice. It is also expected that those without high autonomy would have lower self-perception of their skills. However, if data resulted in the opposite outcomes of either high-scoring dietitian had low autonomy, or, low-scoring dietitians had high autonomy, then there is an indication of other influences that could provide insight into barriers to change of practice. The aim of the present investigation is to first determine the prevalence of dietitian autonomy and then to explore extrinsic motivation that impacts dietitians' perception of successful application of MI.

Chapter Summary

This chapter featured the ethos of autonomy necessary to drive and sustain personal change. SDT features as both a theoretical framework based on the Self-Determination Model for Medical Education as well as a research methods including the Global Motivation Survey that uphold autonomy as a measurable indicator of motivational change. SDT is an evidenced -based theory that fits with the clinical conversation of MI. Dietitians' ability to learn and sustain MI skills in practice is affected by internal and external motivators and barriers. In chapter 3, I present the methodological rationale and strategy for my investigation on how motivation factors affect change of dietitian MI practice.

Chapter 3: Methodology

In this chapter I outline the methodology for my investigation on the ways in which autonomy and external motivation impact dietitians' use of MI. I describe the study population, outline the rationale for the use of a mixed method study design, explain the quantitative and qualitative research and analysis approaches, and verify the personal autoethnographic accounts contained in the prologue and epilogue. The methodology relied upon descriptive statistical analysis of survey results to identify autonomy within dietitians who counsel patients, qualitative conversational methods to discover other influences upon change of dietitian practice, and autoethnography to illuminate the vision for change.

Mixed Methods as a Chosen Research Method

I selected mixed methods as the most appropriate approach to answering the three research questions:

- In what way might autonomy orientation, as a measure of motivation to change, influence dietitians' success in applying MI with patients?
- What other factors might affect success of application of MI skills and outcomes after taking the online course called *Counselling for Behaviour Change* (Dietitians of Canada, 2017)?
- What emergent factors influenced the learning and application of MI by dietitians?

Mixed methods allowed for two distinct methods, which combined provide a balanced strategy between quantitative and qualitative queries to reduce conflict between positivism and constructivism methods (Cojocaru, 2010; Johnson, Onwuegbuzie, & Turner, 2007). The mix of two data sets in this study provided insight into the intricacies and influences upon behaviour change of interest to dietitian stakeholders (Creswell, 2015;

Hesse-Biber, 2010). Although research by dietitians in practice had often employed a quasi-experimental psychological approach of surveys and statistical analysis, dietitian research has also included postmodern constructivist approaches of one-to-one interviews that obtained personal narratives of participants and analysis of emergent themes (Habash, 2015; Hancock et al., 2012; Woodcock, 2010). As in clinical patient assessments where biophysical data and psycho-social data are both considered for best care of a patient, so too in research investigations where numerical and experiential reports of individuals are considered for the best research outcomes (Hesse-Biber, 2010). A mixed method approach allowed me to respectfully adhere to my professional traditions and engage participants in conversation as I have in clinical practice (Hesse-Biber, 2010).

Mixed methods have been used widely in education to synergize aspects of complex issues (Hesse-Biber, 2010; Longhofer & Floersch, 2012; Schifferdecker & Reed, 2009). Onwuegbuzie, Frels, Collins, and Leech (2013) stated that despite an increased number of mixed methods articles in the literature overall and the integrative nature of counselling there is a low prevalence of such studies in counselling journals. Mixed methods, then, is suited to this study of synergy of internal and external factors regarding motivation. I have chosen this methodology based upon three factors as outlined by Creswell (2015): intent, skill level, and background. My intent for mixed methods allowed for both a macro and micro investigation with use of an established mixed methods framework that matched my novice researcher ability in order to study the dietitian experience of applying MI to practice (Leech, Onwuegbuzie, & Combs, 2011).

Explanatory Mixed Methods Design

The mixing of methods over decades has led to a streamlined suite of designs

dependent upon the intention of the study. When quantitative precedes qualitative methods, the nomenclature is QUAN-QUAL (Ivankova, 2014); the emphasis of type is written in font that depicts the larger influence. Creswell and Plano Clark (2011) refer to this quan-QUAL framework illustrated in Figure 2 as an Explanatory Study.

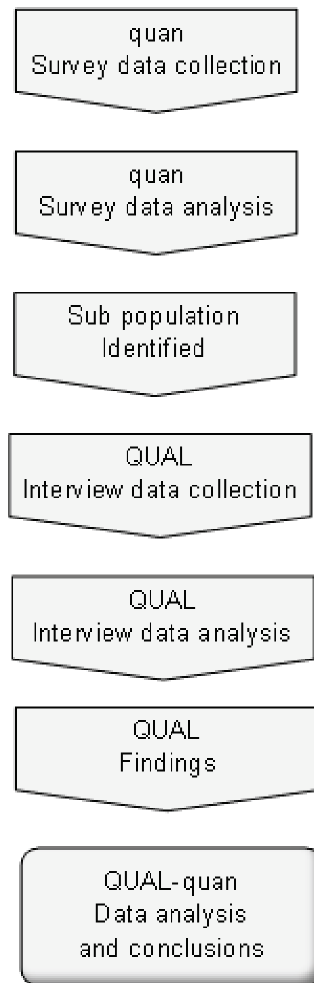

Figure 2. The explanatory design. The illustration is based upon a description by Creswell & Plano Clark (2011).

Autoethnography

The qualitative data provided in the prologue and epilogue of the thesis is in synergy with the mixed methods design. It is a biographical micro study of my experience as an insider in the research (White & Seibold, 2008). Autoethnography became an essential part of the mixed methods research and focused on my lived experience and creativity to create a cultural context for the emotional aspect of work. Stanley (2015) used the method to evoke empathy from readers with unconventional texts that added variety to the standard writing styles of academia; in similar fashion, I used autoethnography to reveal the tensions in my work as an emerging researcher and reflective practitioner by use of excerpts from my thesis journal, poetry, and references to my art of cartooning. My autoethnographical accounts invite readers to become engaged in my story and added methodological rigour by inviting them to be supportive in their emotional and intellectual experience (White & Seibold, 2008). My testimony illustrated the ways in which my applied cathartic reflection brought about change. The application of a reinforcing qualitative method adds to the person to person communication theme of the study.

Theoretical Underpinnings of Approach

Consistent themes of dualism and person centredness have underpinned this study. Dualism has been evident in three aspects of the research: first, the nature of internal and external influences upon learning; secondly, the twofold commitment in the dietetics profession to understand human behaviour by both scientific methods and by social sciences (Petrovic, Lordly, Brigham, & Delaney, 2015); thirdly, in itself, SDT is a dialectic between the growth-oriented human organism and the social contexts that support or thwart change (Deci & Ryan, 2012). Further, a philosophical commitment to person centredness was

embedded into the design. The combined intentions of the MI and SDT approach have been supportive, informative, and responsive, namely person-centred, to assist people towards healthy ways of living (Deci & Ryan, 2012).

Population Sample

I approached the Director of Education of the Dietitians of Canada to ask for access to the 316 dietitians (C. Eisenbraun, personal communication, August 5, 2015) who had completed the course, *Counselling for Behaviour Change*, available as web-based education on *Learning On Demand*, the professional development site of Dietitians of Canada (Dietitians of Canada Diabetes, Obesity and Cardiovascular Network, 2012The study population was from a possible 5,600 dietitians registered with Dietitians of Canada, from the 10,500 estimated dietitians in Canada (C. Eisenbraun, personal communication, August 5, 2015) and were likely those who were motivated to pay annual fees to the national organization to access such courses. Recruitment was a purposive non-probability sampling from the course enrollment roster. One designated staff at the Dietitians of Canada generated the enrollment list and sent the survey in January 2016 by email to addresses on file. The course was originally developed by a working group from the Dietitians of Canada Diabetes, Obesity and Cardiovascular Network (2012); therefore, some responders were likely members of that interest group. Recruitment for part 2 was a purposive probability nested sampling from dietitians who were in either category of successfully applying MI but not autonomous, or unsuccessfully applying MI and autonomous.

Research Tools

The survey tool. In part 1, participants were administrated a survey that contained the standardized Global Motivation Scale (GMS; Sharp, Pelletier, Blanchard, & Levesque,

2003). The web-based questionnaire was developed using FluidSurveys software (Fluidsurveys.com) and featured a core survey of 18 questions on a 7-point Likert scale of the GMS (Slovinec et al., 2014). The six categories of motivational attributes defined by SDT—intrinsic, integration, identification, introjection, external, and a-motivation—were each represented by three questions. The scale from low to high values corresponded to answers of "not agree at all," "very slightly agree," "slightly agree," "moderately agree," "mostly agree," "strongly agree," and "completely agree." All questions began with "Please indicate to what extent each of the following statements corresponds to the reasons why in general you do different things in your life…". The subsequent trio of phrases to assess intrinsic motivation were as follows: ... because I like making interesting discoveries; ... for the pleasure of acquiring new knowledge; ... for the pleasant sensations I feel while I am doing them. Two additional questions were asked in the survey to determine additional study variables. One question was open-ended to obtain the number of years in dietitian practice while the other question was closed-ended to obtain a yes or no about application of MI skills. The questionnaire is found in Appendix B.

Questionnaires, a common data collection method in the social sciences, have been most effective when provided to a population by mail (Shih & Fan, 2009). However, because the population was familiar with online technologies and Dieticians of Canada (DC) communications by email, I anticipated that a survey sent electronically by email would be well received. I recognized the potential sensitivity of the topic of autonomy or admission to low MI impact could influence the response rate, but had thought anonymity of an emailed survey would counter those reasons for non-response (Van Selm & Jankowski, 2006). I anticipated that the survey return rate would meet the needs of the study due to the ease of access to the population via email, the common use of email by dietitians, as well as the

verified finite survey answer choices adaptable to an online format.

The interview tool. In part 2, the interview questions featured a style reminiscent of the MI therapeutic approach. There were 11 open-ended and two closed questions. The script is found in Appendix C. The interview was audio recorded through an Internet Go To Meeting software (GoToMeeting.com), operated by the lead staff of Education Policy and Programs, DC where participants were invited to attend an audio link via their phone or computer. Web access and use of the technology was tested with a DC staff member one week before the first participant interview. Recordings were transferred from the Go To Meeting site to my personal computer and stored as MP4 files in an encrypted file.

The GoToMeeting.com site address was managed and authorized by DC staff who provided me access in this limited capacity. DC online meeting software was used instead of skype to provide a neutral online conversation technology to avoid further personal exposure of a skype address. Participants could access the site by an embedded address in an email sent 10 days before the interview. Modern communication technologies were a part of a total mix of computer technology used in analysis including Excel software in part 1 and graphic colour applications to identify themes in part 2.

Interviews were analyzed by the tool called the Listening Guide (LG), which had been created in the 1980s as a method of repetitive coding of the same text by four different techniques meant to allow exposure of the "complexity of the inner psychic processes" (Gilligan, Spencer, Weinberg, & Bertsch, 2003, p. 158). The LG was unlike other approaches of that time; it interpreted narratives with less risk of the researcher overriding of the participant's "voice" with their own thoughts and feelings (Gilligan et al., 2003; Paliadelis & Cruikshank, 2008; Petrovic et al., 2015). Originally developed as a tool in feminism research to "listen well" to the voice recordings of professional women, the approach exposes nuances

and deeper meanings of words and meaning (Gilligan,1993). The LG tool used in this study was the result of the later work of Gilligan and colleagues into the systematic reworking of narrative into plot, poem, and depiction of different "voices" of the participant for a comprehensive conversational analysis (McLean Taylor, Gilligan, & Sullivan, 1995). The tool included my own listening as well as note taking on a printed script of my thoughts during the interview and comments of my identification with participants' experiences (Doucet & Mauthner, 2008). The LG was a systematic tool used to elicit thorough meaning from participants' statements.

Research Procedure

In order to provide optimal opportunity for response, dietitians who completed the course were sent three invitational emails over 3 weeks (Van Selm & Jankowski, 2006). Participants were informed that the survey would take 5 to 10 minutes of their time based upon completion rates determined by five test volunteers. The questionnaire began with an agreement to the description of ethics and intentions of the survey. At the end of the questionnaire, participants were asked to volunteer their email addresses so that they could be contacted for a report on the findings and to determine their willingness to participate in part 2. DC staff sent my prepared email script with an attached participation information letter (Appendix D) and embedded FluidSurveys link. The script included an invitation to participate, an outline of the intention of the research, a description of ethical management of the data, and an opportunity to be included in part 2.

In part 1, raw data generated by the FluidSurveys software was exported as an Excel spreadsheet into files on a personal laptop protected by encrypted code access. A Summary Report of Results was generated by FluidSurveys software, saved in encryption e-file, printed for review, and locked in an office location. Data checking was completed on three distinct

occasions from two different download exports and compared to ensure the accuracy for analysis. On all occasions, the same colour codes were applied to columns that identified responses. Analysis of distinct and descriptive statistics were conducted and saved in Word file summaries under encrypted access; one final data analysis summary master copy was printed and stored in a locked office location.

In part 2, I asked the dietitian subpopulation to engage in one-to-one interviews about their experience with the online course and MI. I sent out an email invitation to two participants and attached a second participation information letter (Appendix D). The script included a statement of thanks for their participation in part 1, an invitation to volunteer in part 2, a reminder of the intention of the research, a description of ethical management of the data, and an offer of a prior copy of the questions if they agreed to the interview. I coordinated the interview times among the DC staff who operated the Go to Meeting, each participant and myself. At the set time of the interview, the DC member ensured that technologies functioned well and exited from the online connection for interview integrity. Each interview schedule included 30 minutes of recording the conversation and an option of 30 minutes for collegial or supportive conversation. Interviews began with an agreement of understanding to the description of ethics and intentions of the conversation.

The recorded interviews provided raw data as a narrative account of the dietitian experience and along with my comments and reflections were coded for themes by use of the LG technique. I maintained a reflective journal of thoughts and impressions to keep analysis valid by transparency of my own biases and judgments (Jootun, McGhee, & Marland, 2009). I initiated transparency between myself and the participants before the interviews by provision of the questions so that the participants did not feel corralled; the guided narratives

resulted from open-ended opportunities for expression. I transcribed the audio data from the MP4 file into text and verified accuracy by reading and listening several times.

