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BARRIERS TO USING MOTIVATIONAL INTERVIEWING

FOR LIFESTYLE COUNSELING

By

Heidi J. Sannes

A THESIS SUBMITTED IN PARTIAL FULFILLMENT

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Barriers to Using Motivational Interviewing for Lifestyle Counseling

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This thesis paper has been examined and approved by the following members of the thesis committee.

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ABSTRACT

BARRIERS TO USING MOTIVATIONAL INTERVIEWING
FOR LIFESTYLE COUNSELING

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The Minnesota Department of Health has sponsored Motivational Interviewing Continuing Education sessions for Sage*Plus* providers to increase their knowledge and skill in the utilization of MI in their clinical practice. The impact of these educational sessions on skill development as well as utilization of MI by these providers is unknown. The purpose of this study was to determine if healthcare providers perceive any barriers in utilizing MI techniques to do lifestyle counseling with Sage*Plus* program particiants. A descriptive quantitative design was used for this study. Of the 22 healthcare providers that were doing lifestyle counseling 16 completed the questionnaires. The providers were asked to complete two questionnaires: A modified version of the Preventative Medicine Attitudes and Activities Questionnaire (PMAAQ) and a demographic questionnaire. All 29 potential barriers asked about on the modified PMAAQ were found to have some level of significance. The five most significant barriers were all client based; lack of client interest in prevention, the client's physical and/or financial restrictions, lack of insight by the client on the importance of making healthy-lifestyle changes, and the education level of the patient. There are multiple barriers to using MI for lifestyle counseling with Sage*Plus* participants.

TABLE OF CONTENTS

Chapter

I. INTRODUCTION 1

Statement of the Problem 4

Purpose of the Study 4

Research Questions 5

Definition of Terms 5

Statement of Assumptions 7

Summary 7

II. REVIEW OF THE LITERATURE 8

Provider Barriers 8

Knowledge 9

Attitudes 10

Skills 13

Behavioral Routines 15

Client Barriers 17

Client Knowledge 17

Client Attitude 18

Client Skills 19

Client Adherence 21

Practice Barriers 22

Organization 22

Resources 24

Structures 24

Theoretical Framework 25

Transtheoretical Model of Change 25

Motivational Interviewing 26

Summary of Themes, Strengths and Gaps in the Literature 27

III. RESEARCH DESIGN AND METHODOLOGY 28

Design 29

Sample and Setting 29

Ethical Considerations 30

Tools 31

Data Collection 32

Data Analysis 33

Limitations 34

IV. ANALYSIS OF DATA 35

Description of the Sample 35

Research Question 1 37

Research Question 2 40

Research Question 3 41

Summary 42

V. SUMMARY, CONCLUSIONS, RECOMMENDATIONS 44

Discussion and Conclusions 45

Research Question 1 45

Research Question 2 46

Research Question 3 48

Theoretical Foundation 50

Scope and Limitations 51

Implications for Practice 52

Implications for Research 53

Summary 54

References 55

Appendices 61

A. Minnesota Department of Health IRB Permission Letter 62

B. Minnesota State University, Mankato Approval Letter 64

C. Consent Form 66

D. PMAAQ Approval Letter 69

E. PMAAQ (modified) 71

F. Demographic Questionnaire 74

G. Participant Demographics 76

H. Ranking of Barriers to Lifestyle Counseling 78

LIST OF TABLES

Tables

4.1 Participant Demographics 37

4.2 Ranking of Barriers to Lifestyle Counseling 39

4.3 Top Five Significant Barriers to Lifestyle Counseling 41

4.4 Least Five Significant Barriers to Lifestyle Counseling 42

CHAPTER I

INTRODUCTION

Cardiovascular disease (CVD) is the leading cause of death in women (Centers for Disease Control and Prevention [CDC], 2010). Coronary heart disease (CHD), infarctions, and stroke make up CVD. Risk factors for CVD are cigarette smoking, hypertension, diabetes, high cholesterol, and being overweight or obese (Feresu, Zhang, Puumala, Ullrich, & Anderson, 2008). Low income, under- or uninsured, and minority women have an even higher rate of CVD than Caucasian women with higher income (Feresu et al., 2008). Often the symptoms of CVD are silent until there is a serious event, including death, thus it is important to screen for CVD in women and counsel them on how to change their health behaviors that contribute to CVD (Feresu et al., 2008). These low income, under- or uninsured, minority women are more likely to smoke cigarettes, have poor nutrition, and engage in limited physical activity as well as have inadequate access to health services (Finkelstein, Khavjou, & Will, 2006).

One of the objectives of Healthy People 2010 and proposed objectives for Healthy People 2020 is increasing the number of people who have access to care and to provide them with counseling on health behaviors (U.S. Department of Health and Human Services [USDHHS], 2010). It has been shown that lifestyle intervention programs are effective in changing health behaviors that are associated with CVD (Farrell et al., 2009). Congress began funding the Well-Integrated Screening and Evaluation for Women

Across the Nation (WISEWOMAN) program in 1995 under the CDC to provide low income, under- or uninsured 40 to 64 year old women with the knowledge, skills, and opportunities to improve their lifestyle behaviors and thus helping to prevent and control chronic disease, primarily CVD (CDC, 2010; Khare et al., 2009; USDHHS, 2010). Finkelstein et al. (2006) showed that CVD risk factors were significantly improved in the women who participated in the WISEWOMAN program. The WISEWOMAN program in Minnesota, established in 2004, is called Sage*Plus* and is offered at selected clinics throughout the state for eligible women (Minnesota Department of Health [MDH], 2009).

Providers at these clinics that participate in the Sage*Plus* program encourage women to make lifestyle changes that will improve their heart health using Motivational Interviewing (MI) (MDH, 2009). MI is a "client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence" (Casey, 2007, p. 6). MI has been shown to be an effective way to help people make healthy changes in lifestyle behaviors (smoking cessation, diet, and physical activity) (Soderlund, Nordqvist, Angbratt, & Nilsen, 2009). The provider and client work together to determine the client's readiness to make lifestyle changes. These women receive counseling on smoking cessation, physical activity, and diet (MDH, 2009). The women who enroll in this program participate in cardiovascular screening, learn about healthy lifestyles, consider making a few, small, self-selected changes toward a healthier life, and return for an annual rescreening (MDH, 2009). Most healthcare providers understand the importance of providing preventitive health services. However, the actual frequency of lifestyle counseling has been found to be quite low internationally (Duaso & Cheung, 2002; Lambe & Collins, 2009).

Some barriers that have been identified to providing lifestyle counseling in the general population are lack of time, no reimbursement, lack of training and knowledge, provider skepticism of clients' willingness and ability to change health behaviors, and unwillingness of client to participate in a discussion of health behaviors (Casey, 2007; Lambe & Collins, 2009; Viadro, 2004). Barriers fall into three different categories: provider, perceived client barriers by the provider, and practice barriers. Provider barriers are when MI is not implemented either at all or with insufficient fidelity due to factors related to the knowledge, attitude, skills, or behavior routines of the provider (Jansink, Braspenning, van der Weijden, Elwyn, & Grol, 2010). The client barriers perceived by the provider are when MI is not implemented either at all or with insufficient fidelity due to factors related to the knowledge, attitude, skills, or adherence of the client (Jansink et al., 2010). Practice barriers occur when MI is not implemented either at all or with insufficient fidelity due to factors related to the organization of care processes, staff, resources, or structure of the practice (Jansink et al., 2010). In general practice, the outcomes of lifestyle counseling are poor (Jansink et al., 2010). However, the recent results of MI for health promotion and disease prevention interventions have been mixed but overall look promising (Resnicow et al., 2002).

Statement of the Problem

The Sage*Plus* program provides reimbursement for providers to provide lifestyle intervention (diet, physical activity, and smoking cessation) to an underserved population: low income, under- or uninsured middle-aged women. However, it has been shown that people cannot be forced into a lifestyle change that they do not want (McCarley, 2009). Empowering people to be autonomous and to self-manage their own care using MI has been demonstrated to have positive outcomes in lifestyle changes (Mason, 2008).

The MDH has sponsored MI continuing education (CE) sessions for the healthcare providers who are providing Sage*Plus* lifestyle counseling to increase their knowledge and skill in the utilization of MI in their clinical practice. As part of any public health program, it is important to evaluate interventions to ensure that the program is making the best use of limited resources (Finkelstein, Wittenborn, & Farris, 2004). The impact of these educational sessions on skill development as well as utilization of MI by these providers is unknown. General providers around the world have identified barriers to counseling clients on lifestyle change (Jansink et al., 2010); it is important to know if the Sage*Plus* clinic providers perceive barriers to using MI in those interventions.

Purpose of the Study

The purpose of this study is to determine if healthcare providers perceive any barriers in utilizing MI techniques to do lifestyle counseling with the participants of the Sage*Plus* program. Barriers to providing lifestyle counseling can be present at three different levels: provider, client, and practice (Jansink et al., 2010). Information gained

from this study can be used to improve the use of MI to guide healthy lifestyle behavior changes in the participants of Sage*Plus* and to improve the continuing education course offered to these providers.

Research Questions

The research questions for this study are:

1. Do healthcare providers perceive barriers to using motivational interviewing techniques when doing Sage*Plus* lifestyle counseling?
2. When doing Sage*Plus* lifestyle counseling, what are the five most significant barriers healthcare providers perceive to using motivational interviewing techniques?
3. When doing Sage*Plus* lifestyle counseling, what are the five least significant barriers that the healthcare providers perceive to using motivational interviewing techniques?

Definition of Terms

- Barriers: Barriers are defined as any factor that compromises adherence to or integrity of the MI spirit.

- Low Income: Annual income of less than $27,075 for household of one, $36,425 for household of two, $45,775 for household of three, $55,125 for household of four, $64,475 for household of five, $73,825 for household of

six, and an additional $9,350 for each additional member of the household beyond six (MDH, 2010).

- Motivational Interviewing: A "client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence" (Casey, 2007, p. 6).
- MI Utilization: Providers are delivering MI in a respectful and nonjudgmental manner and at the client level of understanding. They are staying true to the spirit of MI and using the five methods of MI: open questions, affirmations, reflecting, summarizing, and eliciting client change talk (Berger, Otto-Salaj, Stoffel, Hernandez-Meier, & Gromoske, 2009).
- Uninsured or Underinsured: Uninsured is when the women do not have health insurance. Underinsured is when the women have insurance that does not cover screening or they have insurance with unmet deductibles or copayments (MDH, 2010). Women are also underinsured when they have Medicare with uncovered expenses associated with the visit, Pap smear, or mammogram (MDH, 2010).

Statement of Assumptions

The assumptions for this study are:

1. MI is an effective counseling method for preparing people for healthy behavior change.

2. Providers know how to use MI in clinical practice.
3. Providers are attempting to use MI techniques with Sage*Plus* participants.
4. There are barriers present that prevent or make it difficult for providers to use MI techniques with Sage*Plus* participants.

