2010

COMPLEMENTARY AND ALTERNATIVE MEDICINE USE BY CANADIAN RURAL WOMEN: A SECONDARY ANALYSIS

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COMPLEMENTARY AND ALTERNATIVE MEDICINE USE BY CANADIAN RURAL WOMEN: A SECONDARY ANALYSIS

(Spine title: Complementary and Alternative Medicine Use by Canadian Rural)

(Thesis format: Integrated-Article)

by

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Graduate Program in Nursing

A thesis submitted in partial fulfillment of
the requirements for the degree of
Master of Science in Nursing

School of Graduate and Postdoctoral Studies
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entitled:

Complementary and Alternative Medicine Use by Canadian Rural Women: A Secondary Analysis

is accepted in partial fulfillment of the
requirements for the degree of
Master of Science in Nursing

Date _____

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Sandra Regan
Chair of the Thesis Examination Board

ABSTRACT

The purpose of this secondary qualitative study is to examine rural women's experiences with Complementary and Alternative Medicine (CAM) use and factors that affect use. In the original study, twenty rural women from Southwest Ontario were interviewed to explore rural women's use of prescription and non-prescription pharmaceuticals. In the research described here, qualitative secondary analysis methodology was used to answer new research questions distinct from the original study. Analysis of the original data has revealed the following findings: facilitators of CAM use, barriers to CAM use, facilitators and barriers to CAM use, comparing conventional medication use and CAM use, and evaluating effectiveness of CAM. Implications for nursing practice, education, and future research are noted. In conclusion, this study suggests that, because participants used CAM as an important health care choice, nurses and health care professionals need to consider CAM into their practice and education.

Keywords: Canadian rural women, complementary and alternative medicine, qualitative secondary analysis.

CO-AUTHORSHIP

Diana Jaradat completed the following work under the supervision of Dr. Beverly Leipert and Dr. Cathrine Ward-Griffin. Drs. Leipert and Ward-Griffin will be co-authors of the publication resulting from this work.

ACKNOWLEDGMENT

I thank my supervisor, Dr. Beverly Leipert, first and foremost for providing me with the opportunity to use the data on the rural women's use of prescription and non-prescription pharmaceuticals for this current qualitative secondary analysis. In addition, I would like to thank her for her time, guidance, and effort during our many conversations. Dr. Leipert dedicated a priceless effort to complete this work. I would like to also thank my committee member, Dr. Catherine Ward-Griffin, for her guidance and contribution throughout this process. I have appreciated your insights and knowledge which have contributed to my thinking as well.

DEDICATION

I dedicate this work to my lovely husband Wasfi Gharaibeh for his endless support and love which were inspiring in my life for a full year. To my parents Ali and Rasmiah Jaradat, thank you for your permanent support and encouragement throughout my life to reach my endeavours and ambition. You have taught me to believe in my abilities and never give up on my dreams. Finally, I would like to thank my little daughter Iram Gharaibeh who made my life meaningful in all means. Thank you all for being with me throughout the highs and lows of this long experience.

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CHAPTER ONE

BACKGROUND/INTRODUCTION

Complementary and alternative medicine (CAM) use is becoming a popular phenomenon worldwide (WHO, 2004). CAM is wide ranging and encompasses various health care practices that fall outside conventional medicine. Conventional medicine is defined as "medical interventions that are taught extensively in medical schools or generally provided in hospitals" (Dalen, 1998, p. 2179), such as prescribed and non-prescribed medications including over-the-counter medications. Although use of CAM is now popular, CAM consumers' experiences are not always clear because of lack of research.

In the literature, various terms are used for CAM, such as unconventional, complementary, alternative, and holistic. Complementary and alternative medicine has been one of the most commonly used terms, and was thus chosen for this study. The National Centre for Complementary and Alternative Medicine (NCCAM) has defined CAM as a group of different medical and health care systems, products, and practices that are not part of conventional medicine (NCCAM, 2004). Because the NCCAM (2004) definition of CAM is more encompassing than other definitions of CAM, has more holistic aspects, and is widely cited in the Canadian and American literature, this definition was used in this study.

CAM encompasses various practices such as massage therapy, meditation, and prayer (NCCAM, 2008). It is only within the past two years

that prayer has been considered as a CAM practice by NCCAM. CAM practices may be attractive to various populations because they are easily available in the community without the need for a physician's prescription. Rural dwellers, especially women, are more likely to use CAM practices compared to urban dwellers because of various environmental factors, such as limited health resources and poor road conditions (Adams, Sibbritt, & Young, 2009; Nichols, Weinert, Shreffler-Grant, & Ide, 2006).