Although interview questions were predetermined, my counselling experience was an asset during the interviews as it allowed for opportune silences and evoked responses when participants were unsure of their thoughts. Interviews as a data collection method have been used widely in research for purposeful fact finding as well as providing an opportunity to hear a personal view or experience on issues (Seidman, 2013). Roulston (2014) stated that interviews contain problematic risks of insufficient data collection as the result of poor interviewer skill or disengaged interviewees. But interviews are rich data sources when considered more than a technique to find rich data, and thought of as a two-way interaction where all interviewee responses are data, including silence or curtness, and the interviewer is transparent in both conversation and analysis (Roulston, 2014). Paliadelis and Cruikshank (2008) refer to this as the relational view of the world that considers who is both speaking and listening to appropriately assess conversation with a thorough, respectful, and delineated method. In this study, LG met the standard of authenticity by engaging as the researcher through listening, reading transcripts, and reflecting at each of four stages. The participants' spoken narrative represented their thoughts and the LG in turn reflected upon layers of the narrative. This intellectual process of writing up both interview responses and my thoughts in the same prose flushed out my opinions that once stated, could not be denied and allowed for comparison of our experiences (Paliadelis & Cruikshank, 2008). In sum, the intention of this stage was to obtain rich data by tracking what was said and not said using the LG analysis methodology.

Data Analysis

In part 1, descriptive data analysis involved a compilation of averages, medians, and raw numbers because the data file was not large enough for robust analysis such as bi-variant testing by cross-tabulations or measures of dependence. A print-out of the FluidSurvey summaries was reviewed for responses to each question. Descriptive data based on the results of the Global Motivation Scale were reviewed on screens as follows:

- a separation of each category in a single spread sheet for each: intrinsically, integrated, identification, introjection, a-motivation, self-reported success, self-reported un-success;
- review of criteria for a high score in a motivation category if the score was 5-7 on the 7-point Likert scale in each of the three categories (a score of 15-21 constituted a high score);
- identification of dietitians who scored higher in *intrinsically motivated* (a score of 15-21) but *not successful with MI* (stated "no" to the direct question) and those who scored low for *intrinsically motivated* (score <14) but *successful*;
- a secondary analysis of Global Motivation Scale categories for each participant.

In part 2, analysis with the LG provided a valid capture of what participants said because it applied the text to four processes: listening for the plot, constructing "I" poems, listening for contrapuntal voices, and composing a final analysis from the data collected in the first three processes (Gilligan et al., 2003; Woodcock, 2010). I listened to the recorded interviews two or three times during transcription and at each of the first three phases to ensure accuracy. The transcription of two 30-minute recordings required attentive listening. At each of four listening stages, the marked-up interview transcript, notes, and typed

summaries all formed a trail of evidence (Gilligan et al., 2003, Paliadelis & Cruikshank, 2008; Petrovic et al., 2015). I understood that embedded within each of these steps was my own choice of inclusion or exclusion of statements as data so that I listened repeatedly to reconsider my choices to be intimately involved as an "active instrument within the qualitative research" (Petrovic, et. al, 2015, p. 1). Data from each step was synthesized to find recurrent ideas or themes. The details of each of the four steps in the three-part process coding process is presented in table form in Appendix E.

Qualitative research was evaluated by its markers of transparency and reliability, and addressed in this study by data collection methods, models, and coding schemes that guided the transcript analysis (Garrison, Cleveland-Innes, Koole, & Kappelman, 2006). Even with predetermined questions, the conversation, a sensitive process, generated data that has been assessed on a "turn-by-turn" basis (Roulston, 2014). I approached each interview with the same ethical intention as I would a patient, and was guided by the structure of predetermined questions that had been provided to the interviewees prior to the interview but used additional prompts and questions as necessary within each conversation (Garrison et al., 2006; Seidman, 2013). Inherent in the LG were the four steps of analysis that provided an internal triangulation of data to support descriptive and interpretive validity (Christensen & Johnson, 2012). Application of the LG has required ability to manage the complexity of multiple coding, a risk when used by a novice researcher (Garrison et al., 2006), but the stepped processes have been well described in articles by experienced researchers in a way that provided logical guidance for reliable technique (Gilligan et al., 2003; Woodcock, 2010).

Integrated Mixed Methods Analysis

In mixed methods, a third phase of data analysis has been comparison and integration of findings from both sets of data to find variant or consolatory themes (Creswell, 2015). Two data sets were set up in chart form to juxtapose the results to assess whether qualitative findings opposed or complemented quantitative findings, and explained the mixed method results; this is the purpose and strength of mixed method design (Creswell, 2015). Specifically, the process included the consideration of measures of motivational attributes within the large population and the nested group, the internal motivational factors of part 1 were compared to those found in part 2, and data results of intrinsic and extrinsic influences upon motivation were explained by the combination of data.

Ethical Considerations

The Nipissing University Research Ethics Board granted permission in November 2015 to conduct the project (Appendix A). There were no other organizations that required submission because DC deferred to the university for that process. Ethical considerations included participants' rights, risk of my personal bias upon interpretation, and risk related to data exposure in cyberspace or as printed matter.

The rights of participants have been consistently protected. First, the administration assistant of the DC head office sent email messages on my behalf to serve as a third-party protection from unsolicited engagement. Secondly, the Participant Information Letter provided in each email informed participants of the right to leave the study at any time, and provided third-party contact information at DC and Nipissing University to ask questions or express concerns. Participant agreement to engage in research was implicit in their completion of the survey or interview. Thirdly, participants have been provided pseudonyms, noted in chapter 4.

The ethical consideration of personal involvement with peers during the interview phase was also considered. I understood that as an insider there was risk of heightened sensitivity and understanding, as well as a tendency to judge or over-empathize (Longhofer & Floersch, 2012). However, a predetermined interview structure managed my engagement and I chose LG as a methodology to be transparent with my thoughts, so that I could be watchful for wrong assumptions and enforce constant reflection of my feelings and opinions.

Data management was ethically managed both over the course of the study and subsequently data security was ensured with encryption and locked files**.** Online technologies allowed data to sit in cyberspace but it has been protected by paid memberships and access passwords. For example, FluidSurveys.com stated that its servers are protected with security technologies, including firewalls and data encryption that are designed to prevent unauthorized access. The study survey sat on the DC website and is accessed only by authorized members of DC. I removed the surveys from the site to a personal laptop that can be accessed only by use of an encryption code. GoToMeeting.com stated that its software is guaranteed to meet the high standards of HIPAA compliance (Health Insurance Portability and Accountability Act) and is encrypted but I did remove the audio recordings from the software and they are now protected in my personal laptop by encryption. Electronic audio files, Excel files, and paper documents are secured and will be destroyed after 5 years from the date of thesis publication as per Nipissing University protocol.

Chapter Summary

This chapter provided a rationale and description of the methodology. This quant-QUAL mixed methods study has used surveys and interviews for data collection, and descriptive statistics and a four-step script review for analysis. The method was used to

explain intrinsic and extrinsic factors that influenced motivation to change. In chapter 4, I present the quantitative, qualitative, and mixed method research findings of influences upon dietitians' motivation to apply MI to practice.

Chapter 4: Analysis

In this chapter I commit to the analysis of the quantitative data, qualitative data, and combined data sets. The chapter is organized to first explain the survey results of the study population; secondly, to assess the data results from two interviews; and thirdly, to consolidate the two data sets for final theme analysis. Discussion incorporates the rationale of Self-Determination Therapy (SDT) and the Listening Guide (LG) as supportive methodologies.

Analysis—Part 1

Dietitians across Canada who worked as nutrition counsellors and who sought professional development in counselling skills through an online course were invited into a research study of their motivation and factors that affect change of professional practice. The geographical distribution of participants had no bearing on variables which supports the idea that MI training was an individual choice and not influenced by regional or provincial mandates. For these individuals, the completed survey identified their intrinsic and extrinsic motivation with their self reported success of application of MI to practice (Slovinec et al., 2014).

The survey response from across Canada was 13% (n= 42) compared to a response rate recommended from a literature meta-analysis of 55.6% (Baruch, 1999), or an academically recommended survey response rate of 70% (Christensen & Johnson, 2012). Although 75 responded of the 316 contacted by DC on my behalf, after data cleaning, 42 surveys were found without error and used in analysis. The low response rate might be attributed to factors such as targeting busy HCPs, or a lack of interest, but I anticipated this possibility and hoped that ratification and communications through DC would avert the low response outcome. Shih and Fan (2009) stated that online surveys have a typical lower response rate of up to 20% less than mailed surveys. Considering this, a response rate of 35.5%

to 50% for online surveys as suggested by experts, or 112 to 158 dietitian participants, were needed to represent all who completed the professional development course. However, survey data did establish descriptive statistics that informed the first research query of participants' motivation orientation and provided the sample for part 2 of the study (Englander, 2012). The results also developed the study rationale that dietitian scores could fall into the six potential categories of motivation as determined by SDT: intrinsic (autonomy), integration, identification, identification, extrinsic, a-motivation (refer to Table 1: Types of Motivation).

Measures of central tendency were assessed to compare the averages and medians of years of experience between motivation subgroups. Survey responses from the study population (n=42) indicated that participants ranged in practice experience from 1 to 37 years with an average of 12 years and median of 11 years. Those who scored as intrinsically motivated/autonomous and who felt successful using MI (n=27) demonstrated a 14-year average and 10-year median of experience, while those who scored across several motivational types and felt unsuccessful with MI (n=7) demonstrated an average of 13-year and 6-year median of experience. The lower median of the group who felt unsuccessful might suggest that fewer years on the job results in less practice with MI, but a lower number can reflect the low sample size. However, the small difference in average years of practice among groups suggests that the years of experience did not equate to dietitians' *interest*, *curiosity*, and *inherent satisfaction*, the definition of of intrinsically motivated/autonomy (see Table 1: Types of Motivation).

Significance of findings related to SDT. The survey results of the Global Motivation Scale survey were further analyzed to show dietitians' self-scored responses to 18 questions about six motivational categories (Sharp et al., 2003). Analysis showed that when

motivation was assessed by total scores of dietitians in each category, the numerical values reflected that dietitians could score themselves high in more than one category. Total values at this first cull of data were based upon the number of times a participant's score was between 15-21 in each attribute category (three questions with a scale of 1-7; values total of 5-7) and aimed for an overall sense of where dietitians as a large group are positioned on the motivation continuum. At this level of analysis raw scores were as follows: 64% (n=27) of the intrinsically motivated category; 55% (n=23) of the integrated motivation category; 74% (n=31) of the identified motivation category; none of introjected motivation; one of external motivation category; none of a-motivation category. This data indicated 100% of scores were in the three motivation categories closest to the intrinsic/autonomy end of the motivational continuum. At this review of data, the seven dietitians who stated they felt unsuccessful at using MI scored within the three top categories of motivation (intrinsic [n=2], integration [n=1], identification [n=3], n/a [n=1]) further indicating a trend for internal motivation in the test population unrelated to feelings of success with MI.

However, these MI scores were not mutually exclusive of each category. Further data analysis considered participant scores that were highest for each person across six categories to obtain more meaningful results. In this second analysis, results showed the same motivation categories but in different quantities. When participants' highest score was assigned to one category, 47% (n=20) of dietitians scored themselves as intrinsically motivated, 17% (n=7) scored as integrated, and 36% (n=15) scored as identified. This final quantitative data is shown in Figure 3.

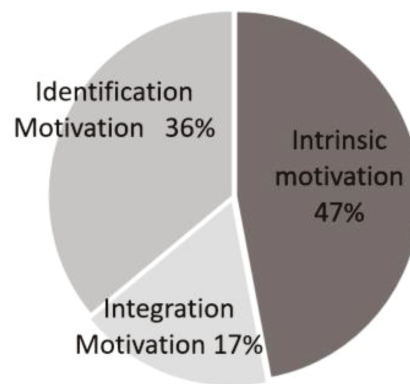

Figure 3. Pie chart to show results of motivational categories of dietitians in the study population. Of six motivational categories, these three were determined by self scored analysis of completion of the Global Motivation Scale.

The congruity of two data analysis results indicated that dietitians who chose to enroll and complete the MI online course were more intrinsically than extrinsically inclined. The first analysis captured their tendency to select intrinsic motivation answers. This may show inclinations towards autonomy in dietitians motivated to educate themselves, or perhaps shows a bias towards high self scores in the volunteer population. However, the second analysis forced an exposure of position where a very small difference in scores between categories for each person served to delineate their motivation type—even between the two dietitians included in the second part of the study. Interestingly, in neither of the data sets were dietitians a-motivated or had introjected motivation.

A-motivation is the state where people have no thoughts of action or they “go through the motions” without real intention to act (Deci & Ryan, 2002). The potential of dietitians’ self-assessing as a-motivated was possible because it could have indicated very low mood and indices of depressed emotions towards life. If the survey was completed in the context of MI success, a-motivation might mean they lacked commitment or made decisions to not apply MI. The potential for study participants to score themselves as introjected motivated

was very low because it required assent to something of which they had no interest and the consequent agreement to an external directive. In counselling practice, a dietitian would have no need to assent to the use of skills that others in authority could not witness in the confines of one-to-one counselling with patients. In sum, of the 42 study participants, all seemed predisposed to intended action which eliminated both the anomaly of success with low or no motivation and the redundancy of lack of success with no internal motivation.

These quantitative data results provided an answer for the first research question: In what ways might autonomy (intrinsic motivation), as a measure of motivation to change, influence dietitians' success in applying MI with patients? It is apparent that dietitians in this study, with an exception of two, did feel successful with MI but not exclusively due to their autonomy. All dietitians did have a type of motivation that contains an element of personal inspiration (again see Table 1), and nearly half of them did have the inherent satisfaction of *autonomy*. This may mean that these dietitians who had inherent satisfaction within themselves were satisfied with their MI skills, and if this is true, they had the ability and predisposition to motivate others.