Summary

It has been shown that lifestyle counseling in general is not often done by healthcare providers for a variety of reasons. Low income, under- or uninsured, minority women are at an even higher risk for unhealthy lifestyle behaviors and CVD than the general population making lifestyle counseling a high priority. The MDH is providing reimbursement to Sage*Plus* clinics for providing lifestyle counseling to this population, thus it is important that the healthcare providers who are providing the Sage*Plus* lifestyle counseling interventions that are trained in MI are doing the lifestyle counseling. These healthcare providers need be proficient at MI and be effective in collaborating with the client to assist them for heathy behavior change. Knowing what barriers are preventing MI from being used correctly is important so that they can be addressed and eliminated. Eliminating these barriers will result in more women making healthy lifestyle changes.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this study is to determine if healthcare providers perceive any barriers in utilizing MI techniques to do lifestyle counseling with the participants of the Sage*Plus* program. The online library at Minnesota State University, Mankato was used to locate peer-reviewed journal articles pertaining to barriers to successful lifestyle counseling. The search engines CINAHL Plus, Academic Search Premier, EBSCO MegaFILE, Alternative HealthWatch, Cochrane Database of Systematic Reviews, Health Source: Nursing/Academic Edition, and Women's Studies International were searched simultaneously using the search term *barriers to motivational interviewing* which yielded 90 articles. Other search terms that were used included *WISEWOMAN*, *motivational interviewing*, and *barriers to lifestyle counseling*. The filters *2000-2010* and *peer-reviewed journals only* were used. The review of the literature presents the main findings regarding provider, client, and practice barriers to successful lifestyle counseling followed by the theoretical framework for the study.

Provider Barriers

The healthcare provider barriers to doing lifestyle counseling are discussed first. The areas that were identified are knowledge, attitudes, skills of delivering lifestyle counseling, and behavioral routines (Jansink et al., 2010). The profession of the provider doing the lifestyle counseling varied throughout the literature among nurses, advanced practice nurses, and general medicine physicians.

Knowledge

One type of healthcare provider barrier is the lack of knowledge of the information provided during lifestyle counseling. Insufficient knowledge of physical activity, smoking cessation, and diet guidelines by the provider doing the counseling was identified by several studies as a barrier to a quality lifestyle intervention (Ampt et al., 2009; Jansink et al., 2010; Lambe & Collins, 2009). Ampt et al. (2009) interviewed 15 general practitioners and one nurse practitioner in Austrailia to determine what factors influenced them to screen and then provide interventions to their clients for behavioral risk factors. When a client exhibited signs of poor nutrition (ex. obesity), these providers would usually assess diet and physical activity (Ampt et al., 2009). Some of the 16 practitioners felt that they lacked knowledge in nutrition, felt that a dietician would be more effective than they would be at making dietary recommendations, and thus did not consistently offer this information (Ampt et al., 2009).

Jansink et al. (2010) interviewed 12 nurses involved in diabetes care in Dutch general practices to ascertain information on the barriers to lifestyle counseling at the nurse, patient, and practice level that these nurses have encountered. Some of these nurses felt that they lacked necessary knowledge about physical activity, smoking cessation, and especially nutrition as the dietician usually gave this advice, and so when they had to do it, they felt unsatisfactory in this area (Jansink et al., 2010). The level of knowledge of physical activity, diet, and smoking cessation depended on the training of the provider doing the lifestyle counseling and what experience they had, and so the level of knowledge in each of these areas of lifestyle counseling varied.

Attitudes

The attitude of the healthcare provider is another potential barrier to lifestyle counseling. It has been found that if those providing lifestyle counseling did not believe that their clients would actually make a change in their health behaviors, the providers lacked the motivation to do the counseling due to feeling powerless (Ampt et al., 2009; Jacobsen, Rasmussen, Christensen, Engberg, & Lauritzen, 2005; Jansink et al., 2010; Lambe & Collins, 2009; Viadro, 2004). Jacobsen et al. (2005) did a focus group interview with five Dutch general practitioners to ascertain their views on lifestyle counseling and the obstacles to lifestyle counseling. The general practitioners were skeptical of their impact from doing lifestyle counseling when they felt that many clients have a lack of interest in changing behavior and they will be able to do little to improve the clients' life circumstances that are conducive to illness (Jacobson et al., 2005). The feelings of powerlessness, which have been described by some providers, could be due to lack of confidence in their ability to evoke healthy lifestyle changes among their clients (Viadro, 2004).

How effective the healthcare providers feel they are as a motivator affects the extent that they will delve into lifestyle counseling (Ampt et al., 2009). It was found that the attitudes of the 16 providers, interviewed by Ampt et al. (2009), strongly influenced how effective they perceived lifestyle interventions to be. Most of these providers felt that it was important to do lifestyle interventions, but some felt that once the client is educated on lifestyle risk factors then the rest is up to them and they did not need to continue to motivate them to makes changes (Ampt et al., 2009).

The healthcare providers attitude regarding what their job is and what that means to them can be a barrier to effective lifestyle counseling. Berger et al. (2009) led focus

groups with case managers and counselors (n=16) as well as a client group (n=7). They also conducted a survey with the 31 case managers and counselors who completed an MI workshop to explore barriers to or facilitators of using MI in the practices of county-employed case managers and counselors who work with clients with severe and persistent mental illness disorders and/or substance abuse disorders. One of the findings was that providers who value professional growth, think that they are effective, and are satisfied in their job may be more willing to include MI in their practice (Berger et al., 2009).

Lambe and Collins (2009) conducted six different focus group consisting of primary health care practitioners (general practitioners and practice nurses) in urban and rural locations in Ireland to identify barriers and current strategies of lifestyle counseling. This study showed that some general practitioners would only consider doing activities that would generate money for the practice and lifestyle counseling is not one of these activities (Lambe & Collins, 2009). Some of the practice nurses noted that "health promotion is not actually why we are employed in the practice, I mean it is a business so it is what is going to generate money for the practice" (Lambe & Collins, 2009, p. 221).

Other healthcare providers feared sounding judgemental and thus were hesitant to provide the lifestyle counseling for fear of jeopardizing their relationship with the client (Jacobsen et al., 2005; Jansink et al., 2010; Lambe & Collins, 2009). Physical activity, diet, and smoking cessation can all be sensitive topics for people, and if not approached carefully, there is potential to offend the client (Lambe & Collins, 2009). Some of the Danish general practitioners that Jacobsen et al. (2005) interviewed felt that they work hard to develop trust and respect with their clients, and they are afraid of jeopardizing their relationships with them and losing contact.

Empathy is a key aspect of delivering MI; if the provider does not understand why it is difficult to change a particular health behavior because it is not hard for themselves, then they may not be effective at motivating the client (Berger et al., 2009; Jansink et al., 2010). For the nurses studied by Jansink et al. (2010), an aspect that reduced the amount of empathy they had for clients was when they have done lifestyle counseling with the client and yet the client still has not reached the goals they have helped them set. This is frustruating for these nurses and affected their desire to continue counseling the client on healthy lifestyle changes (Jansink et al., 2010).

Lastly, lack of time was a common theme in the literature that healthcare providers identified as a reason they felt they could not do lifestyle counseling. It was found that when the nurses studied by Jansink et al. (2010) were stressed for time, they felt that they could not take the time to listen carefully to the client. Often, MI is just part of several interventions that may be occuring during a visit (Resnicow et al., 2002). When MI is not the only intervention happening during a visit or MI is being delivered in nontraditional ways (such as over the telephone), the depth of the rapport and treatment may be impacted (Resnicow et al., 2002). The case managers and counselors studied by Berger et al. (2009) are already feeling overworked and have a skeptical or cautious reaction to anything new and automatically assumed that adopting it into their practice would be too time-consuming, even though MI is just a type of counseling and not a time-consuming assessement of the client. As a result, MI may either not be occuring at all, or if an attempt is being made, the providers may not be staying true to the spirit of MI (Resincow et al., 2002).

Skills

Not having the skills necessary to provide lifestyle counseling can be a major barrier for healthcare providers. MI was developed for use in the addiction field and was delivered by individuals with training in psychology or counseling (Miller & Rollnick, 2002). Training professionals in these fields only required a moderate fine-tuning of skills (Miller & Rollnick, 2002; Resnicow et al., 2002). In public health and medical settings, often nurses, physicians, dietitians, health educators, and occasionally psychologists and social workers are delivering the MI. For these professions, learning MI may require more significant training to be able to keep the integrity of MI intact (Lambe & Collins, 2009; Miller & Rollnick, 2002; Resnicow et al., 2002). However, Resnicow et al. (2002) reported that MI has potential application across various professional and healthcare settings.

Miller and Rollnick (2002) have found that healthcare providers may have a hard time "buying" into MI due to limited training in it. Many practices choose to use two or three training sessions lasting 1 to 1.5 hours each for their providers and few providers opt to attend additional training and do not want to participate in role-play exercises (Miller & Rollnick, 2002). Some providers find that they have limited time to get trained in MI and cited this as a significant barrier to using MI (Miller & Rollnick, 2002). As a result, providers are satisfied with MI techniques but find them difficult to implement due to lack of confidence (Miller & Rollnick, 2002). However, in other studies providers felt that after just one course in MI they were able to change their daily practice to include MI techniques (Rubak, Sandbaek, Lauritzen, Borch-Johnsen, & Christensen, 2005; Thijs, 2007).

The amount of training needed to be able to confidently and skillfully deliver

MI was mixed in the literature. Soderlund et al. (2009) led focus group interviews with 10 welfare center and school health service nurses that trained and practiced MI for 6 months to identify barriers and facilitators to using MI with overweight and obese children aged 5 to 7 years who were accompanied by their parents. This study found that recognizing the advantages and embracing the spirt of MI is a critical factor in facilitating its use among providers (Soderlund et al., 2009). Thus, there may be more to getting providers to use MI than just the amount of training they have, they have to actually believe in MI and be motivated to use it. Miller and Rollnick (2002) suggested that "providers not primarily schooled in client-centered counseling may be able to learn the basic techniques of MI, but without extensive training they may be unable to achieve the whole that is greater than the sum of its parts" (p. 256).

The spirit of MI requires the provider to facilitate and collaborate with the client instead of the more prescriptive, provider-based, and instructional methods that healthcare providers in medical and public health settings use (Miller & Rollnick, 2002; Rollnick, 2001; Thijs, 2007). This can be difficult for providers who are not comforable with change or adding something new to their practice, as with the case managers and counselors that Berger et al. (2009) studied. Providers such as nurses, advanced practice nurses, dieticians, and physicians are deeply based on using instructional methods and sharing information or educating about how clients can change a health behavior and often times use persuasion as a technique to change behaviors (Miller & Rollnick, 2002). MI is much different in that the information is presented in a neutral way, and the client does the work to interpret the information (Miller & Rollnick, 2002). In order to keep the

integrity of MI intact, providers need to be able to make this change in the way that they do lifestyle counseling.