Based on the literature, rural has many different definitions. For this study, I have adopted Health Canada's definition, which defines rural as those communities with populations of less than 10000 and that are isolated from urban resources (Sutherns, McPhedran, & Haworth-Brockman, 2004). This definition was chosen because it was used in the original study upon which this secondary analysis study is based.

Traditionally, women in rural areas are often the primary health related decision makers for family members, especially in terms of health care choices and access to health care services (Leipert, Matsui, & Rieder, 2006). Moreover, rural women may seek innovative health choices to keep themselves and their families healthy and CAM may be one of these health choices (Alder & Fosket, 1999). However, little research has been conducted on CAM usage by rural women, contributing factors to usage, and decision-making processes and factors that are part of rural women's experience of using CAM. Research about CAM use is needed for both health consumers,

especially women, and health care providers such as nurses, as this information may support and expand health choices, especially in rural areas.

Summary of Literature Review

Literature about CAM use by rural women includes both quantitative and qualitative methodologies. Recent quantitative studies have predominantly focused on topics related to frequency and predictors of CAM use (Arcury, Preisser, Wilbert, Sherman, & Sherman, 2004; Robinson, Chesters, & Cooper, 2007; Adams, Sibbritt, Easthope, & Young, 2003; Adams et al. 2009; Shreffler-Grant, Hill, Weinert, Nichols, & Ide, 2007, Upchurch & Chyu, 2005). Qualitative research studies have tended to focus on topics related to experiences with CAM of specific rural populations, such as older adults or older women (Arcury, Bell, Vitolins, & Quandt, 2005; Herron & Glasser, 2003); however, most of the available studies have rarely connected rural environmental factors and CAM use by rural women (Nichols et al. 2006; Leipert, Matsui, Wagner, & Reider, 2008).

Rural women are more likely to use CAM than their urban counterparts (Adams et al., 2003; Adams et al., 2009; Shreffler-Grant et al. 2007, Upchurch & Chyu, 2005). Rural women use CAM for many reasons such as dissatisfaction with conventional therapies and their side effects, positive experiences with previous CAM use (Kelner & Wellman, 1997; Vincent & Furnham, 1996), and as a reaction to the rising cost of conventional therapies (Pagan & Pauly, 2005).

Lack of health care services and lack of access to mainstream health care professionals such as nurse practitioners and physicians (Nichols et al. 2006; Leipert et al. 2008) may be the most common rural factors that affect rural women's use of CAM practices. In addition, the health of rural populations is often affected by many factors such as difficult transportation to health care providers, distance from health care facilities, inclement weather, lack of information about disease and treatment options, and isolation (Bennett & Lengacher, 1998; Canadian Institute for Health Information, 2006). Therefore, rural women may use CAM as the most available and acceptable method of care to meet their many caregiving responsibilities to meet their health care needs. In addition, rural women may use CAM practices because they view these practices as safe and natural (Chez & Jonas, 1997). This study will further understanding about CAM use by rural women.

Purpose

The purpose of this study was to examine rural women's experiences with CAM use. The following research questions were addressed: 1) What factors shape the use of CAM in rural environments? 2) What are rural women's reasons for using CAM in relation to conventional medicine? and 3) What is the effectiveness of CAM from the perspective of rural women?

Methodology

Qualitative secondary analysis was employed in this study. The original study from which the data were obtained explored the needs of rural

women regarding their use of prescription and non-prescription pharmaceuticals, from the perspective of rural women themselves (Leipert, et al. 2008). The original study was guided by a descriptive interpretive qualitative approach, a methodology that explores a topic about which little is known and that allows the researcher to conduct an exploratory investigation of the phenomenon (Denzin & Lincoln, 2005; Heaton, 2004; Strauss & Corbin, 1998). Specifically, the original study explored Canadian rural women's experiences with prescription and non-prescription pharmaceutical use using in-depth semi-structured interviews.

Qualitative secondary analysis is the use of a variety of analytical approaches to answer a research question distinct from the original one (Heaton, 2004). Qualitative secondary analysis methodology allows researchers to investigate new or additional research questions in previously collected data; to verify or refine the findings of primary studies through reanalyzing of data sets; and to synthesize knowledge arising from existing studies (Heaton). For the purpose of this study, secondary analysis was

employed to focus on CAM use by the rural Canadian women in the original study and to gain more information about emergent themes and issues regarding reasons to use CAM, rural influencing factors, and rural women's CAM evaluation criteria that were not focused on in the original study.