Summary—Part 1. Part 1's analysis indicated that the dietitians in this small cohort showed a tendency to self score in motivation categories that were more intrinsic than extrinsic. Further, with mutual exclusivity in category analysis, nearly half (47%) of these dietitians scored themselves as autonomous. This is a logical finding related to SDT for two reasons. First, autonomy supported their goals of professional development since they had decided to take an online course; secondly, it aligned with professional goals to inspire learning through patient interactive counselling. A personal need for growth and development is fundamental to SDT. Ryan and Deci (2002) stated, "Self-determination

theory focuses on the dialectic between the active growth oriented human organism and the social contexts that either support or undermine people's attempts to master and integrate their experiences into a coherent sense of self" (p. 27). In this study the SDT dialectic can be investigated by the data provided by two dietitians in part two who scored high in autonomy and actively growth-oriented but felt unsuccessful with MI, and therefore undermined by experience.

Analysis—Part 2

Research interview methods in part 2 depended upon skills in understanding the nuances within a conversation. It was important, then, to apply full analysis to what was potentially unsaid and review statements from different angles (Roulston, 2014). The recorded interviews of two dietitians were investigated using the four-stepped LG that emphasized listening to what is said in content, tone, and repetitions (Gilligan et al., 2003). Adherence to strict method protocol provided data to meet standards of interview transparency and authenticity (Gilligan et al., 2003).

Data results in qualitative methods are optimal when data is repeated within and between participants (Trotter, 2012). Both interviews provided statement repetition within steps and between participants across the steps. Specifically, in step 3, listening for the contrapuntal voices provided consolidated data of repeated attitudes expressed by each dietitian throughout the interview as well as repeated attitudes between the two dietitians. Further repetition occurred in stage 4, the final stage of LG, where the consolidated themes emerged from similar experiences between both dietitians and in alliance with SDT theory.

The LG method further assisted with data integrity by safeguarding against researcher transference by inclusion of researcher reflection at each of the four steps. As a dietitian

myself, I needed to reflect my own thoughts in relation to what I heard in the interviews (Gilligan et al., 2003; Jootun et al., 2009). This interactive conversation between us as peers generated data. The four steps served to create a stacked reflection for rigorous analysis.

Step 1—Listening for the plot. This initial step of the LG is an important set up because it highlights the researcher's voice (Doucet & Mauthner, 2008; Gilligan, 1993; Paliadelis & Cruikshank, 2008). My voice was juxtaposed with that of two dietitians so that their words became a way for me to reflect on my own experiences. In step 1, I became more acquainted with the dietitians. They were different in many ways: they did not live in the same province, were widely different in years of experience, applied MI to a different client group, and were at different stages of application of learning from the course. The first interviewee, Sue (a pseudonym), was from Alberta and worked with First Nations' women to talk with them about prenatal and infant nutrition practices. The second interviewee, Jill (also a pseudonym), was from Quebec. Six years into her career, she indicated that she lacked skills to assist others along the continuum of behaviour change.

Listening for the plot with Sue. Twenty-three years of experience fueled her desire to assist others in health-care decisions and was reflected in her 10/10 self score of commitment to MI. But her self score for confidence in MI was 5/10. Stated reasons for a low self-score were lack of time to practice and review as well as short time frames with her clients that challenged her ability to build rapport. Her understanding of the role of a listening therapist was brought about by course training and a different prior MI training session. This provided her with the foundations of commitment to patient self-management.

Researcher reflective response to interview with Sue. In the interview with Sue there were times in our conversation that I could not make myself understood. I wondered whether

I had been supportive enough and was unable to put her at ease. I realized that it was a Friday afternoon and she had just finished leading a client training session, was apologetic about not pre-reading the questions, and likely felt unprepared for the interview. Sue noted that it had been a while since she took the course so she relied upon into her memory for answers. She did not seem confident in her ability to give answers; she faltered, hesitated, and had long silences. She might have felt uncomfortable having to admit her lack of confidence in her counselling. But at the same time, she was very clear in her counselling goals. When asked about what she valued most in her counselling skill set, she answered, "I guess I would say that in my work it is building relationships, building trust." This statement was gratifying to me as it indicated a fundamental understanding of patient-centred care.

Sue often paused to think during conversation. She stated, "that the most valuable thing I learned in the course was that knowledge does not equal change." Her statement confirms my thesis argument that facts and instructions provided by health professionals does not inspire patient change but motivational conversation does. Sue stated, "it is not good to give the client a ton of information if they are not ready for it" and now she asks clients permission before providing information. Miller (2015) refers to this as good counselling practice. Sue now considered what information the client may need before launching into nutrition education and felt released from an obligation to provide a lot of information that might be unnecessary at that time. In counselling, she learned to provide information that was needed at the moment rather than the whole lesson on infant feeding practices.

Sue experienced barriers related to time needed to build relationships and time to build skills. She expressed frustration with not knowing whether she would meet the client again or what motivated patients. The question of whether clients felt the impact of her motivation

made her pause and I needed to clarify it three times. Was the question difficult due to a perception that her job is valuable only if client changed behaviour? Perhaps she didn't provide an answer because she relied upon client change as a measure of her success but because of client transience she often did not see them again. When asked about how she projected her own motivational personality she stated, "I am pleasant to others." I was not sure why she thought that being pleasant was a motivational skill. Overall, she was uncertain whether her interactions had an impact on her clients. I related to that frustration.

Listening for the plot with Jill. Jill had heard favourable recommendations of MI training from others and was enthusiastic about the online course. She worked primarily with nursing home residents and wanted to support their autonomy in their institutional living arrangements. One significant interaction with a client who changed behaviours when provided the opportunity to choose her own health goal gave Jill confidence in residents' self-management. Her challenge was finding the patience to not tell a client what to do. When asked why she scored herself 8/10 and not 10/10 on commitment, Jill stated she had a bad habit of not listening at times due to feeling less engaged or forgetting her prompt aids. Her confidence score was 5/10 for reasons similar to Sue's, as well as periodic tiredness and occasional low engagement.

Researcher reflective response to interview with Jill. In this second interview, I again worked across time zones. I was up at 4:00 a.m. to coordinate the use of the Go To Meeting technology with DC staff in Toronto and Jill's time of day in Western Canada. My voice indicated early morning drowsiness. The technical difficulties caused a late start of 30 minutes but Jill stated she was not bothered by the delay, was enthusiastic to engage in conversation, and put me at ease. Initially, I was hesitant and unclear in my diction but I

gained momentum as I woke up. Jill was patient with going through the standard paces of research permission and I felt appreciative of her friendly nature.

Jill suggested that the most valuable thing she gained from the course was to let the client decide what to learn. She felt she wanted to give too much information and thought that taking time to listen to the client was not easy for dietitians. I was glad that she recognized that it is a weakness in the profession. I wondered if she learned this in the course or on her own over time. It was clear that she understood the MI intention of ensuring patients felt heard. I was encouraged by Jill's responses, assessed that she had patient-centred values, and had established practice in the first stages of MI. Jill also talked about respecting the need to listen and saw it as a challenge for her at times. Another very important thing for her was learning about teachable moments. I am surprised that both she and Sue picked up this concept because I am not sure why a dietitian would not understand the notion of a teachable moment. I was interested that both dietitians felt that this was new information when stages of change theory, foundational to dietitian counselling, supports the concept that learning occurs when a person is ready to change. I reflected that it may be that they do not equate changed behaviour as learning as I do.

Jill mentioned other things that she learned and I was impressed that she had a lot to say. I learned that she had prepared written notes for this interview; this is what the Sue had hoped to do. When she stated that she learned to ask "why," I noted that I do not agree with this as I think that "how" questions are less confrontational. To build a therapeutic relationship, Miller suggested we avoid asking "why" and rephrase to avoid a person feeling defensive (Institute for Healthcare Communication, 2013; Miller, 2015).

Jill stated that new MI skills provided right questions and opening lines. Interestingly,

Sue also valued this. Her motivation to change practice was to better connect with the client. She said,

> well I have always felt that if you have a better connection with your clients you will have a bigger impact or they general trust you a little more and that is when they will ask a few more questions and that is when they are more willing to learn or more willing to change—so I find that very helpful.

Jill also referred to her enthusiasm and importance of her mood as an influence on MI success and I wondered if she considered variance in her vivaciousness impacted her ability to build rapport.

One barrier that she found in her practice related to types of clients. She limited her clients to patients but she might have considered other staff as potential recipients of MI conversation. She considered MI as tactics indicating a novice understanding of the skill set. But she did understand that with more practice using MI with repeated cases, she would see it work. Jill's fear of "the long-winded client" is an unfounded typical fear but common among clinicians (Institute for Healthcare Communication, 2013).

My summarizing reflection of plot summaries indicated Sue and Jill were conscientious dietitians who wanted to assist the client in a meaningful way. I related to their experiences with MI.

Reflections on plot summaries. My own reflection was an opportunity to ensure my own authenticity and where the LG allowed inclusion of the researcher's "voice." My voice was one of mentor. I know that as MI competence develops, the trainee learns how to use and adjust the suggested leading phrases and inter-change the sequences to match client statements (Miller & Rollnick, 2013). Both dietitians spoke of the value of the MI skill set

and desire for mastery of certain techniques. When asked if she ever felt unequipped for counselling before learning MI, Sue said, “I learned how to open up the conversation and find out what the client needed first.” Jill gave a similar answer when asked the question about what attributes she most valued in counselling; she responded: “to have the right questions and how to have the right opening line.” A need for scripted phrases is expected when first using new MI skills; it is taught by breaking conversation into sequences and leading phrases to be applied at certain times during the conversation (Miller, 2015). In early stages of learning, it appears as a linear sequence that guides the conversation to a new client goal but as Miller describes, the conversation is like a dance—it moves and flows.

Step 1—Summary. In this first step of LG, I identified two main plot lines: first that learning objectives of MI training were met as they both expressed learning outcomes and identified goals for their own MI skills development; secondly, that dietitians newly trained in MI have had similar frustrations and barriers to practice despite differences in region and years of work. In this first retelling I reviewed my own emotions, identified with their practice experiences, and re-experienced my desire to be a MI mentor. My own reflective practice of learning the MI skills were mirrored in their experience.

Step 2—The “I” poem. Step 2 is a second listening of the recording and constructing the *I poem*. The process focused on the “self-voice” of participants and listened for how each participant spoke about herself (Woodcock, 2010). I highlighted phrases with “I,” “me,” “we,” “you,” “it,” and “they” onto the printed script as I listened to the recording. Gilligan et al. (2003) used only “I” phrases but I, like Woodcock (2010), included “you,” “it,” and “they” phrases to capture the participants’ use of these pronouns to replace “I” when uncomfortable with personal disclosure in the conversation. The inclusion of “they” and “it”

also applied context to the conversation and their attitudes towards a topic (Woodcock, 2010).

The poem is created to understand the interviewees' perceptions of self and although Gilligan et al. (2003) applied it first to find inferences to cultural or racial aspects of self, I used it to hear the dietitian "voice." It was important to hear the professional training in the responses as well as the individual personality. There were no set number of words for the poem but the expectation is to capture the pronoun and the verb (Gilligan et al., 2003). I included verbs that related to the dietitians' relationship to the course or client. The poem allowed the personal experience with the course to be clear at the same time as providing access to emerging themes (Gilligan et al., 2003). I remembered from when I conducted the interviews that themes would include aspects of time, dietitian's feelings related to low confidence, and pressures in the work environment. To understand the barriers to MI skills application, it was important to understand the participants' learning outcomes. There needed to be clarity of how barriers were related to MI skills, prior dietitian professional training, and philosophies of care to understand how themes would fit into SDT. The poems illuminated key thoughts from the scribed statements as evidence of a key learning outcome from the course.

Set 1 of poem stanzas. Sue's poem showed how she gauged information to meet client's needs:

> I think the biggest thing was information
> Now I try to ask permission
>   I do not feel that I have to step in
> I had felt I had to tell them
>   but now I decide what is important
> I was supplying the information

Similarly, the same course learning outcome experienced by Jill regarding the clients need for autonomy is equally clear from a stanza of her poem:

I learned that you have to let the client decide
As a dietitian you always want to give so much information
actually taking the time to listen to what the client is ready to hear is not always easy
I try and respect the need to listen
that is a challenge

Set 2 of poem stanzas. A second set of poem stanzas are also insightful regarding barriers faced by each participant. The following is from Sue:

I am moving in the right direction
I don't feel that I have the skills
The barrier is time
I often feel that there is not much of relationship happening
Will I see them again?
I don't know if I will see her again
The barrier is the transient nature of the clients I see
Barrier is also the time needed for me to review
I have not taken time to look at the resources
They say they will change for their kids but they don't follow through

Further evidence of barriers experienced from Jill is as follows:

I am still practicing and because I do not get a lot of practice I am still half unsure
if I am tired – forget it.
you need practice doing it and need to take the time
If I had more than one client I could sit down and think ok for the next person
I am really going to practice this
you can actually think oh I bet this tactic might work next time
I am not at the point to naturally ask the next question
I think time
You always have to consider the time factor
you do not have a lot of time with your client
they a really closed down person and not really good with open ended questions
or how comfortable they are with you.

The poems revealed powered perceptions in an authentic "voice" as established by Gilligan and other researchers as the tool for determining participants' key learning and barriers to application of MI as I discuss further in the next section.

Researcher reflection on the poems. The poetry indicated rhythms of thought. Poem stanzas in set 1 revealed that Sue and Jill had learned new counselling skills and felt empowered. Their predisposition to autonomy along with their new skills provided them with opportunity to feel confident, yet each participant scored herself 5/10 for confidence. I see the typical MI novice in these stanzas. Health-care professionals in MI training want to assist their clients, understand that they have a role in client motivation, but have not experienced a lot of success with MI. Poems in set 2 describe barriers that lay the foundation for analysis in stage 4 of the LG.

Herein lies responses to the research query. It is in the second set of poem stanzas that illuminate barriers to application of MI practice. Found in those poems are statements that reveal unpreparedness, frustrations regarding the need for more time for skills practice, and time with patients to build rapport. The poetry speaks of the dietitians' professional goals for more effective counselling outcomes and their perceptions of barriers to change.