Jansink et al. (2010) found that nurses found it difficult to adapt their counseling to the stage the client is in and often had too high of expectations for lifestyle change by the client. Part of MI is identifying the stage of change the client is in and then using that information to start applying MI (Shinitzky & Kub, 2001). The two go hand-in-hand and so it is essential that providers be trained in how to identify the stage of change in the client and then also know how to use MI based on that information (Shinitzky & Kub, 2001).

Behavioral Routines

The last theme found in the area of provider barriers was behavioral routines. In general, it is often difficult for people to make a change to their routines. The same was true for the nurses that Jansink et al. (2010) interviewed; when doing lifestyle counseling, these nurses have developed and refined their routine for education and preventive care visits. Changing education or lifestyle counseling visits to involve their clients in decision-making is a big change in routine for many providers and thus is a barrier for them to stay true to the MI spirit (Jansink et al., 2010; Lambe & Collins, 2009). Because providers are used to telling the client what they should do instead of sharing this responsibility, it was found that providers were inclined to take over the responsibilities of the client too quickly when this responsibility should be shared (Jansink et al., 2010).

Litaker, Flocke, Frolkis, and Stange (2005) had 128 primary care physicians rate the importance of five preventative services and their effectiveness, and then they assessed whether or not their patients had received these services to determine if there

was an association between physcians attitudes and the likelihood of their patients to be current for each service. One of the findings from this study was that providers find themselves having a difficult time doing lifestyle counseling due to the competing needs of the client (Litaker, Flocke, Frolkis, & Stange, 2005; Miller & Rollnick, 2002). Many of the clients, who providers see, have other concerns that must be addressed beyond lifestyle counseling and so finding the time and appropriate place in an appointment to do MI can be challenging. Litaker et al. (2005) suggested as a result of their study that several hours of encounter time are needed for preventative care and/or lifestyle counseling. Thus, helping providers to learn how to capitalize on opportunities during appointments with clients to do lifestyle counseling can help providers make better use of visits (Litaker et al., 2005).

Client Barriers

The barriers that clients present to using MI are discussed in this section. The categories of client barriers are client knowledge, attitude, skill, and adherence. The clients in the reviewed studies consisted of adults of all ages, both men and women, and of Dutch, Irish, Australian, American (Caucasian and African American), and Hispanic ethnicities. Jansink et al. (2010) found that most of the barriers identified by the nurses that they interviewed were at the level of the client.

Client Knowledge

The level of client knowledge can be a barrier to successfully using MI to change lifestyle behaviors. Lack of insight of how their behaviors (diet, physical activity, and smoking) affect their health was identified as a barrier to clients making lifestyle changes

by the nurses that Jansink et al. (2010) interviewed. Education is an important part of lifestyle counseling; clients who understand the reason why they should make a lifestyle change will usually be more successful (Jansink et al., 2010).

Understanding other cultures and using interpreters when needed is essential when providing lifestyle counseling. For clients from other cultures, language was found to be a significant barrier to understanding the lifestyle counseling (Jansink et al., 2010). If the client does not understand what the provider is trying to help them do, they will not make the changes and an opportunity will be lost (Jansink et al., 2010).

Clients often get "health" information from their friends, family, and coworkers. This information can be incorrect and getting them to abandon these beliefs and make changes to their health behaviors was found to be a challenge to overcome (Jansink et al., 2010). These clients trust their family and friends, they may not have developed a relationship with the provider, making them more skeptical of the advice they are getting from the provider (Jansink et al., 2010). Making a healthy lifestyle change may be difficult for a person who is surrounded by people who continue their unhealthy lifestyle and do not understand the reason for their friend or family member's desire to change a behavior (Jansink et al., 2010).

Client Attitude

The attitude of clients can also be a barrier to using MI. The attitude of a client toward making lifestyle changes was found to be affected by their culture and age (Jansink et al., 2010). In the same study, other clients were found to have an aversion to change and as a result were unwilling to make changes to their lifestyle behaviors (Jansink et al., 2010). It was felt by the nurses that these clients were seeking excuses

not to give up habits and thus made it difficult for providers to find an opportunity to motivate them to change their behaviors (Jansink et al., 2010).

The clients' expectations about what their visit with their provider should be like can actually be a barrier to providers using MI with them. Clients may be seeking care for managing their hypertension or other chronic health condition and may not be planning on receiving lifestyle counseling during their visit, being that they are not the ones initiating the conversation they may be less interested or willing to address their health behaviors (Miller & Rollnick, 2002). Miller, Marolen, and Beech (2010) led four moderator-led focus groups made up of African-Amercian patients who were 21 to 50 years old who had never particiapted in a MI lifestlyle counseling visit and who receive diabetes care in a rural health center and had them watch an example of an MI consultation on DVD to get their peceptions of the technique. The study indicated that clients were actually more comfortable with more traditional paternalistic approaches where they felt it was the provider's job to tell them what they should do than the client-centered approach of MI (Miller et al., 2010). However, Miller et al. (2010) also reported that clients who preferred the autonomy-supported communication style of MI were more likely to change their nutrition behaviors. The clients' expectations and preferences can influence the effectiveness of MI; Miller et al. (2010) felt that it was not clear from the focus groups if the reason they felt more comfortable with traditional methods of lifestyle counseling was because this what they have become accustomed to over time.

Client Skills

Skills of clients can be a barrier to changing lifestyle behaviors. There are multiple factors that can contribute to a person's ability to make lifestyle changes. Clients will have varying levels of skills, and it will be the provider's job to identify them when using MI so that the provider can individualize the intervention (Jansink et al., 2010).

Jansink et al. (2010) found that many clients have physical and/or financial restrictions that make it difficult for them to make healthy lifestyle changes. For example, it may not be easy for a client with physical disabilities to increase their activity level. Also, it was found that if there is not an affordable option for joining a gym or fitness center it could make it difficult for a client to increase their physical activity (Jansink et al., 2010).

Befort et al. (2008) studied 44 obese African American women who were counseled using MI to examine if MI has any effect on diet and physical activity behaviors. They found that they were no more likely to change lifestyle behaviors than those in the control group counseled with traditional methods (Befort et al., 2008). It has been suggested that MI may not be enough to facilitate lifestyle behavior changes in groups that face several socioeconomic barriers or life stressors, as MI counselors give little attention to problem-solving around relevant barriers encountered while trying to change these behaviors (Befort et al., 2008). Miller et al. (2010) also found that competing priorites and other medical conditions often take priority over physical activity for many clients. More research is needed in the area of the impact of MI across different ethnic, age, and sociodemographic population (Befort et al., 2008; Resnicow et al., 2002).

Some healthcare providers have reported that a client's education level influences their level of motivation to change unhealthy behaviors (Ampt et al., 2009). It was found that clients may be more motivated to make healthy lifestyle changes if they understand the reason behind the need for the change (Ampt et al., 2009). Unfortunately, having less education is associated with being at higher risk for CVD, thus lifestyle counseling is important for this population (Viadro, 2004).

Not all lifestyle changes are created equally some will be more difficult to change than others. Nicotine addiction was found to be a formidable barrier to overcome to helping clients to make a healthy lifestyle change (Jansink et al., 2010). However, changing behaviors such as diet and physical activity can be more difficult for clients because the concepts of abstinence and relapse are less tangible than for example setting a "quit day" for cigarette use (Miller & Rollnick, 2002).

Client Adherence

Adherence is the last theme found in the literature related to client barriers. Adherence is the client's ability to stick to their plan for making healthy lifestyle changes. Jansink et al. (2010) found that lack of immediate results, lack of discipline for maintenance, potential for relapse, and difficult moments such as stressful situations and peer pressure to make unhealthy choices all contribute to decreased adherence of clients to making healthy lifestyle changes.

Some healthcare providers feel that it is difficult for many clients to maintain their commitment to making healthy lifestyle changes, even if they are motivated at the beginning (Jacobsen et al., 2005). Jacobsen et al. (2005) found that providers felt that lack of client adherence is a serious problem. Litaker et al. (2005) had 128 primary care

physicians rate the importance of five preventative services and how effective they felt they were at providing them and then their patients charts were assessed to see if they had received the preventative services to evalute the association between importance and perceived effectiveness in delivering preventative care. One of the findings was that it is important that providers be trained in strategies such as MI so that they can improve their delivery of lifestyle counseling and reduce the number of visits that are necessary to help clients be successful in making healthy lifestyle changes (Litaker et al., 2005).

Practice Barriers

The barriers to using MI that are created by the practice where the healthcare provider works are discussed in this section. The categories of practice barriers are organization of care processes, staff, capacities, resources, and structures (Jansink et al., 2010). The practices in the reviewed studies consisted of Irish, Dutch, Australian, and American general medicine practices and a Swedish welfare center. It is important that providers doing lifestyle counseling be aware of potential barriers presented by the practice where they work so that the providers can help identify ways to keep them from being a barrier.

Organization

The organization of care processes, staff, and capacities was found as an area where barriers exist that prevent providers from doing lifestyle counseling (Jansink et al., 2010; Soderlund et al., 2009). Among the barriers that were identified in this area are lack of time during scheduled appointments and lack of cooperation between the provider doing the lifestyle counseling and the other health providers or ancillary staff (Ampt et

al., 2009; Jansink et al., 2010; Litaker et al., 2005; Miller & Rollnick, 2002; Resnicow et al., 2002). Berger et al. (2010) found that not having adequate computer equipment was associated with providers being less willing to embrace new research-based technologies such as MI into their practice, having adequate computer equipment contributed to them feeling valued by their administrators and they would then come to expect the introduction of other new technologies.

Lack of time due to heavy workloads was found to be a barrier by Lambe & Collins (2009). Rubak, Sandbaek, Lauritzen, and Christensen (2006) did a randomized controlled trial at general practice's in Denmark where 36 general practitioners were assigned to a control group and 29 were assigned to the group that was trained in MI to be used with clients how were newly diagnosed with type 2 diabetes mellitus to assess how well the general practitioners stuck to the MI techniques after a course in it. They found that providers did not think that using MI techniques took more time than traditional methods (Rubak et al., 2006). Lambe and Collins (2009) found that clinicians felt that lifestyle counseling caused little or no increase in the length of a routine visit. VanWormer and Boucher (2004) reported that MI can be used successfully in brief, convenient forms of delivery.

Another aspect of time that was found to be a barrier to clients being successful in changing their health behaviors is the number of sessions they have with their provider (Ampt et al., 2009; Miller & Rollnick, 2002; Resnicow et al., 2002). The greater the depth of the rapport of the client with the provider the more successful the counseling will be, if providers only get one or two sessions with their client, this may not be enough to maximize the effect of the intervention (Miller & Rollnick, 2002). Litaker et al. (2005)

felt that it is important for providers to be well-trained in lifestyle counseling techniques, such as MI, so that the number of visits clients needed to be successful in making changes is decreased.