My Personal Background

"The human factor is the great strength and fundamental weakness of qualitative inquiry and analysis" (Patton, 1990, p. 372). Consequently, it is

important to reflect on my personal experiences. Thus I have to mention my personal experience in community health with women who are using CAM and my personal experience as a Jordanian rural woman who is using CAM therapies such as herbs, massage, and prayer.

As a clinical instructor at Jordan University of Science and Technology, my primary work was in community health in rural areas. The main role was listening to and dealing with rural families especially women and talking about their health practices and their ways to seek health for them and their family members. Learning from women's stories about their health experiences with all family members, and being from a rural location in Jordan encourage me to seek more information regarding CAM use experience.

Through conducting this secondary analysis study and demonstrating the descriptive interpretive approach, I have the opportunity to explore rural Canadian women experiences with CAM use. In addition, I will be able to compare between rural Jordanian and rural Canadian women CAM use in terms of their various available resources.

Significance

Recent demand for knowledge about CAM practices has increased, as individuals look for more natural and self-directed care (Pagan & Pauly, 2005). However, most of the available research has focused on the prevalence and frequency of CAM use among urban populations with little attention to rural dwellers despite its extensive use by rural populations, especially

women. In addition, little attention has been paid to the impact of the rural environment on rural women's decisions and experiences with CAM use. This study will be one of the first studies to identify and explore rural women's experiences with CAM use in Canada. Accordingly, this study could be the basis for various future studies about rural women's health and CAM use, especially regarding various rural factors as determinants of rural women's health. In addition, knowledge from this study will assist health promoters to have a clearer picture regarding rural women's health needs and their available health care choices, including CAM.

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CHAPTER TWO

BACKGROUND

Complementary and Alternative Medicine (CAM) popularity and utilization are increasing internationally (Snyder, Niska, & Lindquist, 2010). CAM is viewed as more holistic in nature than conventional medicine because it focuses on body-mind-spirit integration. Therefore, CAM is very attractive for some individuals because it is seen as potentially compatible with values, world-views, and spiritual and religious philosophies (Zollman & Vicker, 1999). In addition, CAM could be attractive to rural residents because of their limited access to physicians and other health care personnel such as nurses. Eisenberg, Kessler, Foster, Norlock, Cakins, and Delbanko (1993) revealed that 425 million visits were made to CAM providers in 1993 as compared to 388 million visits made to conventional physicians in the USA; the majority of these visits to CAM providers were made by women. Furthermore, in Canada it has been estimated that 3.8 million Canadians, or approximately 12% of the total Canadian population, used or visited a CAM practitioner in 2000 (Millar, 2001).

Almost nine million Canadians live in rural areas, and one in five Canadian women lives in a rural area (Sutherns, McPhedran, & Haworth-Brockman, 2004). However, little research has been conducted on CAM usage by rural women, contributing factors to usage, and the decision-making processes and factors that are part of rural women's experiences with CAM use. Thus, more research about CAM use is needed for both health consumers, especially women,

and health care providers, such as nurses, who may support health choices, especially in rural areas.

Literature Review

Databases that were searched included SCOPUS, MEDLINE, and CINAHL, using the following key words: rural women, rural health system, rural women's roles in the family, and health care professionals and CAM use. All thirty-two research articles that were found related to CAM use by rural women and rural factors, and were published between 1990 and 2010. All of the studies were conducted in Australia, the United States of America, the United Kingdom, and Canada.

Rural women and CAM use

Canadian rural women are the major caregivers within their communities (Morgan, Semchuk, Stewart, & D'Arcy, 2002). Various studies have revealed that women show readiness to participate in health promotion initiatives more than men and that being female is a major factor in the use of CAM (Barnes, Powell-Griner, McFann, & Nahin, 2004; Wolsko et al. 2000). The Institute of Medicine (IOM, 2005) concluded that rural women may be more conscious than urban women of health needs due to limited access to conventional medicine in rural communities. In addition, they are often encouraged by friends or family to use CAM (Leipert, Matsui, & Rieder, 2006). These factors may prompt more participation by rural women in health promotion and illness prevention activities, such as the use of CAM. One of the first studies in Canada on rural women and drug use was conducted by Leipert, Matsui, Wagner, and Rieder (2008) which

revealed CAM use as a significant theme; 18 of the 20 rural women participants used CAM such as vitamins, garlic, and cod liver oil. In addition, it was determined that CAM knowledge was influenced primarily by family, health food store employees, and friends (Leipert et al.). Moreover, the study findings suggested that limited access to physicians, nurses, and pharmacies; low incomes; and lack of access to health insurance plans due to the nature of farm work may account for rural CAM use (Leipert et al.). In this secondary analysis study, I will explore the data in the Leipert et al. study specifically regarding the participants' experience with CAM use, rural women's reasons for CAM use, facilitators and barriers to CAM use, and the participants' evaluation criteria for CAM effectiveness.