Step 2—Summary. The poems revealed how the participants spoke of themselves and in relation to others. At times the dietitians used the terms "you" or "they" to either relay to another or as a second-person reference to self. A review of usage of third-person voice indicated that in both poems, "they" referred to clients (Woodcock, 2010). Sue did not make second-person references to herself but Jill did apply the pronoun five different times to herself. Statements such as "you need practice doing it and need to take the time" and "you always have to consider the time factor" showed that she wanted more time for reflective practice and at that point distanced from her responsibility to understand the barriers of practice and time (Petrovic et al., 2015; Woodcock, 2010). The poem revealed participants' emotions and this stage of LG allowed me to authentically relate to their experiences

(Petrovic et al., 2015). Interestingly, poems also revealed barriers to practice similarly raised by other practitioners in both clinical practice and the literature (Institute for Healthcare Communications, 2013). While step 2 exposed the dietitian's thoughts, step 3 exposed their personalities.

Step 3—Listening for the contrapuntal voices. Music theory applies contrapuntal motion as general movement of melodic lines that maintain their independence but interact with parallel motion, similar motion, contrary motion, and oblique motion ("Contrapuntal," 2017). LG asserts that this is like the aspects of identity that together make one personality (Gilligan, 1993; Petrovic et al., 2015). Analysis in step three identified the different melodic lines in each dietitian's statements. As I listened and read the script, I wrote my impression of their attitudes expressed both in words and tone. I consolidated what I heard into eight similar and three different voices as presented in Table 3. The voices common to both dietitians are listed in Table 3 from most expected to least expected.

Categories for dietitian voices of *student*, *peer*, *experienced dietitian*, *activated professional*, and *conscientious practitioner* indicated a common life experience among health professionals. The next three voices, *the frustrated practitioner*, *low in confidence practitioner*, and the *reflective practitioner* are not uncommon nor unexpected but does provide data that advances the study. The last three voices of *experienced counsellor*, *activated counsellor*, and *conscientious interviewee* were indicators of their separate personalities and shared commonalities with their motivation scores.

Table 3

Comparison of Dietitian "Voices"

Contrapuntal voices	
Dietitian 1 (Sue)	Dietitian 2 (Jill)
Student	
Peer	
Experienced dietitian	
Activated professional/ motivated to change	
Conscientious practitioner	
Frustrated practitioner	
Low in confidence practitioner	
Reflective practitioner	
Experienced counsellor	Activated counsellor
Conscientious interviewee	

Note. Contrapuntal "voices" are the character aspects of each participant identified in step 3 of the Listening Guide research method.

Table 3 shows that contrapuntal voices were not solo ones. Both dietitians voiced their vulnerability as a practitioner learning a new skill, and spoke from a professional and a personal perspective. Interestingly, answers to interview questions by each dietitian were different but the result was a list of common experience. Their role of student was obvious by their enrollment in the training course and by such comments that showed learning, "I am going to take another course on MI" (Sue) and "I am still practicing" (Jill).

Both dietitians showed themselves to value being a peer. Jill stated, "My coworkers

said that the [MI] courses are incredible" while Sue's attitude and obliging comments in the interview with me showed her desire to work with me as peer dietitian in research.

Their position of experienced dietitian was told in story vignettes; Jill told a story of a patient who did not want to take medications and how they talked about what could change in her eating habits, while Sue talked of how she worked with people of First Nations.

Both were motivated to change their practice captured in the voice of an activated professional, but each identified this in different types of statements. Sue's statement, "I had taken a level one MI course before ... and [this course] was definitely part of my professional development" is in response to a different interview question than Jill's when she says, "if I had more than one client [that day] I could sit down and think ok for the next person I am really going to practice this."

The conscientious practitioner voice was evident in different statements too. Jill spoke about her experience after MI training and stated "there are a lot of different aspects to [MI] ... wanting to be able to implement it completely" and Sue spoke about her experience before the MI course: "I did feel sometimes unequipped for patients."

The next three voices on the list of Table 3 provided clues to what barriers the dietitians were experiencing. In the voice of a frustrated practitioner, Sue stated, "They say they want to do it for their kids but then things happen and they don't follow through and they are still back where they were"—which is from a different context to Jill's statement, "you do not have a lot of time with your client so getting into a big long drawn conversation which sometimes can happen when you ask an open-ended question." The low in confidence practitioner was evident in Sue's inability to answer the question about how clients were

impacted by her motivation. She hesitated and was prompted in different ways but still responded with “I try to affirm them ... I am pleasant” which indicated rudimentary coaching skills but not MI skills. Jill was more certain of her skills but stated, “I am still practicing and because I do not get a lot of practice I am still half unsure or a lot unsure.”

The contrapuntal voice of the reflective practitioner is heard in phrases that refer to assessment or new goal. Sue said phrases such as, “… was thinking afterwards ... I would like more experience in hearing change talk ... I am moving in the right direction”; while Jill’s phrases, “I think sometimes it was I just not listening or I didn’t have the information ... so that was one of the times I really understood that…” also indicated self-assessment.

Sue’s experienced counsellor contrasts with Jill’s activated counsellor related to their motivation. Sue had self-motivation scores in the integrated motivation category which indicated ideas that aligned with personal values, while Jill, fully autonomous by her own scores, stated, “I have always felt that if you have a better connection with your clients you will have a bigger impact.” Sue’ s integrated motivation also aligns with being a conscientious interviewee, as she desired her involvement in the interview to align with her value to help me.

It is apparent, then, as seen in Table 3, that contrapuntal voices are indicative of the complexity of human experience. Their voices spoke across a range of personal and professional satisfaction. Phase 1 of the study had already identified that their experience of high autonomy contrasted with low confidence in MI skills and this stage of LG confirmed the same complexity.

Researcher reflection on the contrapuntal voices. In this stage, I noted my responses to each dietitian after I listed their voices. My comments after listening to Sue’s

audio recording and rereading the transcript were as follows: "[Sue] has many voices; I understand now that she responds differently to different questions; she is trying hard to help me." Comments after Jill's transcript were as follows: "[Jill] has some consistent voices; she is not complicated." I had initially thought that Sue was more overwhelmed by her job and had more "voices" than Jill because I had more responses recorded. But upon analysis they had similar voices. Through reviewing their voices, I reflected that the emotions and circumstances of an interview can influence a researcher but it is the systematic methodology that clarified data. Step 3 ensured that I had been listening.

Step 3—Summary. The contrapuntal voices of step 3 revealed participants' character and advanced the study. Petrovic et al. (2015) considered the multidimensional voice of step 3 the core to the method as a "gateway for gaining insight" (p. 4) into individuals' uniqueness. The process delineated individual data at the same time as it "heard" common attitudes from participants (Woodcock, 2010). Importantly it was an ethical research step that ensured that data did not become just words or concepts but substantiated the complexity of the human experience.

Step 3 also provided data that gave "voice" to the objectives of this study. First, these two dietitians who scored as autonomously motivated verified SDT by providing evidence of the nutriments of autonomy, relatedness, and competence. Sue and Jill were self-directed in their practice, believed commitment would bring improved skill, and were dedicated to professional development of MI for the client's sake. Secondly, stated barriers to practice were evidence of environmental impact as anticipated by SDT which specifically in this study were aspects of time and skill that had been previously identified by Endevelt and Gesser-Edelsburg (2014) and by Östlund et al. (2014) as barriers to MI in

practice. Thirdly, the contrapuntal voice of the reflective practitioner identified the process that HCPs conduct for personal insight into practice. An item of influence upon practice, but not an environmental condition discussed by SDT, reflection served to advance theoretical discussion in chapter 5 to include how dietitians identified and managed barriers to practice.

Step 4—Putting data together. Step 4 was conducted with a systemized review of plot subthemes, poems, and contrapuntal voices to find consistent ideas that threaded through the three steps in each participant's LG records and between the two participants. Doucet and Mauthner (2008) likened step 4 to the "retelling and reconfigure" of narratives told on the micro and macro level (p. 406). Step 4 allowed for the data summary to accurately represent the intended messages of my peers. The two main concepts were (a) barriers to practice were due to the job environment and skills development, and (b) that influences upon practice included aspects of the personal and/or professional self. These data were collapsed further into categories: *client type*, *time*, *state of mind*, and *experience with MI*.

The category of client type is typical of HCP experience where the lack of therapeutic relationship was thought to be the client's inability to engage (Institute for Healthcare Communication, 2013; Liddy & Mill, 2014). In this study the dietitians identified the client's inability to participate in MI based on client talkativeness, or institutionalization/transience. Jill identified the client who talked too much; Sue spoke of the lack of talking by clients. Jill spoke of her client's passivity; Sue knew she might not see them again. Sue and Jill's quotes have referred to the nature of the patients they work with and how that has impacted their perceived ability to apply MI. However, Miller and

Rollnick (2013) would argue that engagement is usually possible if goals of the conversation are mutually negotiated. A talkative client may need reassurance to reduce defensiveness or nervousness because the basic structure of a therapeutic conversation is established in the first few minutes (Miller & Rollnick, 2013). A transient or institutionalized client is not excluded from the potential to have a personal goal although limitations of time and lifestyle choices restrict the scope of conversation. It is possible that client type indicated their inexperience with MI; transience may have led to a premature focus on a goal without sufficient engagement and institutionalization may have caused the consultation to begin with an assessment that positioned the client for a passive role (Miller & Rollnick, 2013). But it is also possible that client type is evidence of a cultural barrier because each dietitian was neither of First Nations or elderly. It is also worthy to note that client type as a barrier might have been evidence of their frustration with unmet client goals that were not clients' goals in the first place. It is a risk for clinicians to transfer their feelings of disappointment with unmet patient goals onto the person who has not yet been able to make behaviour change. If this is true, the concept of appropriate client/patient goals is discussed under the heading "Experience with MI."

The findings to be discussed under the remaining categories—time, state of mind, experience with MI—are thematic categories from the data and serve to answer the second research question, "What other factors might affect success of application of MI skills and outcomes after taking the online course called *Counselling for Behaviour Change*?" Figure 4 shows the data summary subthemes that support the three main categories.

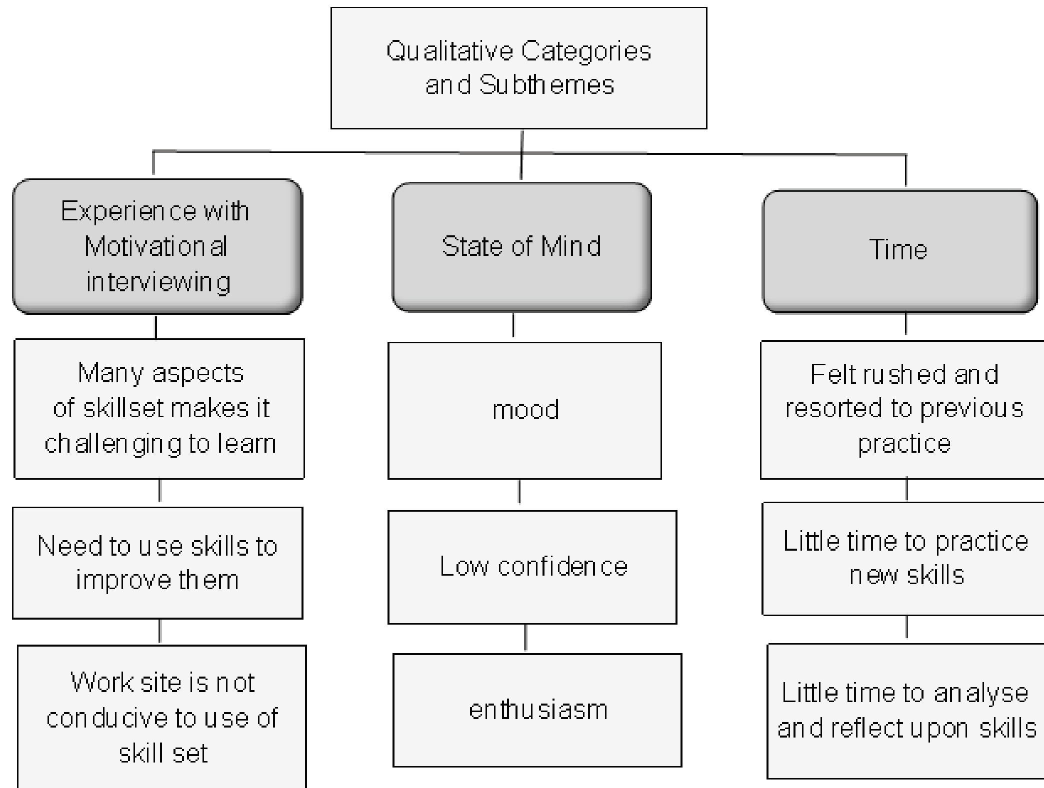

Figure 4. Summary of thematic categories found by qualitative analysis. The Listening Guide provided these findings of three main and subsequent sub themes.

Theme 1—Experience with motivational interviewing. Experience is an expected influence upon practice. Dietitians were motivated to apply MI due to their positive past experiences with training. Each had taken a short general MI course prior this longer professional development course tailored for dietetics. Miller (2015) maintains that learners of MI sometimes misunderstand it. To those trained to make assessments and take the lead in client conversation, the technical conversational aspect of MI makes it challenging. Miller (2015) stated,

> Health care professionals have focused on the local entanglements of the client—it is where their training has taught them to focus. … The universally free position has been forgotten or ignored in an effort to manage the seemingly simple problem. … The HCP tells the person what the problem is and how to fix it but the client often

> understands the problem, and a solution by another person, expert or not, does not help and by not addressing the universal freedom position of the person, the HCP has essentially met only half the patient's needs. (Advanced Workshop in Motivational Interviewing)

Sue experienced this and changed her perspective on her role as counsellor. By involvement with MI training, she identified that her attitude towards the client and her need for a specific MI skill is needed for her professional development. She stated:

> I definitely want to be able to affect change in a way that if the client comes up with the solution. I do not want to give the client a solution. I would like to be more experienced in hearing change talk. … How to process that and what to say when I hear change talk.