Resources

It is important for providers doing lifestyle counseling to have access to resources. Having resources to give clients as an adjunct to the lifestyle counseling is part of helping clients be successful. An example of resources that were found to be helpful by Jansink et al. (2010) is a list of local schools and/or physical activity facilities in the area that have exercise programs. It was found that the lack of high-quality client-education materials to be able to provide effective lifestyle counseling was a barrier (Jansink et al., 2010). The absence of these practice tools was found to be an important obstacle to preventative service delivery (Litaker et al., 2005).

Structures

Structure is the last category under practice barriers. An example of a structural barrier is the lack of on-going supervision in practice settings where providers have been trained in MI; the supervision may not be very intensive or rigorous which can result in the incorrect or insufficient use of MI (Miller & Rollnick, 2002). Also, the location of the office where the lifestyle counseling is conducted was found to be a significant barrier by Berger et al. (2010), as there office was on the edge of town where clients don't or can't go to. According to Resnicow et al. (2002), "mastering deeper level of reflection, handling resistant statements or clients, and applying MI across a range of health

behaviors often require a degree of training, practice, and supervision not practical in most health care settings" (p. 449).

Theoretical Framework

The Transtheoretical Model (TTM) and MI form the conceptual framework for this study. The elements of TTM and MI helped to determine where the potential for barriers to using and being successful with MI might exist. Understanding TTM and MI played a critical role in being able to identify and understand why barriers may exist.

Transtheoretical Model of Change

The TTM, developed by Prochaska and DiClemente, consists of five stages that move along a continuum of an individual's desire to change a current behavior (Casey, 2007; Shinitzky & Kub, 2001). It is the responsibility of the provider to determine which stage of change the client is in to be able to determine the next plan of action. The first stage is precontemplation; at this stage either the individual is not interested in change or they are not aware of the need for change and does not plan on changing behavior in the next 6 months (Shinitzky & Kub, 2001). Contemplation is next, here the individual is contemplating change and weighing the advantages and disadvantages of changing behavior and is open to collaboration with a healthcare provider and to making change within the next 6 months (Shinitzky & Kub, 2001). Preparation is the stage where there is a commitment to change in the near future (usually within one month) as they have determined that it will be more beneficial for them to make a behavior change than to not change and are starting to do something about it (Shinitzky & Kub, 2001). Action is

next, and this is where the individual is actually making the behavior change (Shinitzky & Kub, 2001). The last step is mainentence; this starts after 3 to 6 months of successful change in behavior and the individual is now determining how to avoid relapse and stay in this stage (Shinitzky & Kub, 2001).

Motivational Interviewing

MI, developed by Miller and Rollnick, is used once the provider has determined what stage of change a client is in to help them move along the continuum (Rubak et al., 2006). This nondirective counseling method works by helping clients examine and resolve ambivalence about making a change in their health behaviors (Ruback et al., 2006; White, Gazewood, & Mounsey, 2007). There are two phases to MI: Phase I consists of building a therapeutic relationship and Phase II consists of helping the client move along the stages of change to ultimately changing their behavior (Shinitzky & Kub, 2001).

There are five general principles of MI. The first is expressing empathy by understanding, accepting, and by being a reflective listener (Casey, 2007; Shinitzky & Kub, 2001). Next is to develop a discrepancy between the client's current behavior and their desired goals: the goal is to get the client to identify the reasons for change (Casey, 2007; Shinitzky & Kub, 2001). Argumentation, the next principle, should be avoided by not judging and viewing resistance as a signal to change strategies (Shinitzky & Kub, 2001). Rolling with resistance is the next principle; it is important to collaborate and welcome new perceptions or solutions (Casey, 2007; Shinitzky & Kub, 2001). Lastly,

the provider should encourage and support self-efficacy; they should do this by being optimistic and hopeful that change is possible (Casey, 2007; Shinitzky & Kub, 2001).

Summary of Themes, Strengths and Gaps in the Literature

Research identifying barriers to lifestyle counseling to help clients make changes to diet, physical activity, and smoking has been done using mainly qualitative research methods. Some studies interviewed clinicians with sample sizes of 5 to 185, while other studies interviewed clients with sample sizes of 31 to 44. There was a good amount of research assessing the barriers that providers perceive to doing lifestyle counseling but the research assessing the clients view of what barriers there are was limited.

Many of the same provider, client, and practice barrier themes emerged in these studies. The majority of the barriers that the providers identified were client-based, such as lack of knowledge on healthy lifestyles, cultural or ethnic barriers, and competing financial or physical demands (Ampt et al., 2009; Berfort et al., 2008; Jansink et al., 2010; Miller et al., 2010). More research is needed in the area of the impact of MI across different ethnic, age, and sociodemographic populations (Befort et al., 2008; Resnicow et al., 2002). Being aware of the barriers to using MI to help clients make healthy lifestyle changes will help providers to be able to prepare for the session and hopefully be more successful at maintaining the spirit of MI.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

The purpose of this study was to determine if healthcare providers perceived any barriers in utilizing MI techniques while doing lifestyle counseling with the participants of the Sage*Plus* program. The research questions for this study were:

1. Do healthcare providers perceive barriers to using motivational interviewing techniques when doing Sage*Plus* lifestyle counseling?
2. When doing Sage*Plus* lifestyle counseling, what are the five most significant barriers healthcare providers perceive to using motivational interviewing techniques?
3. When doing Sage*Plus* lifestyle counseling, what are the five least significant barriers that the healthcare providers perceive to using motivational interviewing techniques?

This chapter presents the design, sample and setting, ethical considerations, tools, data collection, data analysis, and limitations to the method for determining the provider identified barriers to using MI.

Design

This study utilized a descriptive quantitative design that guided data collection and analysis. Descriptive studies are designed to learn about an area of interest or specific topic as it is currently and can be used to identify any problems (Burns & Grove, 2009). The strength of a descriptive design is that it allows a researcher to gather data that provides a picture of the phenomena of concern; this data can then be used for further research (Burns & Grove, 2009). The weakness of a descriptive design is that it can only describe the data that it does not allow for testing so there is no statistical significance.

Sample and Setting

The sample consisted of the healthcare providers (physician, NP, PA, or RN) who agreed to participate in the MDH Sage*Plus* program at their respective clinics. These providers should be doing lifestyle counseling while attempting to use and stay true to the spirit of MI with the Sage*Plus* clients. It is assumed that these providers attended the MDH MI continuing education training sessions to become and stay proficient in MI. Based on a list prepared by the MDH of providers who participate in Sage*Plus* clinics, the goal was to assess up to 22 providers.

The setting was the 14 clinics throughout Minnesota that were participating in the MDH Sage*Plus* program. Of the 14 clinics, 11 were selected by the MDH for inclusion. There were 22 healthcare providers (physician, NP, PA, or RN) who were engaging in lifestyle counseling in these selected clinics during this time. The client population that

was seen by these providers in the Sage*Plus* program were women between the ages of 40 and 64 years old, who were enrolled in the Sage*Plus* program.

Ethical Considerations

Institutional Review Board (IRB) permission was obtained from the MDH and Minnesota State University, Mankato (see Appendices A and B) prior to data collection. A minimum of three days before data collection potential participants were sent two copies of the informed consent form (see Appendix C). Potential participants were encouraged to review the informed consent prior to the date of data collection. The informed consent described the intent of the study, benefits, potential risk to them, and their rights regarding participation. If the potential participant agreed to participate in the study, they signed one copy of the informed consent and returned it to the researcher while retaining the other copy for their records. On the day of data collection, the researcher verbally reviewed, in detail, the informed consent with each potential participant.

To protect confidentiality an alpha-numeric code was used for data identification. With MDH's desire to track Sage*Plus* providers' use of MI, the alpha numeric coded information carried the risk for individualized data disclosure and has the potential for negative ramifications by MDH. The key to the alpha numeric code will be kept on a password protected computer by the researchers. Consent forms will be stored in the primary researchers' locked office for two years following completion of this study.

Collected data will be stored in a password protected computer by the researchers.

Only the researchers and the MDH will have access to the collected data. No Sage*Plus* client data was collected.

Tools

The tool used for this study was the Preventive Medicine Attitudes and Activities Questionnaire (PMAAQ) developed by Yeazel at the University of Minnesota Department of Family Practice and Community Health. Permission was obtained from Yeazel (see Appendix D) to use the PMAAQ and to use only the items pertinent to this study, add more items that were needed to answer the questions in this study, as well as to make changes to the wording in the questions. The purpose of the PMAAQ is to obtain information about the knowledge, attitudes, and beliefs of clinicians' about preventative medicine activities (Yeazel, Bremer, & Center, 2006).

The original questionnaire contained 85 items. For this study, 21 relevant items were selected from the PMAAQ and 15 other items were added that were specific to barriers to doing lifestyle counseling (see Appendix E). Items 7, 11, 12, 15, and 16 used a 5-point Likert scale ranging from *strongly agree* = 1 to *strongly disagree* = 5. Items 8, 9, 10, 13, 14, 17, 18, 19, and 20 used a 5-point Likert scale ranging from *strongly disagree* = 1 to *strongly agree* = 5. Items 21 through 36 used a 5-point Likert scale that ranged from *not significant* = 1 to *very significant* =5. All of tool's original eight subscales were internally consistent. Reliability measured by the Cronbach coefficient alpha was 0.74 to 0.98 (Yeazel et al., 2006). This evaluation of PMAAQ's reliability and validity testing was conducted by Yeazel et al. (2006) and was found to be acceptable.

A barrier to using MI to do lifestyle counseling is any factor that compromises adherence to or integrity of the MI spirit. A barrier to using MI was defined as a score of 2 or higher on a 5-point Likert scale on the *barriers* and on the *to what extent do you agree* subscales of the PMAAQ, the higher the score the more significant the barrier was. In addition, providers were given a demographic questionnaire with 11 questions (see Appendix F). The demographic questions were age, sex, educational level, years of experience, employment information, profession, use of MI, and length and type of previous MI training.

Data Collection

This study was part of a larger project evaluating the use of MI in the Sage*Plus* lifestyle counseling appointments. Data collected for this study was gathered at the same time as data for two other branches of the overarching study. The team of student researchers collected data for each other. Each researcher collected data at three or four clinics from a list of clinics and potential participants that was received from the MDH. Clinic managers were contacted to schedule dates and times that were mutually agreeable to the clinic, clinic providers, and researcher when Sage*Plus* appointments were scheduled. The student researcher identified themselves as a graduate nursing student from Minnesota State University, Mankato to the clinic manager when the call was made to schedule a time to come. The student researcher explained that the research studies that were being conducted were for the MDH and would include a demographic questionnaire, the modified PMAAQ, and observation of providers doing the Sage*Plus* intervention appointments. If the healthcare provider chose to participate, the informed

consent, demographic questionnaire, and modified PMAAQ were sent to them a minimum of three days prior to scheduled data collection. They were encouraged to complete the demographic and modified PMAAQ questionnaires at their convenience and to insert them into the provided envelope prior to the scheduled data collection time. If the providers were unable to complete the requested demographic and modified PMAAQ questionnaires prior to researcher's scheduled visit, the Sage*Plus* healthcare providers were given the opportunity to complete the questionnaires either while the researcher was there or at a time of their convenience within the next five days and then insert, seal, and mail them in the addressed and stamped envelope provided by the researchers.