Women may use many CAM types for themselves or for family members. For example, a Canadian qualitative study with 19 rural women who were using or have used CAM revealed that the participants used numerous types of CAM such as vitamins, minerals, and herbal preparations in order to address menopause symptoms (Will & Fowles, 2003). In addition, CAM use among Canadian rural women and men has been associated with past positive experiences with previous CAM use (Kelner & Wellman, 1997).

Another study conducted in South Australia (Andrews, Lokuge, Sawer, Lillywhite, Kennedy, & Martin, 1998) revealed that women from different backgrounds used CAM in order to treat asthmatic children, were satisfied with the results, and felt that more support was needed from health care providers regarding CAM use. In addition, a second Australian longitudinal study on

women's health with 4,217 women recruited from rural and urban areas revealed that women in rural areas were more likely to use CAM than urban women (Adams, Sibbritt, Easthope, & Young, 2003).

Rural women use CAM for many reasons. For example, CAM may give rural women hope for care or cure terminally ill diseases such as cancer in the absence of conventional medicine effectivity (Weg & Streuli, 2003). Other studies conducted in the UK and the USA among rural and urban women and men concluded that CAM use is associated with dissatisfaction with conventional medicine outcomes because of its side effects (Vincent & Furnham, 1996) and its rising cost (Pagan & Pauly, 2005).

In summary, most of the related research articles revealed that CAM was often used by rural women because of limited health care services in their communities. In addition, rural women tended to use CAM for various reasons such as to prevent illnesses and promote their families' health. However, there were various gaps in the body of literature about rural women and CAM use. For example, rural and urban samples were included but not segregated in most of the studies, which makes it difficult to separate rural data from urban data. In addition, men's and women's experiences with CAM use were mostly studied together which could make it difficult to differentiate between their experiences. Therefore, a strong need exists to study rural women's experiences with CAM use more specifically, so as to better understand their experiences more clearly.

CAM Use and Rural Influencing Factors

Rural populations are facing many health care challenges in Canada. Rural residents have shorter life expectancies, higher rates of disability, and higher rates of accidents and violence than their urban counterparts (Harris & Wathen, 2007). In addition, the health of rural populations is often affected by many factors such as difficult transportation to health care providers due to inclement weather and distance from health care facilities (Leipert, 2005; Leipert, et al. 2008; Morgan et al., 2002; Nichols, Weinert, Shreffler-Grant, & Ide, 2006; PWHC, 2004; Romanow, 2002). Lack of information about disease and treatment options as well as isolation create additional health and health care challenges for rural dwellers (Bennett & Lengacher, 1998; Canadian Institute for Health Information, 2006; Dryburgh, 2001). In addition, poverty and financial insecurity related to the nature of farm work are rural factors that may affect rural women's use of CAM (Leipert, 2005; PWHC, 2004; Romanow, 2002) by affecting their ability to afford conventional medications. In addition, a study conducted in rural Canada with dementia caregivers (Morgan et al., 2002) revealed that there are other barriers to the use of formal health care services, such as unavailability of specialists and expensive conventional medications. As a result, these economic, environmental, and social factors may predispose rural women to select CAM as an alternative health treatment option.

Rural dwellers tend to be self reliant which may contribute to their feeling responsible for their health-including decisions about CAM (Nichols et al., 2006; Robinson, Chesters, & Cooper, 2007). Rural women are often responsible for

their families, communities, and family farms or businesses (PWHCE, 2004). Consequently, they may tend to rely on CAM as their primary health care choice because it is a more available and accessible health care choice.

In summary, several rural factors affect CAM use. However, there is little research that has examined the relationship between these rural factors and CAM use by rural women.

Conventional Health Care System and CAM Use

According to a Health Canada (2005) survey of 2,004 Canadians, 72% of participants believed that they have the right to use any natural health products/CAM therapies they choose. However, often health consumers who are using CAM prefer not to tell their conventional physicians about their CAM use (Boyce, 1999). For example, Alder and Fosket (1999) conducted research in San Francisco with people who had breast cancer. They reported a number of reasons given by the patients for not communicating CAM usage to their doctors including: 1) the impression of doctors' disinterest; 2) the expectation that a physician may respond negatively destroying patients' hopes; 3) a need to be a full decision maker regarding their health options; and 4) the belief that doctors do not have enough information about CAM (Alder & Fosket, 1999).