Jill also went through change as a counsellor based upon her MI training. She experienced what Miller refers to as the struggle with the "universally free position":

> I think the most … valuable thing that I learned in the course was that you have to let the client decide on what to learn. … As a dietitian you always want to give so much information and then actually taking the time to listen to what the client is ready to hear is not always easy for us.

Both dietitians had MI experiences that made them initiate further training to better assist clients. The theme experience with MI, then, influenced the dietitians in two ways. It was identified as a barrier when there was not enough experience with the skill set but was a positive influence when it served to stimulate them towards development of skills.

Theme 2—State of mind. State of mind was a theme title that referred to participants' attitude towards learning a new skill set. The dietitians were conscientious and

pressured themselves to talk patients into changed outcomes. But in fact, advanced practitioners of MI allow the patient to do the talking, and results are dependent upon what the clients hear themselves say. At this initial stage of learning MI, both dietitians considered their state of mind as pertinent to good outcomes. Sue stated, “I always try to give affirmation of what they are doing,” while Jill said “Obviously if I am having a bad day or have a bad mood so their impression of me is not going to be good so why would they be motivated if I was not motivated.” Both were confident in their nutrition knowledge but showed vulnerability in their communication skills.

Both participants gave themselves a score of 5/10 for confidence. Sue reflected “I guess I am moving in the right direction—I don’t have the skills” which indicated her state of mind relied upon her assessed experience, while Jill scored herself based on application of MI skills 50% of the time which indicated that her state of mind was more like an on or off switch. The difference in their expression of state of mind might be explained by SDT. Sue’s highest score in the mutually exclusive second data set was *identification* motivation which was defined as the “agreement with the value or goal.” On the continuum of motivation, her self-assessment of motivation was not yet at the point where she had integrated the skills and values to a level of complete internal motivation. Jill was the only study participant to score exclusively in the *intrinsic* category and her responses provided evidence of her internal motivation. Her statements were matter of fact and stated with confidence. It was her own reflective nature and self-honesty that caused her to feel that she was not successful. I think she was correct in saying that it was time and practice that caused her feelings of poor success. Her constant reference to the need to listen and her statements about respect and not having an agenda were fundamental values of MI. Each

dietitian identified their attitude towards their own change differently but they were similar in their consideration of how experience influenced their ability to make change.

Theme 3—Time. Time pressures in the work environment was not a surprising study finding. Pressures to achieve outcomes in a limited time frame does challenge opportunities to trial new practices. A common concern among practitioners and identified in this study is that MI itself is time prohibitive (Institute for Healthcare Communication, 2013). However, Miller (2015) has shown how aptly placed phrases in 15-minute conversations can move a patient from unmotivated to a new position along the motivation continuum. MI, as a way of having conversation even when collecting regulation required medical data, does build rapport and creates efficiencies for information gathering (Institute for Healthcare Communication, 2013; Miller & Rollnick, 2009, 2012). Professional development requires time for reflective practice; both participants in this study identified their need for time at work to anticipate, strategize application, and reflect upon their MI skills in counselling events. Sue stated, "[the barrier] has been time to sit back on what I have learned" and the responsibility of this as expressed by Jill: "[I] need to take the time; if I had more than one client I could sit down and think, 'ok for the next person I am really going to practice this and see how it goes'." There is no substitute for practice to develop new skills and HCPs benefit greatly when employed in a work environment that supports this. Reflection upon practice is an expectation set by dietitian regulatory bodies around the world and is fully discussed in chapter 5 as a strategy for practice change.

Step 4—Researcher reflections. In this reflection, I identified with their professional development of empowerment in application of a new skill. Affected by what they said, I was reflective of their journey and valued their honesty with me. I respected the professional

integrity required to recognize that they were not using the skills effectively. Each of them worked alone and I am sure had an impact on their opportunities to reflect with others. In fact, they might have been applying more MI skills to practice than they thought they were. Additionally, the many dietitians who scored themselves as autonomous and successful with MI might not have been as good with the skill set as they thought they were. A bias towards positive self-assessment was captured in a meta-analysis of 30 years of MI practice in addiction research (Hall, Staiger, Simspon, Best, & Lubman, 2016). Hall et al. (2016) found that sustained practice at a beginner level of MI proficiency was possible when there was follow-up training and skill benchmarks for self-assessment. It is possible that dietitians in this study assessed their skills to be better than they were and that Sue and Jill were more stringent. This raised the need to reassess my own proficiency of MI skills in practice. Proficiency, captured in theme 1, can be measured by patient outcomes but served as a catalyst for reflection when self-assessed as low.

In summary, the analysis of part 2 data indicated typical work place outcomes. Thus far, influences upon the dietitians' MI practice were their skill-set, their mind-set, and time.

Analysis—Integrated Methods

Mixed methods analysis combined data sets that represented the dietitian experience of applying MI skills from a micro personal attribute level and a macro environmental level (Leech et al., 2011). SDT stated that motivation is impacted by influences of our own autonomy and our environment at large. The two data sets were consolidated to propose findings that satisfied the third study question, "what emergent factors influenced the learning and application of MI by dietitians?"

The study identified influences and barriers to change that are supported by SDT

assertion that there are internal and external influences upon motivation. The values autonomy, defined as interest, curiosity, and inherent satisfaction, were evident in both dietitians' comments and attitude towards the MI training. Yet, the results indicated that intrinsic predisposition towards client autonomy in two dietitians was not a stronger influence upon their MI counselling confidence than were other personality influences and lack of experience. However, these latter internal influences are well understood and can be managed. There are no substitutions for "practice, practice, practice" when it comes to learning new skills to a level of competence (Miller, 2015). Confidence is a corollary of competence when learning new skills (Institute for Healthcare Communication, 2013). In addition, competence with MI reduces the influence of mood and other emotions upon practice as the dietitians build confidence in skills and good listening.

The identified external influences of workplace restrictions are also well understood, documented in the literature, and common to health-care practice. This is the problem to ponder in the current climate of health care—how dietitians are going to learn and practice new skills when there are time pressures at work. Sue and Jill, both autonomous individuals, maintained their motivation to apply MI in practice despite barriers in the workplace. Their self-reflection upon practice identified an emerging solution that might manage barriers to assert the use of new skills. Reflection, although common to all types of professional practice, had not been identified in the literature to date to maintain MI skills by self-assessed practice.

Chapter Summary

This chapter explained and analyzed two data sets in which qualitative and quantitative findings helped explain influences upon the uptake of MI practice. The LG analysis of two dietitians provided insight into their feelings of low success with MI despite

the findings from the SDT survey that indicated their predisposition to autonomy would be a precursor for success with new MI skills.

The SDT survey contained the limitations of the research method itself. Surveys are more likely to attract an obliging, successful cohort while the small response rate might be related to any conjectured reasons. However, this study's results did indicate that dietitians who took the professional training where more likely to self score themselves in categories on the less extrinsic end of the motivation continuum. Within the limitations of this study, almost half of dietitians who took the course self scored themselves as autonomous.

The LG holds the position that that there are "subjects beneath, behind or beyond narrated subjects, we also contend that, as researchers, we cannot come to fully know them" (Doucet & Mauthner, 2008, p. 407). The data analysis of only two participants cannot imply their experience is common to other dietitians and a person cannot be known or present themselves adequately in a 30-minute interview. Yet, the LG method represented the participants' responses with integrity. The data indicated that these two dietitians assessed themselves as unsuccessful with MI related to barriers of time, state of mind, and experience with MI.

Mixed methods analysis confirmed that there were internal and external influences upon learning a new skill. The practice solution of *reflection* will be fully discussed in the context of professional development training of dietitians in chapter 5.

Chapter 5: Conclusion

This chapter places findings about dietitians' experiences with MI into the context of the literature, evaluates the research method, and addresses research limitations. The chapter then makes recommendations for future research, considers implications for dietitian practice, and considers how results contribute to health education for sustained patient change.

Barriers and Influences Upon MI Practice

SDT maintains that motivation to change behaviour is supported or thwarted by ourselves, others and environmental conditions (Deci & Ryan, 2002; Lynch, Vansteenskiste, Deci, & Ryan, 2011). Studies of motivation indicates that when we are agreeable to an activity, our motivation moves closer to the autonomous end of the continuum (Lynch et al., 2011). As predicted by SDT and in response to the first thesis question, autonomy influenced dietitians' success with MI related to a predisposition to self motivation (Vallerand & Ratelle, 2002). Gorozidis and Papaioanna (2014) had shown that teachers who were autonomously motivated were inclined to student-centred learning styles, felt high job satisfaction, and had an increased sense of personal accomplishment. Lynch et al. (2011) stated the "truly autonomy-supportive stance will allow the counsellor to enter into the client's worldview in an accepting, interested, non-judgmental way… that will ultimately enhance both the alliance and client motivation" (p. 293). This does suggest that 47% of the dietitians in this study who were autonomously motivated felt good about their nutrition counselling effort and positively impacted patient motivation for behaviour change. Yet there were two dietitians who did not feel success with their effort. These key findings, expanded upon in this chapter, are depicted in the summary framework of Figure 5 below.

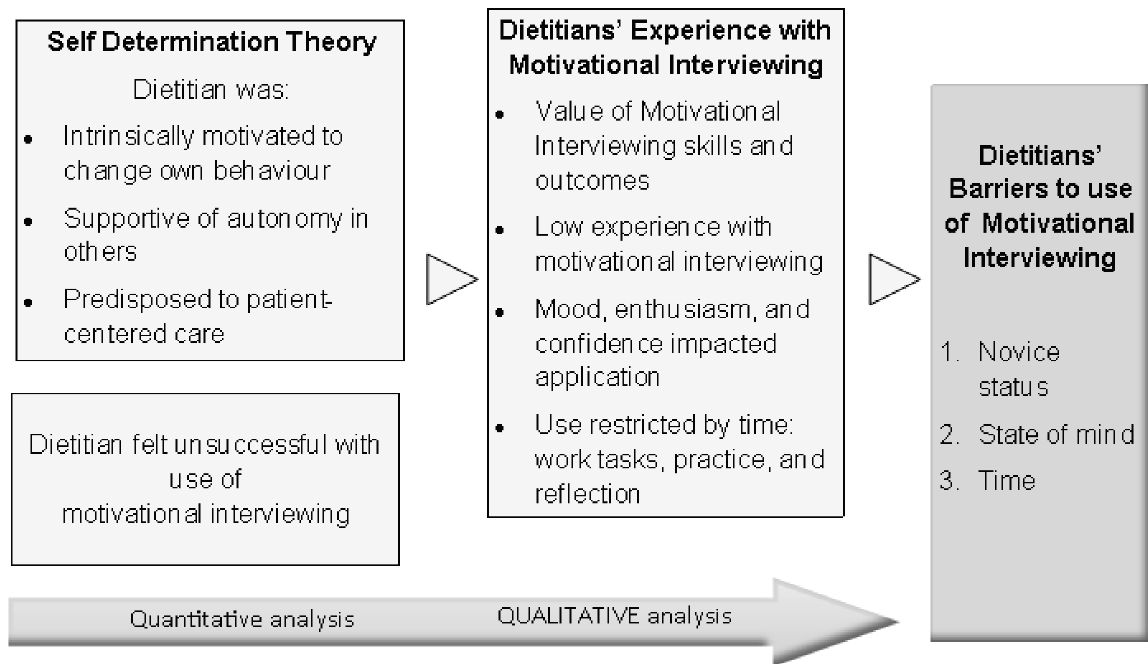

Figure 5. Influences and barriers upon motivational interviewing practice. Final themes result from mixed methods analysis.

Figure 5 shows that autonomous motivation predisposed the two dietitians to success with MI but was thwarted by barriers and influences upon their practice. Each barrier will be discussed as well as the concept of reflection as a potential strategy to change professional practice that emerged in analysis from the subtheme *little time to analyse and reflect upon skills* (see Figure 4).

Novice status. Novice in MI is the norm for dietitians. The traditional role of dietitians would not anticipate dietitians providing therapeutic nutrition counselling (Dietitians of Canada, 2016; McIntosh, 2016b). Dietitians in this study identified that there was little expectation by clients or other health-care staff that their role would include more than nutrition assessment and education. This meant that the work environment did not provide a designated space for counselling, or written instituted policies, procedures, or work flow.

Novice MI status in this study was shown in several ways. Both dietitians identified that many aspects of the skillset make MI challenging to apply and revert to previous counselling practice when under pressure. They identified their lack of use of the listening skill when rushed at work but an experienced MI counsellor would prioritize the therapeutic relationship (Miller, 2015; Miller & Rollnick, 2013). Experienced counsellors know that the therapeutic alliance is as important as the information provided. This conflicts with dietitian training that prioritises education, documentation in medical records, and the medical-legal need for accuracy. Pressures upon practice in a busy healthcare setting such as medical record documentation, a distracting environment or limitations of patient concentration, require a "less is more" education approach of providing fewer pertinent nutrition facts after the therapeutic trust is established (AbuSabha, 2013; McIntosh, 2015). When the dietitian is no longer a novice in MI skills, she will be efficient with requirements and understand education provided in the absence of a therapeutic connection is often not remembered. In fact, Moyers and Miller (2013) stated that the most influential predictor for patient change is the degree of empathy they perceived from the therapist.

Positioned as novices, both dietitians had also identified their concern about learning the many aspects of MI conversation. Although MI is taught with example scripts to apply at specific times, it is in application that the student learns that the foundational skill is listening and conversational prompts come naturally when the therapist's goal is to hear "change talk" (McIntosh, 2016a; Miller, 2015). Secondly, their common experience of low confidence is part of being a novice. Low confidence results from self-judgment compared to expectations and is otherwise known as low self-efficacy as described in chapter 2 (AbuSabha & Achtergerg, 1997; Larson & Daniels, 1998; Lu & Dollihite, 2010). Even though an internal

experience, low confidence is prompted by a response to socio-environmental conditioning, hence, an external barrier in SDT (Deci & Ryan, 2002, 2012).