Data Analysis

Data was analyzed using Statistical Package for the Social Sciences software (SPSS), version 12. Frequency counts, means, minimums, maximums, and standard deviations were calculated for each item on the modified PMAAQ questionnaire to determine which barriers interfered the most and least with the providers' ability to use MI techniques.

Limitations

A limitation to this study was the sample size of up to 22 potential participants. Another limitation was that the validity and reliability of the modified PMAAQ was unknown due to the modifications made to it for this study. Also, the PMAAQ was

developed to be used with physicians in preventive medicine in primary care. In this study the PMAAQ was given to a range of healthcare providers in addition to physicians, it was also given to advanced practice nurses, registered nurses, licensed practical nurses, dieticians, and social workers who were providing SagePlus lifestyle counseling. Lastly, the culture of each individual clinic could affect which, if any, barriers are perceived by the healthcare providers using MI for lifestyle counseling.

CHAPTER IV

ANALYSIS OF DATA

The purpose of this study was to determine if healthcare providers perceived any barriers in utilizing MI techniques to do lifestyle counseling with the clients in the Sage*Plus* program. The MDH generated a list of healthcare providers who are doing lifestyle counseling in the clinics that are participating in the Sage*Plus* program. This chapter has a demographic profile of the healthcare providers and the results of the modified PMAAQ that was administered to the participants from March 4th, 2011 until March 17th, 2011.

Description of the Sample

The sample was comprised of 16 healthcare professionals who provide Sage*Plus* lifestyle counseling interventions in clinics that participate in the MDH funded Sage*Plus* program. Over two weeks of data collection, 16 of the potential 22 healthcare provider participants carrying out Sage*Plus* lifestyle counseling interventions completed the questionnaires. There were two providers on leave during the data collection time, two that declined to participate, one that was unable to get a time scheduled for the student

researcher to come to gather data, and one that did not return calls or electronic messages. These 16 providers who participated in this study provide Sage*Plus* lifestyle counseling at 8 of the 11 clinics selected by MDH to be evaluated in this study.

The healthcare providers had a wide range of ages and years of experience in health care. The age of the providers ranged from 25 to 66 with a mean age of 45.

There were 15 females and 1 male. The highest degree completed by each provider ranged from an associate's degree to a master's degree. Employment status ranged from volunteers to paid employees and casual on-call to full-time; with 6.3% being casual on-call, 12% were volunteers, 31.3% being part-time, and 50% being full-time. The number of years working in healthcare ranged from 3 to 35 years with a mean of 18 years. The number of years working with Sage*Plus* clients ranged from 0.5 to 10 years with a mean of 3 years. The number of years that the providers have been at their current clinics ranged from 0.75 to 16 years with a mean of 5 years.

Table 4.1

Participant Demographics

	N	%	Mean	SD	Range
Age	15	-	45	13.73	25-66
Years working in Healthcare	16	-	18	11.27	3- 35
Years working Sage*PLUS*	16	-	3.01	2.69	.5 – 10
Years at current clinic	14	-	5.01	4.46	.75- 16
Gender					

Male	1	6.3	-	-	-
Female	15	93.7	-	-	-
Employment					
Full-time	8	50	-	-	-
Part-time	5	31.3	-	-	-
Casual Call	1	6.3	-	-	-
Other	2	12.5	-	-	-
Highest Degree Completed					
RN (baccalaureate)	5	31.3	-	-	-
RN (diploma/associate)	1	6.3			
LPN	1	6.3	-	-	-
CHW	1	6.3	-	-	-
MPH	1	6.3	-	-	-
BA	3	18.8	-	-	-
BS	1	6.3	-	-	-

Research Question 1

The first research question was: Do healthcare providers perceive barriers to using motivational interviewing techniques when doing Sage*Plus* lifestyle counseling? The modified PMAAQ listed 29 possible barriers. The providers indicated whether or not the barrier was significant, and if it was significant, they indicated to what extent it was a barrier. The answer to this question would be yes if the mean of the scores was higher than a 1.00, indicated that the barrier had some level of significance. The providers do perceive barriers to using MI when doing lifestyle counseling; all 29 of the possible barriers had a mean score over 1.00. The mean scores of the barriers to using MI to do lifestyle counseling ranged from 1.25 to 4.06.

Item 36 on the modified PMAAQ was a place for the healthcare providers to write in any other barriers that they have identified in using MI to do lifestyle counseling that were not asked about in the PMAAQ. Additional barriers listed on the PMAAQ by the providers were mainly client-based. The main themes of barriers identified by the

providers are: that Sage*Plus* participants need to overcome other obstacles in their lives in order to be able to make lifestyle changes, cultural barriers, and inadequate resources. They felt that the other problems in the lives of their clients take priority over their concern for a healthier lifestyle; some examples given were a loss of job, pain, lack of resources, and lack of money for food and walking shoes. Other providers felt that the language and cultural barriers were the biggest challenge, one provider felt that she had little credibility in eyes of women from Latin America because "they view registered nurses as experts in the areas of glucose and cholesterol and they will think that the provider does not know anything if we ask they ask questions as and do not instruct". It was also noted that it is often hard to follow-up with clients because they frequently move, don't always have a phone, and occasionally get sent back to their countries that they have moved to Minnesota from. Lastly, it was felt that MI doesn't work as well with low income and minority clients; they would benefit from simple teaching aids, more Spanish education materials, and more smoking cessation resource

Table 4.2 *Ranking of Barriers to Lifestyle Counseling*

Rank	Item	Mean

1	13. It is difficult for patients to make lifestyle changes	4.06
2	23. Lack of patient interest in prevention	3.94
3	27. The patient's physical or financial restrictions	3.8
4	24. Lack of insight of patient on importance of making healthy lifestyle changes	3.56
5	28. Education level of patient	3.56
6	19. It is difficult for patients to adhere to their commitment To making lifestyle changes, despite being motivated at the start	3.5
7	30. Cultural differences between doctors and patients	3.5
8	20. Doing lifestyle counseling using MI takes longer than traditional methods	3.44
9	21. Lack of time	3.44
10	22. Personal motivation	3.33
11	9. I am less effective than professional counselors in getting patients to quit smoking	3.31
12	29. Communication difficulties with patients	3.31
13	17. It has been difficult to change my routine of lifestyle counseling to include MI	3.13
14	15. I feel I have had a sufficient amount of training in MI	3.00
15	35. Number of visits with each patient	2.75
16	10. Patients without symptoms will rarely change their behavior on the basis of my advice	2.73
17	31. Lack of knowledge on how to use MI for lifestyle counseling	2.69
18	25. Patients belief of what their friends & family and family tell them over what you say	2.67
19	32. Insufficient training on how to use MI	2.67
20	18. Patients prefer being told what to do over helping to come up with a plan themselves.	2.47
21	33. Insufficient knowledge of nutrition	2.44
22	26. Lack of proper patient education materials	2.38
23	34. Fear of sounding judgmental	2.31
24	14. It is difficult to understand why patient can't meet the goals they have set with you.	2.25
25	11. Most patients try to change their lifestyle if I advise them to do so.	2.13
26	8. For most patients health education does little to promote their adherence to a healthy lifestyle.	2.06
27	16. I am able to identify the stage of change the patient is in to start applying MI.	1.81
28	7. Smoking cessation counseling is an effective use of my time as a provider.	1.56
29	12. I am satisfied in my current job.	1.25

Research Question 2

The second research question was: When doing Sage*Plus* lifestyle counseling, what are the five most significant barriers that healthcare providers perceive to using motivational interviewing techniques? Table 4.3 lists the five most significant barriers in descending order with the most significant barrier listed first. The last two barriers in the top five are tied with the mean of 3.56. For item 13 a score could range from a 1, which meant that the provider strongly disagreed with the statement, to a score of 5, which meant that they strongly agreed. For items 23, 24, 27, and 28 scores could range from a 1, which meant that the provider thought that the item was not significant as a barrier to effective use of MI, and a score of a 5, which meant that the item was a very significant barrier. For all item's scores could range from a 1, this meant that the barrier was not significant, to a 5, which meant that the barrier was very significant.

Table 4.3

Top 5 Significant Barriers to Lifestyle Counseling

Rank	Item	N	Minimum	Maximum	Mean	SD
1	13. It is difficult for patients to make lifestyle changes	16	2	5	4.06	.799
2	23. Lack of patient interest in prevention	16	3	5	3.94	.854
3	27. The patient's physical or financial restrictions	15	1	5	3.8	1.265
4	24. Lack of insight of patient on importance of making healthy lifestyle changes	16	2	5	3.56	1.209
5	28. Education level of patient	16	1	5	3.56	1.263

Research Question 3

The third research question is: When doing Sage*Plus* lifestyle counseling, what are the five least significant barriers that the Sage*Plus* healthcare providers perceive to using motivational interviewing techniques? Table 4.4 lists the five least significant barriers in ascending order with the least significant barrier listed last. For item 8 a score could range from a 1, which meant that the provider strongly disagreed with the statement, to a score of 5, which meant that they strongly agreed. The opposite was true for items 7, 11, 13, and 16 where scores could range from a 1, which meant that the provider strongly agreed with the item, and a score of a 5, which meant that they strongly disagreed. For all items scores could range from a 1, this meant that the barrier was not significant, to a 5, which meant that the barrier was very significant.

Table 4.4

Least 5 Significant Barriers to Lifestyle Counseling

Rank	Item	N	Minimum	Maximum	Mean	SD

1	12. I am satisfied in my current Job	16	1	2	1.25	.447
2	7. Smoking cessation counseling is an effective use of my time as a provider	16	1	3	1.56	.629
3	16. I am able to identify the stage of change the patient is in to start applying MI	15	1	4	1.81	.834
4	8. For most patients health education does little to promote their adherence to a healthy lifestyle	16	1	4	2.06	1.124
5	11. Most patients try to change their lifestyle if I advise them to do so	16	1	3	2.13	.619

Summary

Although the goal sample size of 22 was not met, 16 questionnaires were completed for a return rate of 73% during the 2-week data collection period. There was a wide range in age, educational preparation, and years working in health care and with the Sage*Plus* program. The frequency counts, means, minimums, maximums, and standard deviations calculated from the PMAAQ indicate that the healthcare providers do perceive barriers to doing lifestyle counseling and that some are more significant than others. The most significant barriers all being client-based barriers; Sage*Plus* clients have difficulty making lifestyle changes, have little interest in prevention, have physical and financial restrictions, lack of insight on the importance of making healthy lifestyle changes, and the education level of the patient.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

The purpose of this study was to determine if healthcare providers perceived any barriers in utilizing MI techniques to do lifestyle counseling with the participants of the Sage*Plus* program. The research questions for this study were:

1. Do healthcare providers perceive barriers to using motivational interviewing techniques when doing Sage*Plus* lifestyle counseling?
2. When doing Sage*Plus* lifestyle counseling, what are the five most significant barriers that healthcare providers perceive to using motivational interviewing techniques?
3. When doing Sage*Plus* lifestyle counseling, what are the five least significant barriers that healthcare providers perceive to using motivational interviewing techniques?