In a survey of 417 Canadian physicians regarding their perspectives about CAM and if they refer their patients to a CAM practitioner, Kaczorowski, Patterson, Arthur, Smith, and Mills (2002) concluded that 75% of physicians had never referred a patient to a CAM practitioner. However, female and young physicians in an American study were 2.4 times more likely to refer to CAM

professionals than male and older physicians (Wahner-Roedler, Vincent, Elkin, Loehrer, Cha & Bauer, 2006). Most physicians agreed that they should have knowledge about the most commonly used CAM practices in order to understand their patients' needs and CAM use experiences (Wahner-Roedler et al.). However, 70% of the physicians stated that they believed that CAM practices represent a major threat to public health because of possible interactions with other conventional medicine therapies (Wahner-Roedler et al.). Thus, it may be that rural women are using CAM but are reluctant to inform their physicians and risk alienating them. In rural areas, where there may be few health care providers, women may choose to be silent about CAM use to preserve their access to care from a physician. However, further research is needed regarding rural women's CAM use, reasons for CAM use, and the relationship of CAM use to care by other health care providers such as physicians and nurse practitioners.

The Most Common CAM Types Used

Nine research studies, as discussed below identified the most common CAM types used by rural women. Most of these were related to factors such as CAM availability, accessibility, and previous experience with CAM. Chiropractic, herbs, and vitamin supplements were the most common types of CAM used by rural women. However, some rural women used some CAM practices such as prayer on a daily basis.

Few CAM research studies have considered the differences between urban and rural settings regarding CAM use. In 2005, Health Canada surveyed 2004 adult Canadians who were currently using CAM or had used it in the past (Health

Canada, 2005). This survey revealed that 71% of participants used at least one form of CAM therapy. The most commonly used CAM included vitamins, Echinacea, herbal remedies, as well as algal and fungal products. In addition, 70% of rural respondents used CAM, which was considered to be a significant percentage. Moreover, the Canadian survey detected many rural aspects of CAM use such as significant CAM availability in rural communities. One of the few Australian studies that was conducted in rural areas (Wilkinson & Simpson, 2001) also found that 70.3% of the participants used at least one type of CAM. Based on this result, the authors concluded that CAM use in rural settings is higher than in urban settings.

American literature has found that home remedies (Arcury, Preisser, Wilbert, Sherman, Sherman, 2004; Arcury et al. 2005; Upchurch & Chyu, 2005) and chiropractic therapies (Herron & Glasser, 2003; Upchurch & Chyu, 2005; Nichols et al. 2006) were the most common CAM types used by rural women. Although these studies differed in settings, methodologies, and CAM definitions, they all agreed that vitamin supplements and herbs were the most used CAM by rural American women (Arcury et al. 2005; Herron & Glasser, 2003; Upchurch & Chyu, 2005), while prayer (Herron & Glasser, 2003; Upchurch & Chyu, 2005) and massage therapy (Nichols et al.) were the least CAM therapies used by the American rural population.

In Victoria, Australia, chiropractic and massage therapies, naturopathy, and prayer were found to be the most common CAM practices used by rural and urban dwellers (Robinson et al. 2007). Vitamin supplements and herbs were the

most common types used by rural women for many reasons such as low cost and ease of accessibility.

Though CAM is gaining popularity in rural Canada, little research has been conducted on its usage. Most of the available research has focused on the use of some CAM therapies types such as herbs or chiropractic among rural and urban dwellers, with no evaluation of other CAM therapy types such as meditation, relaxation, supplement therapy, and prayer. Moreover, little attention has been paid to the social contexts that are part of women's lived experience of using CAM, especially in rural communities. In addition, there is a need to explore the relationship between rural factors that may shape rural women's experiences with CAM use, reasons to use CAM in rural communities, and CAM effectiveness evaluation criteria used by rural women.

In summary, the literature reviewed reveals that more research is needed to explore rural women's experiences with CAM use. Various aspects, such as rural factors' effect on CAM use, have been missing in the literature. Therefore, this study will help rural Canadian women and nurses to know and understand women's experiences of CAM which may assist them in understanding and supporting effective therapies. Nurses and other health care professionals could also apply the study findings to assist rural women in making effective and safe health-related decisions.