Novice status requires time for practice MI skills. In the short term, then, time for the novice would be well spent considering conversational scenarios and ideally role playing these conversations with other HCPs, but in the long run time is no longer a barrier to the application of MI skills.

Lastly, worthy of mention but not identified in the data, is the common novice experience of concentrating on our own learning without seeing the challenges experienced by others. These dietitians identified their own barriers to change and with MI experience will likely gain empathy for patients' barriers to change nutrition behaviours. Jill and Sue did, however, in their novice position, identify their own challenge with change in the theme of State of Mind.

State of mind. A study of internal factors of dietitians' temperaments and character traits was surveyed with 346 dietitians in Australia (Ball, Eley, Desbrow, Lee, & Ferguson, 2015). When compared to results of other health professionals, dietitians scored high in the categories of harm avoidance, reward dependence, persistence, self-directedness, and cooperativeness, and scored with low levels of self-transcendence. The study concluded that results might represent dietitians' tendencies of being over-cautious, perfectionists, and less certain of their skills (Ball et al., 2015). The two dietitians in this study revealed these tendencies when their conscientiousness defaulted to self-doubt and low confidence.

Another internal influence upon practice was their enthusiasm to engage with clients and not be frustrated by them. In this study, frustration was a catalyst for dietitians to learn additional counselling skills but is the antithesis of the application of MI (Miller, 2015;

Miller & Rollnick, 2012). Their enthusiasm may reveal expectation to present themselves in a certain way and act out their role, rather than commit themselves to dialogue. Their disappointment in themselves for feeling frustration and not showing enthusiasm is supported by the findings of Ball et al. (2015) that dietitians have a tendency towards perfectionism.

Time. When dietitians in this study stated they wanted more time to think about how to use the skills prior to counselling session to plan for an MI conversation, they identified a common experience in initial use of MI skills (Institute for Healthcare Communication, 2017). Desroche, Lapointe, Deschenes, Gagnon, and Legare (2011) studied the experiences of time-pressured dietitians who solved their time problem with shared decision making, a patient-centred approach, to their practice. Study focus group data revealed that time was a barrier related to session timelines, sufficient time in the schedule for return visits, as well as pressures due to high workloads. Desroche et al. identified that efficiencies in time management occurred when patients were engaged and set their own goals for the session. Such patients, highly involved in their own decisions, used less of a professional's time.

Youngson (2012) identified that when patients are partners in their care there is a delayed benefit to the health-care system; educating and motivating patients takes more time at first, but in the longer term, patients empowered for their own care need less of the HCP's time. The speed then, of which dietitians are required to conduct their work of nutrition management, requires patients to be highly engaged and included in the process. There is a savings to the health-care system when best practices include a therapeutic conversation that results in patient change (Desroche et al., 2011; Institute for Healthcare Communication, 2013; Mol, 2009; Stigler et al., 2010; Youngson, 2012).

The literature is clear regarding increased dietitian counselling skills and motivation

based on MI training (Brug et al., 2007; Clifford et al., 2011; Endevelt & Gesser-Edelsburg, 2014; McIntosh, 2015; Smart et al., 2014). Dietitians in this study also held their MI training in high esteem (McIntosh, 2016a). Interestingly, one anticipated barrier to MI application before the study was the online nature of the training, but it was the lack of opportunity to practice skills after training that was a concern. Data analysis in part 2 indicated the need for post-training support by the subthemes *many aspects of MI make it challenging to learn* and *need to use skills to improve them*. This is confirmed by MI founders and all MI training literature that acknowledge practice creates skill (Institute for Healthcare Communication, 2013; Miller, 2015; Miller & Rollnick, 2013). The need for additional courses and training opportunities for dietitians after taking the course was presented in the preliminary analysis report in March 2016, *Report to the Director of Education Policy and Programs, Dietitians of Canada: A Summary of Research Findings From Surveys and Interviews About the Learning on Demand Course—Counselling for Behaviour Change* (McIntosh, 2016b).

Reflection upon practice. Time restricted dietitians' reflection upon their application of new MI skills. The third query of this study asked about influences upon learning and application of MI by dietitians. Final analysis indicated that autonomously directed dietitians were competent professionals who experienced emotive internal barriers and external barriers that impeded reflection upon change to practice.

Reflection upon practice is captured in the current expectation of *reflective practice* among health professionals (Kinsella, 2009; Mann, Gordon, & MacLeod, 2009). Chatalalsingh (2014) defines reflective practice as required for Quality Assurance by the College of Dietitians of Ontario as follows:

Reflective practice is a learning approach for professional individual and team

> development. Understanding ourselves (our perceptions, the way we see others and how we react to conflict) is an important aspect of how we manage personal and professional relationships. … Individual reflection helps you become aware of the *undiscussables.* These are the issues, thoughts, and feelings that stay below the surface of conversations and don't get talked about, except perhaps with those we trust. Individual reflection will help you understand how undiscussables may have influenced your conversation or actions and how you can productively share them. (p. 10)

Mann et al. (2009) concluded from a systematic review study that reflective practice in heath professional education could be a viable strategy to enhance learning. Kinsella (2012) stated that intentional reflection brings about change of thought; *embodied reflection* brings about change of behaviour. As this study defined change of behaviour as learning, Kinsella's embodied reflection provides a term for the act of professional skill development. Kinsella (2012) stated that when reflection is taken further to include the social or political context it is termed *reflexivity*. Dietitians gave evidence of their reflexive thinking when they talked about practice in relation to their work contexts (Longhofer & Floersch, 2012).

Reflexivity. Reflexivity was apparent from the LG phase of contrapuntal voices that revealed layers of the professional personality. In response to my question "Did you ever feel unequipped for conversations with patients?" one dietitian said,

> I feel like the answer to this one is both yes and no because you always feel equipped that you have the nutritional information, which is what you are kinda there for, but often times whenever an interview or a session that you had with someone did not go well you wondered what went wrong and I think often times it was I just did not listen or they weren't ready to change and I just didn't have that information yet and

was not open to looking for it so yes and no again.

The other dietitian in a response to my question of what she most valued in her counselling skills responded with,

> Yeah I am trying to think … I guess I would say that in my work it is building relationships, building trust. Instead of coming down—sometimes I get feedback that I am telling them what to do, though I don't feel that I am trying to do that, but yeah for me, it is building some sort of trust.

Kinsella (2012) proposed that when reflexivity is further applied with intuition, thought, and action, the professional engages in *phronesis.* Each of these experiences is interwoven and are not felt in isolation so that the professional is conducting a "dialogical praxis" while she considers her thoughts. Sellman (2012) stated that phronesis is apparent when "the competent practitioner demonstrates in her action as an understanding of the deeper requirements occasioned by the need to respond to the messiness of everyday practice" (p. 123).

Phronesis as a type of professional knowledge is explained as practical wisdom (Macklin & Whiteford, 2012). The term was coined first by Aristotle and has been more fully defined in recent years to capture the ideals of practice that are beyond the knowledge and technical applications of a profession (Macklin & Whiteford, 2012). For the purposes of this study, it is a term that captured the experience of knowing that there are ways to engage in teaching and learning not well understood in dietetics. Professionally compelled to bring about patient learning, Sue and Jill moved through reflection upon their thoughts and actions to reflexive reconsideration of their practice to meet the socio-political standards of care set out by the changing expectations in the Canadian health culture of patient-centred care. They

both showed evidence of deeper thought, dedicated action, and the commitment to change that led to their phronesis experiences. Their commitment to change of practice modelled what is expected of patients in self-management of chronic conditions. The study did not identify dietitians' realization that their challenge to change parallels those of patients but it is certain that they expected patients to reflect upon their health behaviours, make practical decisions in the context of their environment, and mange this in the ebb and flow of life. It is practical wisdom to model what we ask of others. Congruity between words and actions inspires trust. A therapeutic relationship is possible if a nutrition counsellor inspires clients to listen and trust professional information (Gingras, 2005). For the patient, the experience of being heard might be a starting point for them to listen to themselves and hear their own ambivalence towards change (Miller, 2015).

Summary of Analysis

The identified influences and barriers to change of practice found in this study show the areas of opportunity to assist dietitians who are committed to change practice within the changing health environment. The barriers to change were not negative experiences with MI and barriers other than time are largely managed by repeated practice. It is possible for dietitians who are autonomous, like the two in this study and myself, to manage these barriers by phronesis.

Finishing Thoughts on the Use of Mixed Methods

Foundationally, the pervading argument that motivation to change can be defined by two categories of intrinsic and extrinsic motivation established the need for the study methodology to differentiate between two categories. Importantly, the method mirrored or modelled the clinical practice of change management. As the first step in dietitian practice is

to identify patients' motivation and the second is to ask them to identify their barriers to change, a mixed methods approach served this purpose.

The explanatory sequential mixed methods design in this study relied upon proven methods of the global motivation scale and LG to reduce collection and analysis risks. As an early career researcher, I relied upon specific theoretical approaches for high quality control yet validity was low due to insufficient sample size (Trotter, 2012). The LG, established and applied over a 30-year period, has had a recent regeneration in the literature and will be discussed as a point of interest of this study. Mixed methods have commonly claimed validity by showing interconnections among different paradigm data sets (Denzin, 2012; Howe, 2012; Mertens & Hesse-Biber, 2012). In this study, the triangulation of data was reliable due to the replicability of results from unconnected sources such as interview, survey, and researcher experience (Trotter, 2012). Alternatively, when recruited participants are of an expert group where consensus on most issues creates an internal cultural saturation, such as the dietitians in this study who all agreed that they wanted more counselling skills and took same training for it, then results are also reliable due to similarity to a case finding in a group of like-minded people (Patton, 2015; Trotter, 2012). Further, a targeted sample is reliable when from a larger network and where both qualitative and quantitative research are needed within the same project (Trotter, 2012). Qualitative reliability can be increased by use of triangulation when saturation is unmet. In sum, study results met these criteria of triangulated data that were established in the early years of mixed methods research (Denzin, 2012). But current rationale for mixed methods is less reactive to positivistic expectations of analysis and open to defensible pragmatic design.

Denzin (2012) explained the role of the mixed methods researcher as one of a

bricoleur, a French term that refers to the diverse talents of a handyman ("Bricoleur," 2017). This study builds from two research worldviews, some of which are dependent upon sequential organization and reliant upon pre-established theory, and others that depend upon evaluation strategies to collect information from the variable human context that is contingent upon events (Macklin & Whiteford, 2012). In the context of professional practice experience of counselling clients, a study of people working with people, mixed methods was logical because it combined psychological theory and methods to investigate an unknown human experience.

Assessment of the Listening Guide

The LG is a reliable method for data analysis of transcripts and texts initially developed for the researcher to become sensitized to recorded data with multiple listening and analysis techniques (Gilligan, 2015). This differs from other qualitative methods that might include a step of verification of transcripts by the participants. In this study, the interview questions were prepared in advance and provided to subjects beforehand to be transparent and entice volunteers. But the questions did stilt free conversation that may have evoked deeper thoughts. Study design would have been more in line with MI intentions if it were "just a conversation between two people" (Miller, 2015, p. 5).

LG enables the researcher to listen well to another and requires reflection throughout all steps. This was a reflexive process where I the researcher, considered what I heard dietitians say, thought about their responses, and considered the impact on us as individuals, in roles as dietitians and representatives of the health professions. Petrovic (2015), a dietitian who applied the LG to a study of dietitian students, stated:

> Understanding our analysis and findings as complex and multidimensional serves as an example to the dietetic profession, and others, as to how a relational process like

> the LG can liberate important knowledge and enhance science-based professions' understandings of participant experience as a contributor to professional knowledge. (p. 10)

Gilligan (2015) proposed that as a method used by researchers who have an interest in people's stories, there is a responsibility to maintain a trusted environment to hear and represent their stories. LG systemized the listening and reflection that works to sift data to reveal the story while another more common method used to tell story, such as Narrative Inquiry, differs in that it is an organic approach that requires skill to scaffold copious data from storylines of larger interrelationship narratives including the researcher's (Caine, Estefan, & Clandinin, 2013). Narrative Inquiry relies upon the phenomenon of experience and a study of our "storied lives" (Caine et al., 2013, p. 576) whereby LG attends to a transcript or text to interpret the "voice" that is both spoken language and unspoken thought and "provides a way to exploring the interplay of inner and outer worlds" (Gilligan, 2015, p. 69). Narrative Inquiry would have suited an exploratory study but for this study, LG suited the explanatory research, fulfilled the goal of expediency, and reduced methodological risk.

Interestingly, narrative methods are increasingly used in clinical practice research. Narrative methods in research and practice have potential in dietetics to develop person-centred care strategies. Habash (2015) reviewed the use of narrative dietetics as an adaption of a new practice of narrative medicine that places the patient in a story line of care and healing to keep the practitioner mindful to treat the whole person. Gilligan (2015) says that qualitative researchers with an interest in people's stories have a responsibility to create safe conditions for people to tell their stories and bring their voice into larger conversations about people experiences; the LG is one such method.

Study Limitations

The main limitation of the study was the small population size. The participation might have been larger if I had provided longer timelines or an online forum for responses (Ball et al., 2015). The findings do reveal the characteristics and influences of dietitians who were in the study and in a larger context may indicate influences upon dietitians who seek to use MI.

It could be argued that if the measure of motivation in the first qualitative part of the study had have been more specifically directed to their counselling skill, findings would be specific to motivational interviewing skill uptake. However, the use of the Global Motivation Scale captured dietitians' current motivation for change in a larger scope of influence beyond their work environment, and therefore more realistic to life experience. A wider scope of motivation was required to find whether the specific program or access to training, identified by location or length of practice had bearing on outcomes related to the Self-Determination Model for Medical Education that underpinned the thesis.

Significance of the Study

Overall, the study may interest dietitians in counselling practice. Specifically, education leaders at Dietitians of Canada, who offer the continuing professional course *Counselling for Behavioural Change*, may gain insight for further online MI trainings. The study contributes to the literature regarding MI as an internationally recognized skill set. Additionally, the study of motivation as a key aspect of learning is important to educators of all disciplines. Further, the study may add to the body of research about dietitian professional practice in both applications of new skills and their reflective practice. Finally, as mixed

methods research, and as an application of the qualitative methodology, the Listening Guide, it may be of interest to those who seek function and impact of methodological strategies.