This chapter presents the background literature, method, results, discussion and conclusions, limitations, implications for practice, and implications for research.

Discussion and Conclusions

In this section each research question will be presented along with a discussion of the findings that pertain to that question as well as the conclusions that were formed. At the end the theoretical framework of MI is addressed.

Research Question 1

The first research question was: Do healthcare providers perceive barriers to using motivational interviewing techniques when doing Sage*Plus* lifestyle counseling? It was found that the Sage*Plus* providers do perceive barriers to doing lifestyle counseling. All of the barriers listed in the PMAAQ had some level of significance, with mean scores ranging from 1.25 to 4.06, where 1 is *not significant* and 5 is *very significant* (see Appendix H).

The range of barriers to lifestyle counseling in the Sage*Plus* program fell into the categories that were identified in the literature as provider, client, and practice barriers. All of the literature reviewed indicated that there were barriers that needed to be overcome in order to effectively deliver lifestyle counseling in the variety of settings where the studies occurred. Thus, it was expected that the healthcare providers would be able to identify barriers to using MI to do lifestyle counseling. What was not expected was that they would all hold some level of significance. It is possible that because the Sage*Plus* clients are a low income and ethnically diverse population the number of barriers for the providers to overcome is larger than it would be for an educated middle-class population.

The healthcare providers were able to write in other barriers that they have identified to using MI to do the Sage*Plus* lifestyle counseling. There were three common themes that were identified; the clients have too many financial and/or physical barriers and stressors that take priority for them over healthy lifestyle changes, cultural barriers, and the need for different educational resources for the clients. It was felt that MI might not be the best method of doing lifestyle counseling for the Sage*Plus* clients. It appears that the majority of the barriers identified by the providers are centered on the lack of

ability of the clients to overcome the barriers in their lives that are getting in the way of them to be able to make the healthy lifestyle changes, rather than a lack of motivation by the client. This sentiment was echoed by Befort et al. (2008) and Jacobsen et al. (2005), providers in these studies also felt that the circumstances in clients' lives prevent them from making lifestyle changes despite being highly motivated at the beginning. This is different than what was found by Jansink et al. (2010) and Miller et al. (2010), in these studies the providers felt that the clients lacked the motivation needed to make lifestyle changes. Both Befort et al. (2008) and Miller et al. (2010) both looked at the African American population yet came up with different conclusions.

Research Question 2

The second research question was: When doing Sage*Plus* lifestyle counseling, what are the five most significant barriers that healthcare providers perceive to using motivational interviewing techniques? The top five most significant barriers identified by SagePlus providers doing lifestyle counseling had a mean score of 3.56 to 4.06, where 1 is *not significant* and 5 is *very significant*. Thus, the top five barriers ranged from somewhat significant to very significant.

The top five most significant barriers were all at the level of the client. This was expected as the majority of the studies in the literature also found that providers most commonly identified that the most significant barriers for them to overcome when doing lifestyle counseling were also at the level of the patient. The Sage*Plus* providers indicated that the most significant barrier was that it is difficult for clients to make lifestyle changes. According to the literature review, this could be due to a lack of insight into how their behavior affects their health, their attitudes toward wanting to make

lifestyle changes, cultural differences, lack of education, physical or financial restrictions, and competing priorities such as managing other medical conditions (Jansink et al., 2010; Miller at al., 2006; Miller & Rollnick, 2002). The other four barriers in the top five provide some insight into why the Sage*Plus* providers feel that it is difficult for their clients to make lifestyle changes: Lack of client interest in prevention, the client's physical and/or financial restrictions, lack of insight by the client on the importance of making healthy-lifestyle changes, and the education level of the client. Interestingly, these agreed with prior research.

The clients receiving lifestyle counseling were low income women between the ages of 40 and 64 who were under- or uninsured. Because they are low income, they are under significant financial restraints making it difficult for them to buy healthy foods and even afford to buy decent shoes for walking and exercise. Often, even though these women probably would like to be healthier, they have so many other competing demands on them that they feel are more important such as finding a job or a job that pays better, taking care of their families, and finding a way to the pay bills (Miller et al., 2010). Lastly, these women may be low income because they have a lack of education which is also a barrier to understanding the importance of making healthy-lifestyle choices. The reason that the Sage*Plus* providers have indicated that the barriers at the client level are the most significant is probably due to the characteristics of the population. Another reason that the Sage*Plus* providers might be placing the most significance at the client level is because they were not using MI techniques correctly. MI is designed to be patient-centered and is used to help clients resolve ambivalence.

The expectation would have been to see cultural differences between the healthcare provider and client to be in the top five barriers identified by the providers doing the Sage*Plus* lifestyle counseling. However, it was number 7 out of the 29 barriers identified. The expectation would have been for it to be at the top because many of the Sage*Plus* clients are minorities. In the literature, understanding other cultures was found to be essential and language was found to be a significant barrier to the client being able to understand the lifestyle counseling (Jansink et al., 2010). This could have been because some of the providers are bilingual and are minorities themselves, allowing them to be more understanding of how to approach the lifestyle counseling with this population.

Research Question 3

The third research question was: When doing Sage*Plus* lifestyle counseling, what are the five least significant barriers that healthcare providers perceive to using motivational interviewing techniques? The five least significant barriers identified by providers doing Sage*Plus* lifestyle counseling had a mean score of 1.25 to 2.13, where 1 is not significant and 5 is very significant. Thus, the bottom five barriers ranged from just significant to minimally significant.

There really is no common theme to the least significant barriers identified by the healthcare providers doing Sage*Plus* lifestyle counseling. One study found that if providers were not satisfied in their jobs that they put less effort into preventative health care and learning new technologies like MI to do lifestyle counseling (Berger et al., 2009). From what the providers indicated on the PMAAQ, they were satisfied in their jobs and so job satisfaction was the least significant barrier identified with a mean of just

barely significant at 1.25. Comparing the results of this study with the literature, it can be induced that the providers care about preventative health care and should be open to using new techniques such as MI.

It was surprising that among the five least significant barriers identified by the healthcare providers there were two client-related barriers because all of the five most significant barriers were client-related. The providers indicated that they somewhat or strongly agreed that most clients try to change their lifestyle if they advise them to do so and that they mostly somewhat or strongly disagree that for most clients' health education does little to promote their adherence to a healthy lifestyle. However, for the latter item the standard deviation was 1.124 because three providers somewhat agreed with the item. From these results it seems that the providers feel that their clients have many barriers to overcome to be successful in making lifestyle behavior changes but that they feel that they at least try to make changes and that they think that the information they provide them is useful.

The healthcare providers agreed that smoking cessation counseling is an effective use of their time as a provider, with only one provider indicating that they neither agreed nor disagreed with this statement. The literature was mixed on this topic. Jansink et al. (2010) found that nicotine addiction was difficult for providers to help their clients overcome whereas Miller and Rollnick (2002) suggested that helping clients with smoking cessation was easier than diet or physical activity changes because the concepts of abstinence and relapse are more tangible, for example setting a “quit day”. If the providers think that smoking cessation counseling is an effective use of their time, then they will be more likely to initiate this with their clients. However, one provider wrote

on the PMAAQ that they wished that they had more patient education materials on smoking cessation.

Theoretical Foundation

One of the barriers to doing Sage*Plus* lifestyle counseling that landed in the least five significant barriers identified by the healthcare providers was the ability to identify the stage of change the client is in. Of the 16 providers who answered the question, 14 either strongly or somewhat agreed that they are able to identify the stage of change, 1 neither agreed nor disagreed, and 1 somewhat disagreed. Being able to identify the stage of change of the client is essential to utilizing MI techniques, 14 of the providers felt that they could do this (Shinitzky & Kub, 2001). The two providers who were unsure of how to do this would benefit from more training in MI so that they can be effective in using the techniques.

Other interesting findings in regard to MI were that: Doing lifestyle counseling takes longer than traditional methods had a mean of 3.44, difficulty changing routine to include MI had a mean of 3.13, and feeling that they have had a sufficient amount of MI training had a mean of 3.00. The mean score of a 3 is right in the middle of the level of significance of the barrier. It appears that even though the providers felt that their level of knowledge and proficiency in MI was somewhat of a barrier, they were not in the top 5 most significant barriers, so the amount of training in MI could be improved so that it becomes more natural for them to use the techniques which should help reduce the extra time they perceive it takes.

Scope and Limitations

The generalizability of these findings is limited. The client population of the healthcare providers that were studied is limited to specific group of people and thus the results can only be generalized to providers who work with this group; low income, under- or uninsured 40 to 64 year old women. There are WISEWOMAN programs throughout the United States that have programs similar to Sage*Plus* and thus these findings could be helpful for them when they evaluate their programs. The providers in this study were diverse but there were no advanced practice nurses or physicians who completed the questionnaires (see Appendix G). Thus, the findings cannot be generalized to all types of providers.

There are some limitations to this study. One of the limitations is the sample size of 16 healthcare providers. A larger sample size would have increased the generalizability of the study and getting all 22 of the providers to complete the questionnaires would have made for a more complete program evaluation of the use of MI to do lifestyle counseling with the Sage*Plus* participants. Another limitation to this study is that the validity and reliability of the PMAAQ was compromised when it was modified by the changing of some of the wording and the addition of new items. Also, the PMAAQ was not developed to assess specifically the barriers to the use of MI for lifestyle counseling.

Implications for Practice

The information gained from this study can be used to make improvements on how lifestyle counseling is currently done to help the participants of the Sage*Plus* program make healthy lifestyle changes. The findings of this study can be used to

improve the continuing education course offered to these providers. The most significant barriers indentified by the healthcare providers all had to do with the obstacles that the Sage*Plus* clients had to overcome in order to make healthy-lifestyle changes and not their lack of motivation or ambivalence about needing to make changes. Motivational Interviewing is a good technique to help motivate clients to make lifestyle changes, but with this population it would be useful to use it in addition to other techniques that would help the Sage*Plus* participants eliminate some of the obstacles in their way of making changes. Also, extra training in MI would be helpful for many of the providers to feel more competent in using MI and could result in reducing or eliminating some of the barriers that they have identified to effectively using MI techniques. As a result, the Sage*Plus* clients might have more success in changing their lifestyle behaviors.

Implications for Research

Future research could look at the ethnicity and languages spoken by the providers doing the lifestyle counseling and compare it to how effective they are in helping clients make lifestyle changes of their same ethnicity. It would also be useful to look at the efficacy of having a provider that speaks the same language as the client, compared to a provider who needs to rely on the services of an interpreter during the intervention. Providers of different ethnicities might identify different barriers to lifestyle counseling, controlling for this bias would be useful. Data was collected on how effective the providers thought they were in changing their client's behavior and how important they thought it was to counsel clients on these behaviors: exercise, healthy diet, and smoking cessation. It would be useful to see if there is a correlation between the importance of

lifestyle counseling to a provider and their effectiveness. It would also be useful to compare the proficiency of a provider in using MI techniques for lifestyle counseling and the number of barriers that they perceive. It would also be interesting to know which barriers are the most significant for someone who is proficient at MI.