Research Questions

The purpose of this study was to examine rural women's experiences with CAM use. The following research questions were addressed: 1) What factors

shape the use of CAM in rural environments? 2) What are rural women's reasons for using CAM in relation to conventional medicine? and 3) What is the effectiveness of CAM from the perspective of rural women?

Methodology

Using pre-existing data, a qualitative secondary analysis methodology was used to investigate new research questions. Secondary analysis is conceptualised as a methodology which studies qualitative data that are obtained from previous studies in order to answer a research question distinct from the original one (Heaton, 2004). For the purpose of this study, qualitative secondary analysis methodology was employed to gain more information and understanding about rural Canadian women's experiences with CAM use, factors related to CAM use, reasons for using CAM in relation to conventional medicine, and CAM use effectiveness criteria, topics that were not the primary focus of the original study.

The Original Study

The original study explored rural women's use of prescription and non-prescription pharmaceuticals (Leipert, et al. 2008). Rural was defined as living "outside of commuting zones of urban centres with 10,000 or more population" (DuPlessis, Beshiri, Bollman, & Clemenson, 2002, p. 1).

A descriptive interpretive qualitative inquiry was used in the original study (Leipert et al. 2008). Permission for the original study was obtained from the Ethics Review Board at the University of Western Ontario. In-depth semi-structured face-to-face interviews were conducted with 20 rural women aged 17-88 years who lived in rural Southwestern Ontario, Canada. One woman was of

Mennonite background, another was an Aboriginal woman, and the rest were of Caucasian background or did not explicitly claim a background (Leipert et al.). Interviews ranged from 45-120 minutes and were recorded by audiotape. Each interview was transcribed and imported into NVIVO 7 (QSR International, 2006) to assist with data management. A team of five researchers determined themes from the data regarding rural women's issues, needs, and solutions regarding drug information and therapies (Leipert et al.). The major findings revealed that various prescription drugs were used by study participants and the most frequently used types were antihypertensives, antidepressants, analgesics, and birth control medications; CAM therapies were commonly used among study participants mainly to boost their immune system; and alcohol use was common in some rural communities in the study. The original study did not focus on the CAM use experience.

The Secondary Analysis Study

Qualitative secondary analysis is a useful method for new researchers or students because it allows access to data sets without the burden of data collection (Heaton, 2004; Szabo & Strang, 1997). In addition, qualitative secondary analysis facilitates more research on "hard to reach" groups, such as rural women who are living in remote areas, by reusing available data to understand or explore new phenomena. Qualitative secondary analysis also avoids over-burdening informants by making the best use of previously collected data (Heaton).

This qualitative secondary analysis study was guided by a descriptive interpretive qualitative approach, (Denzin & Lincoln; Strauss & Corbin, 1998).

The reason that I chose this approach was because it was used in the original study. In addition, this approach helped me to explore rural women's experiences with CAM use by conducting more exploratory investigation in data related to my research questions (Strauss & Corbin, 1998).

I used several steps for data analysis in this secondary analysis study (Heaton, 2004). First, I started the analysis of each of the 20 interviews by listening to the tapes; I then read each of the 20 transcripts in order to familiarize myself with the data (Heaton, 2004). Next, transcripts were imported into the computer program NVIVO 8 (QSR International, 2006) for analysis. Each transcript underwent line-by-line coding (Strauss & Corbin, 1990) to determine findings related to rural women and CAM use, such as rural location and CAM use. Throughout the analysis, I attempted to capture the overall picture related to rural women and CAM use by asking, "How is this related to my research questions?" and "What is going on here?" (Thorne, Kirkham, & MacDonald-Emes, 1997). I then moved to specific coding by trying to answer my research questions and to develop categories related to CAM use by rural women (Lofland, Snow, Anderson, & Lofland, 2006). For example, conventional medication use, rural factors and CAM use, and evaluation criteria for CAM use were revealed as major categories due to the nature and extent of the participants' comments. In addition, I recorded my own thoughts about each category in order to clarify the main findings. Memos describing the coding categories, interconnections, and the research experience were also kept to track and facilitate the developing analysis (Szabo & Strang, 1997). Throughout the analysis process I met frequently with

my supervisor, who is the original study principal investigator, and my committee to discuss my initial and specific codes. In addition, my committee members helped with the analysis by guiding me to organize my categories and the relationships among the findings.