Future Research

This research was innovative in design and promoted the need for change but was framed in a traditional research approach that included appropriate queries to explore a problem. Future research study on the topic of dietitian patient-centredness would be more profession-centred if it applied methodologies such as Narrative Research or Appreciative Inquiry.

It might be of interest to apply narrative method in a study where dietitians provide specific reflective account of incidence of experienced MI success with an objective to self-assess the frequency of professional satisfaction with MI. This study started with a negative premise—that dietitians could include better counselling in assistance to patients. An alternative query might have been to ask all dietitians with scores of autonomy what challenges they had or could anticipate as barriers to MI in practice. But that would have been best conducted in a focus group. Alternatively, the research method of Appreciative Inquiry is a cooperative search for the best in people within the scope of their whole environment and pursues questions that strengthen a system's capacity to improve (Youngson, 2012). The Appreciative Inquiry approach would be from a positive position of reviewing what is being done well; it gives people the experience of personal satisfaction to report what goes well by using the sequence of the 4-D Cycle of discovery, dreams, design, and destiny (Youngson, 2012). It does not have an agenda and allows people to be heard without making them feel vulnerable. Overall, the topic of counselling skills experienced by dietitians has not been widely researched to date and is open to many styles of analysis.

Implications for Training and Dietitian Practice

In chapter 2, I used the Self-Determination Model for Medical Education (Figure 1) to propose that when the autonomy ethos is valued by the teacher professor, the ethos is taken up by health professional students; it follows that the new health professional will communicate it with patients. In this study, where this corollary is assumed to be true, dietitians inclined to intrinsic motivation but unsuccessful with newly learned autonomy supportive counselling skills, provided insight into why this contradiction could exist. These two dietitians were found to have advanced practice by their positions of autonomy and reflexivity. Their reflexive account of MI application created a transparency that was required for their sustained motivation for change of practice. Once stated aloud, the practitioner has an imperative to act from their ethos and might sustain the momentum of changed practice.

Dietetic phronesis, wisdom in action, is to have the skills and the will to serve clients in their journey to nutritional wellness. Robin Youngson (2012), in *Time to Care*, presented the cost to health professionals when they continue to work in their fields after their loss of interest and loss of compassion for patients. Youngson, a medical doctor who came to a point in his career when he was despondent of the lack of caring he found in the health system, turned to the literature to find that the universal reasons for the loss of compassion in health care included the following: pace of work and multitude of competing demands, peer pressure, perceived need for objectivity and clear judgment, the de-humanizing impact of medical technology, and institutional rules and policies.

Dietitians in this study identified some similar negative pressures in their work experience, associated with time limitations and expectations by others. They found that the

pressure of competing time demands, pressure from what they think would be expected from their peers, and an expectation to play a traditional dietitian role are barriers to job satisfaction and barriers to apply MI to gain a therapeutic alliance with clients. There is an expectation in the registration bodies and national organizations to advocate for the role of the dietitian in health care and be a key member of multidisciplinary teams (Madson, Landry, Molaison, Schumacher, & Yadrick, 2014). Suffice to say that professional development in skills that escalate patient change serve to profile dietitians as effective change agents.

Chapter Summary

SDT proposed that health professionals who learned their profession in autonomously supportive scholastic environments can naturally support autonomy in patients. The rest of us might learn the importance of autonomy transfer in the course of professional practice. In this study, for two dietitians who are autonomously motivated but did not feel that they were successful with applying autonomous supportive therapy with patients, their competence was thwarted by internal emotions and external work factors. Their continued interest to improve their counselling skills despite the barriers shows that *phronesis*, or practical wisdom, is evident where skilled and ethical practitioners identify the actions necessary to reach their professional goals.

There are no barriers to the reputation of MI as an ideal approach to inspire patient health behaviour change as expected in patient-centred health care. The few barriers to dietitian MI practice identified in this study can be moved aside when professional change is expected in the health-care milieu.

Afterword

I wear a professional ring on the smallest finger of my right hand. I placed the ring on my finger in a short ceremony at university as I made a pledge to serve the public in ways of nutrition and health to the best of my ability. True to my personality, I have sought new experiences and have not been satisfied with the status quo. The limitations of my role are determined by medical structures and legal parameters while the scope of my practice is to the ends of my interest and compassion. My weakness is an avoidance of strict parameters; my strength is an ability to stretch with different cultures, political nuances, power strongholds, and social mores. I am committed to the ideals of nutritional health for people in the context of their own life; for those with whom I currently work, a perfect meal is one they created for themselves while managing the schizophrenic voices or battling the fear of eating. I want to work with them and show other staff what the commitment to nutrition is: supportive education that assists residents and patients make healthy food decisions for themselves and not settle into compliance to expectations of others or mindlessly eat for unconsidered reasons. I do not want to nestle into a nutrition power position but I do recognize that position brings influence and that fuels my PhD. I do not want to wrestle for a place in the health-care milieu but find my place of satisfaction in the profession. My ring shows signs of wear; it is no longer round and the etchings are gone. So, like me, it has bent with time, unmarked for the future, and will hold its place for years to come.

Epilogue

This epilogue contains my final thoughts regarding this doctoral study and reflects my professional placement in the strata of healthcare. It includes a response to a poem written by Kathleen Porter (2016), a person committed to Critical Dietetics, although I have stated that motivational interviewing fits into a constructivist paradigm rather than Critical Theory and understand that behaviour change occurs in the presence of an antagonist, it promotes change based on the sense of *for oneself* rather than *because of another*. Yet the contribution of Critical Dietetics in this epilogue is poignant as it calls for a change of practice. I also include excerpts from later entries from the journal that I maintained over the four years of my doctoral degree that reveal reflections upon the process of professional change. Further in the epilogue, I provide an antidote of changed practice and finish with a plotline for the cartoon *The Adventures of Christine*.

A Critical Dietetics Poem: Turning Point

If ever there were a time for critical considerations
That time is now
Critics, offer your thoughtful insights
Differences laid out
Invite into dialogue
A discovery
Make us whole
An assembly needing different parts in order to function
Similarity has lead us down the path of an uncertain Homogeneity
Bring your solemn stories
Celebrate in unique knowing
Critical Dietetics is at its own juncture
You know the generous donation
Requires time to pay it forward. (Porter, p. 77)

A Response: New Lands

By Christine McIntosh

Like a pioneer

Travelling rivers of unknown currents and under forest canopies that cover the sun
Building shelter from materials found around me
I make a new home
Brave but afraid of being misunderstood
Hopeful but saddened by the chronic poverty of health
Lightened with commitment to change but wise to their status quo
Awarded by collegial reinforcement that communication skills are paramount, that personality does direct our work, and that time must be managed
I am a pioneer newly learning what elders knew but others still seek
Accepting and contributing to the handiwork of others, optimistically giving forward

Journal excerpt: November 2016. This study has revisited a classic question in education: What is more influential—the internal/personality or the environment? In the case of motivational interviewing, fundamentally it is the degree of autonomy that authenticates the practice. A person leading a conversation using motivational interviewing who is autonomously orientated can anticipate the same for the participant. The optimal therapeutic counselling situation for a person wanting to make behaviour change is to have supportive counsellors who are intrinsically motivated themselves. Beyond that relationship, the external influences can thwart behaviour change. For example, a dietitian who is autonomously motivated engages with a person making significant food changes and can appeal to the patient's nutriments. On the other hand, authenticity from a dietitian who is extrinsically motivated can appeal to the extrinsic motivational factors of an extrinsically motivated patient. How do we build autonomy, relatedness, and competence in a person?

Journal excerpt: January 2017. To test a theory, we should ask if it fits into what we know of the world. Testing a theory requires a step away from it to see it from a distance. Is it logically consistent?

I started my thesis with what I considered to be common sense. The questions I asked came from my professional experience. It was sensible to me to wonder if we as health professionals, or myself, as a dietitian, could change habits just as we were expecting patients

to change. I found what I think is commonly found among us who want to change is the attribute of autonomy of Self-Determination Theory; found there in the nutriments of autonomy are a commitment to understanding myself in relation to others, my ability to act, and reliance upon my own counsel.

Personal anecdote: February 2016. I recollect a recent time of self-counsel when I had felt a need to advocate for the care of a patient with serious mental illness. The psychiatrist was seated beside me at the large table where the care team was attentive to the dietitian seen on the video link. We were on an internet call with the regional experts who advised care teams regarding patients with anorexia nervosa. The patient had agreed to not be present due to her high emotional state.

The dietitian-on-screen turned to face me and asked, “What is her weight today?”

She was not pleased with the result and commented on the need to increase the energy content of the patient’s diet. The stated goal for gain was wellness and readiness to engage in psychological therapy while the unstated goal was readiness for discharge. All those around the table understood the evidence-based treatment and markers of medical improvement. The dietitian continued to look at me and said, “She needs to be on a 12-megajoule meal plan and are we sure she is eating all of her food?”

The team continued to make comments and recommendations with discussions on how many more weeks needed until discharge. The patient had come to the hospital six weeks prior, had gained 10 kilograms, was eating six times a day, was bored, highly anxious, refusing anti-depression medications, and wanted to go home to be with her husband and young daughter.

There I was, sitting with the medical team but situated with the patient. I believed that

the patient was not going to gain any psychological well-being by staying in the hospital. Despite living in a psychiatric ward for the last 3 weeks (the first weeks had been in a medical ward where she had been close to death) her mental state was fragile. She had a legal-medical order that enforced her treatment whether she was in hospital or not. Her life in the community was going to include many visits with health professionals to ensure she was medically well and that she would begin psychological therapy.

I leaned over to the psychiatrist and stated, “Let’s be kind.”

In that short phrase, I aligned myself with those types of professionals who put the patient’s goals before the medical treatment model. In that moment, I made myself vulnerable to judgment of incompetence by medical-model care expectations. Despite how it may have appeared, it did not indicate any personal disregard for the evidence that states what weight a person should be prior to discharge nor other clinical indicators of patient status, but it did reflect my belief that treatment should be an agreement between the patient and care providers.

I realized that I was comfortable with working in both worlds of care.

Cartoon Plotline: The Adventures of Christine

The cartoon I most recently imagined remains as a storyboard of six vignette boxes and is not yet drawn. It was created in December 2016, months before my thesis submission or defence. The storyline is a logical plot line that repeats itself, thus providing a common-sense defence for plausible conjecture.

Storyboard box 1. This first cartoon drawing is of a table laden with foods that represent choices that are considered good or not good for our health. Behind the table sits a person, age and gender non-distinguishable but wearing a cap, considering the food choices.

Charts that indicate health messages and posters of provocative food advertisements are wantonly stuck up on the wall at the back of the scene. Out the window in the background, the cartoon character of Christine is walking past wearing her backpack.

Storyboard box 2. The drawing is as if a camera has zoomed closer to the person with a cap who now has five thought bubbles from the person's head with smaller pictures within each bubble. One thought bubble picture is of stick people having a tug of war game, another is of a stick figure wagging a finger at the seated person identified by the cap, another is of the person with a cap sitting serenely in a cross-legged position with a smile of confidence, another is of the capped stick figure sitting companionably with a stick figure in a white lab coat, and another with a ballooned font question mark.

Storyboard box 3. In this drawing the stick figure in the white lab coat is now a full figure. This character sits on a profile sitting at a desk in the foreground. Upon the desk are many manuals, on a side wall is a professional certificate, in the background is a window with a view to a university. Each manual represents a theme of dietetics. One has a fruit bowl, another with symbols of chemistry, another titled *How to Help Patients Change Behaviour*. The character has chin in hand with a facial expression of contemplation.

Storyboard box 4. This drawing is a replica of Box 1 where the person with a cap sits at a table in the foreground, head slumped looking at a food that was on the provocative poster. The view is very close so that the real scene takes place in the middle ground of the story box. In this space, a ghost like spectre figure of knapsack wearing Christine floats in tandem with another spectre with loose chains and crooked bony finger pointing out of the robed arm at the person sitting at the table.

Storyboard box 5. This scene is reminiscent of the stick figure scene of Box 2 thought bubble where the capped figure and lab coat figure are happily engaged in conversation. This scene is in the background, while in the foreground, the spectre figure of knapsack-wearing Christine floats in tandem with a different robed spectre who is wearing a ring of flowers on the hood and robed arms are outstretched towards the conversation taking place.

Storyboard box 6. This scene is reminiscent of the office scene of Box 3 where Christine's health professional office desk is off to the side of the background with same view of the university, but in the foreground, the health professional, Christine without her knapsack, and person with a cap are sitting facing each other on comfortable chairs. The coffee table in the middle of them has a jug of water and two glasses along with the book titled *How to Help Patients Change.* Christine is slightly leaning forward and attentive to the words of the capped person who has a thought bubble with a stick figure picture of a person walking a stick dog while carrying a bag of fruits and vegetables.

Epilogue Summary

Spectres of times-past and past practices may haunt us but for me the process of completing the study and considering its findings confirms my commitment to patients' self-care.

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Appendix A: REB Letter of Approval

Mail

COMPOSE

Inbox (89)

Starred

Important

Sent Mail

Drafts (19)

Circles

REB 100759 - Approved

romeoadmin@nipissingu.ca
to me, Sharon

December 02, 2015

Mrs. Christine McIntosh
Schulich School of Education
Nipissing University

File No: 100759
Expiry Date: ***December 02, 2016***

Dear Christine,

It is our pleasure to advise you that the Research Ethics Board (REB) has
methods explanatory approach' and has granted ethical approval. Your p

Modifications: Any changes to the approved protocol or corresponding m
implementation.

Adverse/Unanticipated Event: Any adverse or unanticipated events mus

Renewal/Final Report: Please ensure you submit an Annual Renewal or
prompt 30 days prior to the expiry date.

Wishing you great success on the completion of your research.