The ranking of the barriers in this study suggests that despite the client being motivated to make lifestyle changes they are not able to overcome the numerous socio-economic barriers or life stressors that they are faced with. Further research looking into what it is about these barriers and stressors in the Sage*Plus* participants' lives that prevents them from making healthy lifestyle changes, as well as how healthcare providers can help to eliminate some of these barriers and stressors needed. Lastly, more research looking into which populations MI would work best with and then looking at what it is that prevents MI from being useful in certain population would be useful.

Summary

Healthcare providers have identified that there are several barriers that they need to overcome to be effective in using MI techniques to do Sage*Plus* lifestyle counseling. The most significant barriers identified are at the level of the client. The least significant barriers have to do with the attitude of the provider toward doing lifestyle counseling, the importance of lifestyle counseling, and their satisfaction with their job. The providers appear to be motivated to do lifestyle counseling; they value the importance of doing lifestyle counseling, and believe that their clients want to make lifestyle changes. They just feel that their clients have too many obstacles to overcome to be able to make lifestyle changes. By giving the healthcare providers more training in MI, in addition to

the use of other techniques or tools to help the Sage*Plus* participants eliminate or reduce some of the barriers and stressors in their lives that are getting in the way of them being able to make healthy-lifestyle changes, the MDH can be more successful at not only helping the providers use the MI techniques more effectively but will also give them other tools to help the participants make changes.

References

Ampt, A. J., Amoroso, C., Harris, M. F., McKenzie, S. H., Rose, V. K., & Taggart, J. R. (2009). Attitudes, norms and controls influencing lifestyle risk factor management in general practice. *BMC Family Practice, 10*(59), 1-8. doi: 10.1186/1471-2296-10-59

Befort, C. N., Nollen, N., Ellerbeck, E. F., Sullivan, D. K., Thomas, J. L., & Ahluwalia, J. S. (2008). Motivational interviewing fails to improve outcomes of a behavioral weight loss program for obese African American women: A pilot randomized trial. *Journal of Behavioral Medicine*, *31,* 367-377. doi: 10.1007/s10865-008-9161-8

Berger, L. K., Otto-Salaj, L. L., Stoffel, V. C., Hernandez-Meier, J., & Gromoske, A. N. (2009). Barriers and facilitators of transferring research to practice: An exploratory case study of motivational interviewing. *Journal of Social Work Practice in the Addictions, 9*(2), 145-162. doi: 10.1080/15332560902806199

Burns, N., & Grove, S. K. (2009). *The practice of nursing research.* St. Louis, MO: Saunders.

Casey, D. (2007). Using action research to change health-promoting practice. *Nursing and Health Sciences, 9,* 5-13. doi: 10.1111/j.1442-2018.2007.00297.x

Centers for Disease Control and Prevention (CDC). (2010, August 26). *WISEWOMAN- Well- Integrated Screening Evaluation for Women Across the Nation.* Retrieved from: http://www.cdc.gov/wisewoman/

Duaso, M. J., & Cheung, P. (2002). Health promotion and lifestyle advice in a general practice: What do clients think? *Journal of Advanced Nursing, 39*(5), 472-479.

Farrell, M. H., Hayashi, T., Loo, T. K., Rocha, D. A., Sanders, C., Hernandez, M., & Will, J. C. (2009). Clinic-based nutrition and lifestyle counseling for Hispanic women delivered by community health workers: Design of the California WISEWOMAN study. *Journal of Women's Health, 18*(5), 733-739. doi: 10.1089/jwh.2008.0871

Feresu, S. A., Zhang, W., Puumala, S. E., Ullrich, R., & Anderson, J. R. (2008). The frequency and distribution of cardiovascular disease risk factors among Nebraska women enrolled in the WISEWOMAN screening program. *Journal of Women's Health, 17*(4), 607-617. doi: 10.1089/jwh.2007.0438

Finkelstein, E. A., Khavjou, O., & Will, J. C. (2006). Cost-effectiveness of WISEWOMAN, a program aimed at reducing heart disease risk among low income women. *Journal of Women's Health, 15*(4), 379-389.

Finkelstein, E. A., Wittenborn, J. S., & Farris, R. P. (2004). Evaluation of public health demonstratioan programs: The effectiveness and cost-effectiveness of WISEWOMAN. *Journal of Women's Health, 13*(5), 625-633.

Jacobsen, E. T., Rasmussen, S. R., Christensen, M., Engberg, M., & Lauritzen, T. (2005). Perspectives on lifestyle intervention: The views of the general providers who

have taken part in a health promotion study. *Scandinavian Journal of Public Health, 33*(4), 4-10. doi: 10.1080/14034940410028181

Jansink, R. B., Braspenning, J., van der Weijden, T., Elwyn, G., & Grol, R. (2010). Primary care nurses struggle with lifestyle counseling in diabetes care: A qualitative analysis. *BMC Family Practice, 11*(41), 1-7.

Khare, M. M., Huber, R., Carpenter, R. A., Balmer, P. W., Bates, N. J., Nolen, K. N., . . . Will, J. C. (2009). A lifestyle approach to reducing cardiovascular risk factors in underserved women: Design and methods of the Illinois WISEWOMAN program. *Journal of Women's Health, 18*(3), 409-419. doi: 10.1089/jwh.2008.0911

Lambe, B., & Collins, C. (2009). A quantitative study of lifestyle counselling in general practice in Ireland. *Family Practice, 27,* 219-223. doi: 10.1093/fampra/cmp086

Litaker, D. F., Flocke, S. A., Frolkis, J. P., & Stange, K. C. (2005). Physicians' attitudes and preventive care delivery: Insights from the DOPC study. *Preventive Medicine, 40,* 556-563. doi: 10.1016/j.ypmed.2004.07.015

Mason, P. (2008). Motivational interviewing. *Practice Nurse, 35*(3), 43-48.

McCarley, P. (2009). Client empowerment and motivational interviewing: Engaging clients to self-manage their own care. *Nephrology Nursing Journal, 36*(4), 409-413.

Miller, S. M., Marolen, K. N., & Beech, B. M. (2010). Perceptions of physical activity and motivational interviewing among rural African-American women with type 2 diabetes. *Women's Health Issues, 20,* 43-49. doi: 10.1016/j.whi.2009.09.004

Miller, W., & Rollnick, S. (2002). *Motivational Interviewing: Preparing People for Change.* New York, NY: The Guilford Press.

Minnesota Department of Health. (2009, June 16). *SagePlus: Minnesota's cancer screening and heart health program*. Retrieved from http://www.health.state.mn.us/divs/hpcd/ccs/sageplus/sageplus.htm

Minnesota Department of Health. (2010). *SagePlus: Eligibility*. Retrieved from http://www.health.state.mn.us/divs/hpcd/ccs/sageplus/s_plus_eligib.htm

Moyers, T. M., Martin, T., Manuel, J. K., Hendrickson, S. M., & Miller, W. R. (2005). Assessing competence in the use of motivational interviewing. *Journal of Substance Abuse Treatment, 28,* 19-26. doi: 10.1016/j.jsat.2004.11.001

Resnicow, K. D., DiIorio, C., Soet, J. E., Borrelli, B., Hecht, J., & Ernst, D. (2002). Motivational interviewing in health promotion: It sounds like something is changing. *Health Psychology, 21*(5), 444-451. doi: 10.1037//0278-6133.21.5.444

Rollnick, S. (2001). Comments on Dunn et al.'s "The use of brief interventions adapted from motivational interviewing across behavioral domains: A systematic review". *Addiction, 96,* 1769-1775. doi: 10.1080/09652140120089517

Rubak, S., Sandbaek, A., Lauritzen, T., Borch-Johnsen, K., & Christensen, B. (2005). Motivational interviewing: A systematic review and meta-analysis. *British Journal of General Practice, 56,* 305-312.

Rubak, S., Sandbaek, A., Lauritzen, T., & Christensen, B. (2006). An education and training course in motivational interviewing influence: GP's professional behavior. *British Journal of General Practice, 55,* 429-436.

Shinitzky, H. E., & Kub, J. (2001). The art of motivating behavior change: The use of motivational interviewing to promote health. *Public Health Nursing, 18*(3), 178-185. doi: 0737-1209/01

Soderlund, L. L., Nordqvist, C., Angbratt, M., & Nilsen, P. (2009). Applying motivational interviewing to counseling overweight and obese children. *Health Education Research, 24*(3), 442-449. doi: 10.1093/her/cyn039

Thijs, G. (2007). GP's consult & health behaviour change project: Developing a programme to train GPs in communication skills to achieve lifestyle improvements. *Client Education and Counseling, 67,* 267-271. doi: 10.1016/j.pec.2007.05.002

U.S. Department of Health and Human Services. (2010). *Healthy People 2010*. Retrieved from http://www.healthypeople.gov

VanWormer, J. J., & Boucher, J. L. (2004). Motivational interviewing and diet modification: A review of the evidence. *The Diabetes Educator, 30,* 404-419. doi: 10.1177/014572170403000309

Viadro, C. I. (2004). Taking stock of WISEWOMAN. *Journal of Women's Health, 13*(5), 480-483.

White, L. L., Gazewood, J. D., Mounsey, A. L. (2007). Teaching students behavior change skills: Description and assessment of a new motivational interviewing curriculum. *Medical Teacher, 29,* e67-e71. doi: 10.1080/01421590601032443

Yeazel, M. W., Lindstrom Bremer, K. M., & Center, B. A. (2006). A validated tool for gaining insight into clinicians' preventive medicine behaviors and beliefs: The preventative medicine attitudes and activities questionnaire (PMAAQ). *Preventive Medicine,* 46, 86-91.

APPENDICES

Appendix A

Minnesota Department of Health IRB Permission Letter

Sent: Monday, February 28, 2011 11:44 AM

To: Witt, Diane E

Cc: Kowski, Ann (MDH)

Subject: RE: IRB question

Hello, Diane:

Thank you for contacting the Department of Health's IRB regarding the study titled "Minnesota Department of Health Sage*Plus* program evaluation: Motivational Interviewing use and barriers to use in lifestyle

counseling interventions". After reviewing the material, we find that the study you are proposing is program evaluation of a public health program and does not constitute research as defined by federal regulations. The primary intent is not to create "generalizable knowledge" but to monitor and improve the operations and process of a public health program. This study does not need further review by the Department of Health's IRB.

Please feel free to contact me if you want to discuss this study further.

Sincerely,

Pete Rode

IRB Administrator

Appendix B

Minnesota State University, Mankato Approval Letter

Appendix C

Consent Form

Informed Consent

Minnesota Department of Health Sage*Plus* program evaluation: Motivational Interviewing use and barriers to use in lifestyle counseling interventions.