Rigour and Quality in Qualitative Research

Qualitative research studies, including qualitative secondary analysis studies, must carefully attend to issues of rigor so that outcomes can contribute to the development of credible new knowledge (Szabo & Strang, 1997). The rigor for my study was addressed by using the following criteria: subjectivity and reflexivity, adequacy of data, adequacy of interpretation, and confirmability (Morrow, 2005).

According to Morrow (2005), subjectivity seeks to reveal findings that closely adhere to the participants' perceptions. To minimize subjectivity, I made my implicit assumptions overt to myself and others by being reflexive. Reflexivity is self-awareness (Morrow). Therefore, I kept a self-reflexive journal from the beginning to the end of my secondary analysis study, by recording all my thoughts and insights about the data, in order to ensure that the findings emerged from the data and were minimally affected by my pre-assumptions or personal experience. For example, I documented my thoughts about my own CAM use experience and reviewed them regularly through out the analysis process to minimize their effect on emerging codes. Another reflexive strategy that I used in my study was consulting with the original research team, such as the interviewer and the principal investigator Dr. Leipert, who is the supervisor of this

thesis, who could help me reflect on my secondary analysis data and findings (Hill, Knox, Thompson, Williams, Hess, & Ladany, 2005).

Adequacy of data is an assurance of the quality of the findings (Morrow, 2005). A sufficient number of study participants is crucial. In the original study, participant recruitment ceased after reaching the point of data redundancy, which means that no new information was generated from new data (Lincoln & Guba, 1985) and that the sample size was adequate. Thus, a sufficient number of participants were achieved in the original study. To ensure adequacies of data in my study, I reviewed all the interviews to check that there were sufficient data to answer my research questions. In addition, the 20 interviews generated a large and broad data set which helped in determining various relevant categories (Szabo & Strang, 1997). Adequacy of interpretation is assurance of the quality of interpretations during the process of data analysis and presentation (Morrow, 2005). Adequacy of interpretation was undertaken by repeated readings of the transcripts, listening to the interview tapes, reviews of the participants' sociodemographic data, and consultations with my supervisor and committee.

The next criterion is confirmability. Confirmability is the principle that the integrity of findings lies in the data; I must adequately connect the data to the analytical process in such a way that the reader is able to confirm the adequacy of the findings from the analytical process (Morrow, 2005). Confirmability was enhanced by supporting my explanations and major themes with quotes from the data. In addition, the principal investigator in the original study was my thesis

supervisor who helped me to understand the original study and engage in the proposed study (Szabo & Strang, 1997).

Qualitative Secondary Analysis Methodology Use Experience

The qualitative secondary analysis method was useful because it allowed me access to important data without the expense and burden of data collection (Heaton 2004). In addition, qualitative secondary analysis was useful for my research because it facilitated research on rural women who are considered a hard to reach group in Canada.

On the other hand, challenges regarding qualitative secondary analysis method are varied and noted in the literature to be mainly related to lack of control in generating the data set for the secondary study (Jacobson, Hamilton, & Galloway, 1993). In this study, lack of control in generating the data set for the secondary study was noticed. The lack of control in this study was linked to how the data set was generated; because I was not there when the data set was generated, I was not able to probe for information about CAM, which limited the CAM data that were available. In future research, I would probe more to know the reason of rural women's hesitation to share CAM use experiences with health care professionals, especially physicians, which could enrich interpretation and understanding. To address these issues, I consulted with the principal investigator of the original study, who is my thesis supervisor, to clarify questions about the participants and interviews and to provide more additional background information (Szabo & Strang, 1997). In addition, I listened to all the interview

tapes carefully in order to understand as best as I could the interview contexts and the words and nuances of participant responses.

The inability to ask additional questions while analyzing the data set (Szabo & Strang, 1997) was a limitation in this study too. For example, more information about participants' CAM use, such as the CAM types used and reasons for use, and how personal factors affect CAM use, would have been helpful. To address this issue, I reviewed the transcripts several times in order to capture all the data that I could which was related to my research questions.

Findings

Analysis of the interviews revealed five overarching findings regarding rural women and CAM use: facilitators of CAM use, barriers to CAM use, facilitators and barriers to CAM use, comparing conventional medication use and CAM use, and evaluating effectiveness of CAM (Figure 1 on page 66). Four facilitators of CAM use were revealed: dissatisfaction with conventional medicine attitudes, behaviours, and outcomes; influences of family and friends; geographical accessibility of CAM; and familiarity. Barriers to CAM use included: lack of information and limited literacy, and cost due to limited insurance coverage. (In) accessibility of CAM providers and resources and professional influences were identified as both barriers and facilitators to CAM use. Finally, study participants evaluated the effectiveness of CAM use according to its utility for health promotion and illness prevention, and for treatment. In the presentation of these findings pseudonyms are used to refer to the study participants in order to ensure their anonymity.