Sincerely,

Dana R. Murphy, PhD
Chair, Research Ethics Board

<u>Please note:</u> If you encounter any issues when working in the Research

Romeo Admin
to me, Sharon

Appendix B: Study Survey

PLEASE FIND LIVE TEST ONLINE SURVEY AT: http://fluidsurveys.com/surveys/dcnetworks/counselling-for-behavoiur-change-test/

survey 1 of Part A ; Quantitative data collection

Q		
1	Have you completed the Counseling Behaviour course on Learning on Demand of Dietitians of Canada?	Yes/No
2	If you answered No, I thank you for your willingness to be involved in this research. The study requires participants to have completed the online course. You can exit the fluid survey now. Thank you for your time. Have a nice day.	No
	If you answered Yes, please continue	Yes
3	I have practiced dietetics for ______ years. Please round up to the closest number of years.	open ended Q of number of years
4	I am successful with applying MI to my practice	Yes /No
	To what extent each of the following statements corresponds to the reasons why you do generally different things in your life…	
5	… in order to help myself become the person I aim to be	
6	… because I like making interesting discoveries	
7	… because I want to be viewed more positively by certain people	

Scale for items 5, 6 and 7:

Not agree at all	Very slightly agree	Slightly agree	Moderately agree	Mostly agree	Strongly agree	Completely agree
1	2	3	4	5	6	7

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		Not agree at all	Very slightly agree	Slightly agree	Moderately agree	Mostly agree	Strongly agree	Completely agree
8	... because I choose them as means to attain my objectives	1	2	3	4	5	6	7
9	... for the pleasure of acquiring new knowledge	1	2	3	4	5	6	7
10	... because otherwise I would feel guilty for not doing them	1	2	3	4	5	6	7
11	... because by doing them I am living in line with my deepest principles	1	2	3	4	5	6	7
12	... although it does not make a difference whether I do them or not	1	2	3	4	5	6	7
13	... for the pleasant sensations I feel while I am doing them	1	2	3	4	5	6	7
14	... in order to show others what I am capable of	1	2	3	4	5	6	7
15	... because I chose them in order to attain what I desire	1	2	3	4	5	6	7
16	... because I would beat myself up for not doing them	1	2	3	4	5	6	7

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17 ... even though I do not have a good reason for doing them

Not agree at all	Very slightly agree	Slightly agree	Moderately agree	Mostly agree	Strongly agree	Completely agree
1	2	3	4	5	6	7

18 ... in order to attain prestige

Not agree at all	Very slightly agree	Slightly agree	Moderately agree	Mostly agree	Strongly agree	Completely agree
1	2	3	4	5	6	7

19 ... even though I believe they are not worth the trouble

Not agree at all	Very slightly agree	Slightly agree	Moderately agree	Mostly agree	Strongly agree	Completely agree
1	2	3	4	5	6	7

20 ... because I would feel bad if I do not do them

Not agree at all	Very slightly agree	Slightly agree	Moderately agree	Mostly agree	Strongly agree	Completely agree
1	2	3	4	5	6	7

21 ... because by doing them I am fully expressing my deepest values

Not agree at all	Very slightly agree	Slightly agree	Moderately agree	Mostly agree	Strongly agree	Completely agree
1	2	3	4	5	6	7

22 ... because they reflect what I value the most in life

Not agree at all	Very slightly agree	Slightly agree	Moderately agree	Mostly agree	Strongly agree	Completely agree
1	2	3	4	5	6	7

23 Thank you for your participation in this survey. Your contribution is greatly appreciated. The results of Part 1 are completely confidential and used for research purposes only. Participant identity cannot be identified by the researcher in Part 1.

24 This survey is Part 1 of a research project. Your continued participation is highly valued but participants in Part 2 are yet to be determined by Part 1 results. Please provide your email address to be potentially involved in Part 2 of the survey.
Part 2 in one to one interviews.

Email address___________________________

25 Please provide your email address if

Email address___________________________

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you are interested in receiving a
summary of research results

Likely 5 minutes; No more than 10 minutes

Fluid survey layout

Page 1	Q 1,2,3
2	Q 3,4
3	I generally do different things in life .... Q 5,6,7
4	I generally do different things in life .... Q 8,9,10
5	I generally do different things in life .... Q 11,12,13
6	I generally do different things in life .... Q 14, 15, 16
7	I generally do different things in life .... Q 17,18,19
8	I generally do different things in life .... Q 20,21,22
9	23, 24
10	25

Appendix C: Interview Script

Interview Guide

For PART 2 OF RESEARCH STUDY: MEASUREMENT OF DIETITIANS' MOTIVATION TO CHANGE PRACTICE: A MIXED MEHTODS EXPLANATORY APPROACH

INTRODUCTION:	Hello _______. Thank you for agreeing to this interview. How are you today?	
ORIENTATION TO THE INTERVIEW:	Let me re-introduce myself to you. I am Christine McIntosh, registered dietitian in Ontario. I am working on a PhD related to motivational interviewing within dietetics.Our interview will be recorded for 30 minutes. I will ask you to engage in conversation related to your experience with motivational interviewing and what barriers you have had in providing MI with patients. At the end of 30 minutes, I will turn off the recording and the interview can be over. We can continue discussion for another 30 minutes. This in in order to allow you talk to about motivational interviewing or any thoughts you have had that you did not want to share in the recording. You can tell me at any time during the talk that you do not want to continue. Contact information to my supervisor or ethics board related to this interview has been provided to you in prior emails. Do you have any questions? Shall we begin?	
Start of interview	Recording is now started	
FIRST QUESTION:	My interest in this conversation with you today is to find out more about your experiences with motivational interviewing since you took the Counseling for Behaviour Change online course. In the survey that you completed for this study you replied that [either successful or unsuccessful]. You might remember all of the questions that you answered on a Likert scale. Your answers determined that you are [either autonomously oriented or not autonomously oriented]. What do you think aBout this test result?	Prompt: are you surprised?
CONSEQUENT QUESTIONS THAT WILL FOLLOW IN A RELATIVE ORDER DETERMINED BY THE FLOW OF EACH INTERVIEW:	Have you taken other motivational courses in the past?	
	Before taking course(s) in motivational interviewing, did you ever feel unequipped for conversations with patients?	What is it that makes you feel

Question	Probe
	this way? Anything else?
What are the attributes you most value in your counselling skill set?	Anything else?
What is it that motivates you to change your practice to include more counselling skills?	
On a scale of 0-10 wha tis your commitment to apply motivational interviewing to your practice?	Oh, a ---, why not a ----?
On a scale of 0 to 10, what is your confidence of applying motivational interviewing in your practice?	Oh , a --- why not a---?
Can you tell me about the most valuble thing you learned in the Counseling for Behaviour Change course?	Are there other things that you learned?
Are there barriers to application of these skills to your practice?	Are there other influences?
When do you feel your patients are most motivated to change their health behaviours?	Are patients impacted by your motivation?

THANK YOU FOR YOUR WILLING PARTICIPATION TODAY. THIS IS THE END OF THE 30 MINUTES. I WILL NOW TURN OFF THE RECORDING.

Appendix D: Participation Information Letter

Participant Information Sheet

Dear Dieitian,

I am Christine McIntosh, Registered Dietitian in Ontario, Canada. I invite you to contribute to my research project related to my PhD thesis of Educational Sustainability of Nipissing University, Ontario, Canada. You are contacted due to your inclusion in a group of dietitians in Canada who have completed the *Counseling for Behaviour Change* course, of Learning of Demand, www.dietitians.ca.

As your colleague, I am interested in your experience with the motivational interviewing course and will be providing a 10 minute online survey (www.fluidsurveys.com) to those who elect to take a survey for Part 1 of the project. There is further potential to be part of a very small number of participants in Part 2 who will be invited for a one- to- one 30 minute internet meeting (GoToMeeting).

My project *Measurement of dietitian motivation to change practice: a mixed methods explanatory approach* is aligned with the goals of Learning on Demand to provide excellent professional development courses to dietitians across Canada. The study will add to the growing body of research about dietitians as nutrition counsellors.

- Motivational interviewing has been found to be an effective patient engagement practice amongst health professionals yet there is limited understanding of this practice by dietitians.
- My aim in this study is to glean first the attitudes and thoughts of dietitians by use standardized survey questions, asses the findings and then secondly ask a small number of the participants to further explain their experience.
- Your completion of the survey provides data to my thesis research and become part of publishable findings in The Canadian Journal of Dietetic Practice and Research.

Your involvement

The survey will be provided to you from the roster of those who have completed the course. I appreciate you volunteering your time as there is no remuneration for your involvement. This email and 3 consequent emails will be sent from Dietitians of Canada. You are free to not respond to any of the emails. Your participation or non-participation has no bearing on your relations with Dietitians of Canada and if you choose to take the 10 minute survey, you can request removal of your completed survey at any time of the research period (September 2015 to December 2016). You are free to end your participation at any time. Your completion of the survey does imply consent to your participation but does not waive any legal rights in regards to participation. This study is of minimal risk but may elicit some emotions. Supportive e-counselling can be found at sites such as http://www.myecounsellor.com or http://www.cissyhelps.com/online-counselling.

Your rights as a participant

As per the research standards set by the Tri-Council Policy Statement 2, Canada, 2010, I will maintain confidentiality of all data by use of encryptions, password protections, locked cabinets for all printed data and destruction of all primary data at the end of the thesis project. Secondary data is de-identified and may be used in its summarized forms in subsequent publications. I have no conflicts of interest and am unfunded in this project. This study has been reviewed and received ethics clearance through Nipissing University's Research Ethics Board. If you have questions regarding your rights as a research participant, contact: Ethics Administrator, Nipissing University, 100 College Drive, North Bay, ON P1B 8L7 or ethics@nipissingu.ca. If you have any concerns about this thesis project, please contact my PhD supervisor, Dr. Sharon Rich, sharonr@nipissingu.ca.

Thank you for your potential involvement in my research. Please feel free to contact me at any time. camcintosh795@community.nipissingu.ca.

Christine McIntosh, MS RD, APD, PhD Candidate

Participant Information Sheet

Dear Dieitian,

I am Christine McIntosh, Registered Dietitian in Ontario, Canada. This is a formal invitation for your continued contribution to my research project related to my PhD thesis of Educational Sustainability of Nipissing University, Ontario, Canada. You are contacted due to your agreement to be contacted for participation in Part 2 of the study where we will have a one to one talk about your experience with counselling after completion of the *Counseling for Behaviour Change* course, of Learning of Demand, www.dietitians.ca.

As your colleague, I am interested in your experience with the motivational interviewing course. The survey provided valuable and necessary information and now I ask you to continue your participation in the study. Part 2 is a 30 minute conversation with me using online the software GoToMeeting.

My project *Measurement of dietitian motivation to change practice: a mixed methods explanatory approach* is aligned with the goals of Learning on Demand to provide excellent professional development courses to dietitians across Canada. The study will add to the growing body of research about dietitians as nutrition counsellors.

- Motivational interviewing has been found to be an effective patient engagement practice amongst health professionals yet there is limited understanding of this practice by dietitians.
- In Part 1, I was able to survey the attitudes and thoughts of dietitians pertaining to motivation.
- In Part 2, I wish to investigate this further.
- Your completion of the survey provides data to my thesis research and become part of publishable findings in The Canadian Journal of Dietetic Practice and Research.

Your involvement

The conversation will complete your activity in the study. I appreciate you volunteering your time as there is no remuneration for your involvement. Your participation or non-participation has no bearing on your relations with Dietitians of Canada and if you choose to continue with an online conversation, you can request removal of your completed survey and your recorded conversation at any time of the research period (September 2015 to December 2016). You are free to request the removal of your input at any time. Your consent to participate in the study does not waive any legal rights in regards to participation. This study is of minimal risk but may elicit some emotions. Supportive e-counselling can be found at sites such as http://www.myecounsellor.com or http://www.cissyhelps.com/online-counselling.

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Thank you for your potential involvement in my research. Please feel free to contact me at any time. camcintosh795@community.nipissingu.ca.

Christine McIntosh, MS RD, APD, PhD Candidate

Appendix E: The Listening Guide Method Process

Listening Guide purpose	Procedure	Personal reflection
Step 1. Listening for the plot		
Preliminary ideas, thoughts, learnings, and my own narrative. Plot: emotional resonance, repeated words, phrases, images, information, comments, contradictions, omissions, revisions. Silence, lowering voice, higher voice, trailing voice.	Printed out script. Listened to recording as used colours to code themes, thoughts, emotions of the speaker.	Wrote my own personally and intellectually driven thoughts along the margins. Recorded personal thoughts in a summary response of 1-2 pages long.
Step 2. Constructing "I" poems		
The second listening. "I" poem or "voice" poem drew out the internal conversation of the interviewee. The "sense of I" is the "psyche" of the individual that he/she brings to the session, to each question.[1] This analysis process captured both emotional and intellectual concepts to not objectify the person. References to another "I" might be a personal deflection or identify a third personality in the discourse.	Found all words of grammatical first and second person – "I, me you, yours, we, us, ourselves, they, their, them." [2] Compiled "I" statement sentences choosing words that link and flow into a poem.	I wrote my own reflections after each poem.
Step 3. Listening for contrapuntal voices		
The third listening. Listen for at least two contrapuntal voices.[3] Contrapuntal motion is a concept from music theory where there at least two melodic lines that maintain their independence but may flow in parallel motion, similar motion, contrary motion, and oblique motion.[4]	I wrote into the script margins the role from which the speaker was stating the point. For example, as a student, a dietitian, or colleague.	I listened again and noted my own role responses. For example, as dietitian, coach, or colleague.
Step 4. Composing an analysis		
For each interview, I arranged into columns: the summaries from the first listening, the poem, and contrapuntal voices to identify into a fourth column the common themes. Onto a second document I copied the final themes of each interview into columns and coded by colour.	Onto a third document, I copied the colour blocks into columns to identify the themes.	I wrote a reflection of my thoughts of the emergent themes

[1] Gilligan, Brown, & Rogers, 1990
[2] Woodcock, 2010
[3] Petrovic, Lordly, Brigham, & Delaney, 2015
[4] https://en.wikipedia.org/wiki/Contrapuntal_motion