You are being asked to participate in a research study on the use of Motivational Interviewing (MI) in Sage*Plus* lifestyle counseling interventions. We ask that you read this form before agreeing to participate in this evaluation. This evaluation is being conducted by Diane Witt, along with three graduate student researchers Jeremy Waldo, Heidi Sannes, and Joan Grotewold.

Purpose

The purpose of this project is to assist the Minnesota Department of Health evaluate the use of MI in the Sage*Plus* program and determine if there are any barriers to the use of MI. This information will be utilized to enhance MI training and support for health care professionals who are providing the Sage*Plus* lifestyle counseling interventions.

Procedures
If you agree to participate in this research and sign this consent form we ask you to complete two questionnaires, which will take about 10-15 minutes of your time, as well as allowing direct observation of a minimum of two Sage*Plus* lifestyle counseling appointments.

Risks and Benefits
You will be asked personal questions about your age, education, profession, your current job, how your MI training, your beliefs about the use of MI and any barriers you perceive that impact your use of MI. You can choose not to answer any or all of these questions. This information may help to enhance the MDH sponsored MI continuing education training program to better meet the needs of the Sage*Plus* healthcare providers.

Confidentiality
The records of this study will be kept private. The only people who will see this information will be the researchers and the MDH. Your information, name and place of employment will be kept confidential. There will be no way to identify you or your individual responses in any report of this study. The questionnaires and lifestyle counseling evaluations will be kept in a locked office at Minnesota State University, Mankato for two years and then destroyed. Only the researchers and MDH will have access to these files.

Voluntary nature of study
Participating in this study is entirely voluntary. Your decision whether or not to participate will not impact your current employment or relationship with the MDH. If you decide to participate, you may withdraw at any time.

Contact
If you have questions about this study, you may contact Dr. Diane Witt who is the researcher conducting this study at Minnesota State University, Mankato at 507-389-1725. If you have any questions or concerns about the treatment of human subjects contact: MSU IRB Administrator, Dr. Terrance Flaherty, Minnesota State University, Mankato, Institutional Review Board, 115 Alumni Foundation, (507) 389-2321.

I have read the above information and understand that this survey is voluntary and I may stop at any time. I consent to participate in the study.

____
Signature of participant

____

Date

____
Signature of researcher

____
Date

☐ Participant received a copy.

Appendix D

PMAAQ Approval Letter

Dear Ms Sannes,

I am pleased to learn of your interest in using the PMAAQ and have attached a copy for you to examine. Please feel free to use any portions of the tool. I'd be especially interested in knowing if you find it useful for you purposes since I'm an advisor for the SAGE colorectal cancer screening portion of the program. Please feel free to contact me with any questions about the tool.

Mark Yeazel

I consider it absolutely OK to modify the PMAAQ to better fit your needs. Good luck and please let me know about your results.

Mark Yeazel

Appendix E

PMAAQ (modified)

Preventive Medicine
Attitudes and Activities Questionnaire (modified)
(PMAAQ)

How **effective** are you in changing your patients' behavior with respect to:

	Very effective	Moderately effective	Somewhat effective	Minimally effective	Do not counsel
1. exercise	☐	☐	☐	☐	☐
2. healthy diet	☐	☐	☐	☐	☐
3. smoking cessation	☐	☐	☐	☐	☐

In general, how **important** is it for providers to **counsel** patients about the following?

	Very important	Moderately important	Somewhat important	Not very important
4. exercise	☐	☐	☐	☐
5. healthy diet	☐	☐	☐	☐
6. smoking	☐	☐	☐	☐

To what extent do you **agree** with each of the following statements:

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree

7. Smoking cessation counseling is an effective use of my time as a provider.	☐	☐	☐	☐	☐
8. For most patients health education does little to promote their adherence to a healthy lifestyle.	☐	☐	☐	☐	☐
9. I am less effective than professional Counselors in getting patients to quit smoking.	☐	☐	☐	☐	☐
10. Patients without symptoms will rarely change their behavior on the basis of my advice.	☐	☐	☐	☐	☐
11. Most patients try to change their lifestyle if I advise them to do so.	☐	☐	☐	☐	☐
12. I am satisfied in my current job.	☐	☐	☐	☐	☐
13. It is difficult for patients to make lifestyle changes.	☐	☐	☐	☐	☐
14. It is difficult to understand why patients can't meet the goals they have set with you.	☐	☐	☐	☐	☐
15. I feel I have had a sufficient amount of training in MI.	☐	☐	☐	☐	☐
16. I am able to identify the stage of change the patient is in to start applying MI.	☐	☐	☐	☐	☐
17. It has been difficult to change my routine of lifestyle counseling to include MI.	☐	☐	☐	☐	☐
18. Patients prefer being told what to do over helping to come up with a plan themselves.	☐	☐	☐	☐	☐
19. It is difficult for patients to adhere to their commitment to making lifestyle changes, despite being motivated at the start.	☐	☐	☐	☐	☐
20. Doing lifestyle counseling using MI takes longer than traditional methods.	☐	☐	☐	☐	☐

In your clinical practice, how significant are the following potential **barriers** to effective use of Motivational Interviewing (MI) when doing **Sage*Plus* lifestyle counseling**?

	Not significant	Minimally significant	Somewhat significant	Moderately significant	Very significant
21. lack of time	☐	☐	☐	☐	☐
22. personal motivation	☐	☐	☐	☐	☐
23. lack of patient interest in prevention	☐	☐	☐	☐	☐
24. lack of insight of patient on importance of making healthy lifestyle changes	☐	☐	☐	☐	☐
25. patients belief of what their friends & family tell them over what you say	☐	☐	☐	☐	☐
26. lack of proper patient education materials	☐	☐	☐	☐	☐
27. the patient's physical or financial restrictions	☐	☐	☐	☐	☐
28. education level of patient	☐	☐	☐	☐	☐

29. communication difficulties with patients	☐	☐	☐	☐	☐
30. cultural differences between doctors and patients	☐	☐	☐	☐	☐
31. lack of knowledge on how to use MI for lifestyle counseling	☐	☐	☐	☐	☐
32. insufficient training on how to use MI	☐	☐	☐	☐	☐
33. insufficient knowledge of nutrition	☐	☐	☐	☐	☐
34. fear of sounding judgmental	☐	☐	☐	☐	☐
35. number of visits with each patient	☐	☐	☐	☐	☐
36. other (list)	☐	☐	☐	☐	☐

Appendix F

Demographic Questionnaire

Demographic Questionnaire

Location: ____________________ Subject #_______ Student Researcher: ______

1. Age:______
2. Sex: ___ 1. Male ___ 2. Female
3. Highest Degree Completed:
   - ___ 1. RN (BSN)
   - ___ 2. RN (ADN)
   - ___ 3. APN (FNP, ANP, GNP, etc.)
   - ___ 4. PA
   - ___ 5. MD or DO
   - ___ 6. Other _________

4. Employment:
   - ___ 1. Fulltime
   - ___ 2. Part-time
   - ___ 3. Casual call
   - ___ 4. Other ________________

5. Number of years working in Healthcare: _____

6. Number of years working with Sage*Plus* clients:_____

7. Number of years at current clinic: _____

8. Do you use Motivational Interviewing (MI) when providing lifestyle counseling?
   ___ 1. Yes ___ 2. No

9. What MDH-sponsored MI training have you participated in? (Check all that apply.)
   - _____ None
   - _____ One- day Continuing education seminar. Number of hours ____Year(s) attended ____
   - _____ Two -day Continuing education seminar. Number of hours ____Year(s) attended ____
   - _____ Video/Self- study Number of hours____Year(s) attended ____
   - _____Other________________ Number of hours ____Year(s) attended____

10. What was the format of MDH-sponsored MI training you attended? (Check all that apply.)

____ None
____ Role play
____ Lecture
____ Watching Video
____ Round table discussion
____ Other_______________________

11. Additional MI training you have participated in: (Check all that apply.)

____ Class/Seminar Year(s) attended _____
____ Self-study Year(s) attended _____
____ Webinar Year(s) attended _____
____ Other ______________________________________Year(s) attended _____

Appendix G

Participant Demographics

Table 4.1
Participant Demographics

	N	%	Mean	SD	Range
Age	15	-	45	13.73	25-66
Years working in Healthcare	16	-	18	11.27	3- 35
Years working Sage*PLUS*	16	-	3.01	2.69	.5 – 10
Years at current clinic	14	-	5.01	4.46	.75- 16
Gender					
Male	1	6.3	-	-	-
Female	15	93.7	-	-	-
Employment					
Full-time	8	50	-	-	-
Part-time	5	31.3	-	-	-
Casual Call	1	6.3	-	-	-
Other	2	12.5	-	-	-
Highest Degree Completed					
RN (baccalaureate)	5	31.3	-	-	-
RN (diploma/associate)	1	6.3			
LPN	1	6.3	-	-	-
CHW	1	6.3	-	-	-
MPH	1	6.3	-	-	-
BA	3	18.8	-	-	-
BS	1	6.3	-	-	-

Appendix H

Ranking of Barriers to Lifestyle Counseling

Table 4.2 *Ranking of Barriers to Lifestyle Counseling*

Rank	Item	Mean

1	13. It is difficult for patients to make lifestyle changes	4.06
2	23. Lack of patient interest in prevention	3.94
3	27. The patient’s physical or financial restrictions	3.8
4	24. Lack of insight of patient on importance of making healthy lifestyle changes	3.56
5	28. Education level of patient	3.56
6	19. It is difficult for patients to adhere to their commitment To making lifestyle changes, despite being motivated at the start	3.5
7	30. Cultural differences between doctors and patients	3.5
8	20. Doing lifestyle counseling using MI takes longer than traditional methods	3.44
9	21. Lack of time	3.44
10	22. Personal motivation	3.33
11	9. I am less effective than professional counselors in getting patients to quit smoking	3.31
12	29. Communication difficulties with patients	3.31
13	17. It has been difficult to change my routine of lifestyle counseling to include MI	3.13
14	15. I feel I have had a sufficient amount of training in MI	3.00
15	35. Number of visits with each patient	2.75
16	10. Patients without symptoms will rarely change their behavior on the basis of my advice	2.73
17	31. Lack of knowledge on how to use MI for lifestyle counseling	2.69
18	25. Patients belief of what their friends & family and family tell them over what you say	2.67
19	32. Insufficient training on how to use MI	2.67
20	18. Patients prefer being told what to do over helping to come up with a plan themselves.	2.47
21	33. Insufficient knowledge of nutrition	2.44
22	26. Lack of proper patient education materials	2.38
23	34. Fear of sounding judgmental	2.31
24	14. It is difficult to understand why patient can’t meet the goals they have set with you.	2.25
25	11. Most patients try to change their lifestyle if I advise them to do so.	2.13
26	8. For most patients health education does little to promote their adherence to a healthy lifestyle.	2.06
27	16. I am able to identify the stage of change the patient is in to start applying MI.	1.81
28	7. Smoking cessation counseling is an effective use of my time as a provider.	1.56
29	12. I am satisfied in my current job.	1.25