Facilitators of CAM Use

Facilitators of CAM use included: dissatisfaction with conventional medicine attitudes and behaviours, influences of family and friends, geographical accessibility of CAM, and familiarity.

Dissatisfaction with Conventional Medicine Attitudes and Behaviours.

Many participants chose CAM because of their negative past experiences with side effects from conventional medications. For example, Mary described her son's experience with herbs, "he [her son] had such bad yeast infection too after five times [using] antibiotics, I was… fighting a losing battle type of thing. So then I did herbal, and I found that really helps".

In addition, others experienced dissatisfaction and hopelessness as a result of the attitudes of care providers, especially physicians. Participants often responded with feelings of anger and then turned to CAM. Jessica became upset when her female physician did not listen to her concern related to birth control:

> Yeah, that woman [female physician] was terrible. I waited for months to get in [and in] ten minutes, she doesn't even check me out, she's like, "Why did you stop taking the pill?" and she seemed more annoyed at that than anything. I said, "Cause [of] the risk of breast cancer in my family" and she's like, "Well, you know that you have two very serious disorders and, even if you only had one you would still have a problem so, you just need to get comfortable with the fact that you'll always be overweight and never be able to have children". So hopeless! Like I just wanted to get out of there!

Most of the study participants were reluctant to explain their CAM use to their family physicians. This reluctance occurred for various reasons, such as the physician's lack of knowledge about CAM, lack of respect for CAM use, and lack of experience with CAM. Alexandra stated that she did not know if her physician

was aware of all of the CAM that she is using, "Well she's [her physician] definitely aware of the ginger thing. I use milkweed a lot…I don't think she's aware of it". Most participants preferred to be silent or responded with, "No, I never really told him [family physician]".

Some study participants, if they did divulge their CAM use, found their physicians unsupportive:

> Very negative [The physician's response] I would say. Because I have a bit of arthritis and then my one sister-in-law has really bad arthritis and I actually told him that she takes shark cartilage, and it helps her. Tylenol, the pain medications, it just covers it over but it doesn't help nothing and she found this shark cartilage really helped her and it kind of slows it down, almost stopped it. 'Cause she felt better than she has for the last five years. So I mentioned this [relative's effective use of shark cartilage] to my doctor and his comment was, "Well it didn't help the shark any did it?!" I just kind of looked at him. Probably 'cause he doesn't know anything about it. Maybe that's part of it. (Tamara)

Moreover, other study participants complained about the lack of physicians/family doctors in rural areas which affected physicians' behaviours regarding their clients. For example, Jessica reported that, "It's very rushed, and I have to make a list and when I don't get to the things on the list, he like stands up and says, you know, " 'We only get a certain amount of time per patient, I have to go' ". Tamara agreed:

> They've got too many people without doctors, they've got too many patients, they don't have time. My doctor won't take walk-ins anymore. If you've got an emergency they'll [doctors] send you away, tell you to go on to the hospital, where you sit for another couple of hours waiting.

Therefore, study participants tended to use CAM in order to avoid the time constraints, attitudes, and behaviours of the rural health care providers, particularly physicians.

Influences of Family and Friends. Many study participants heard about CAM from their family or friends. Timmy stated that, "Oh my sister and brother-in-law, they took that [herbs], … and my sister told me about it. So I thought I would try it". Alexandra also described her mother's positive CAM experience as contributing to her own CAM experience:

> My mom …[always says] don't put stuff in to your body that you're not real sure how you're going to react to it, or if you really need it, or maybe there's other things, herbal-type medications, that you could be using instead, more natural things. So that's how she was and I think that's sort of how I've sort of been conditioned to be and it's sort of things about not really wanting to go to doctors either…

Jessica described how her friends' knowledge about CAM therapies was important to her, "Just their [my friend's] knowledge [about CAM therapies]... or past knowledge and then, current knowledge I would say". Angela also described her friend's past positive experience with CAM use "he [her friend] had a liver problem and he took it [herbal therapy] and seemed ... to think that's what basically saved him because we thought he was going to die, so I think I can use it too". Therefore, family members' and friends' past positive experiences with CAM use influenced some study participants to use CAM too, and to consult their family and friends about CAM use. Consequently, some participants were keen to use CAM therapies.

Geographical Accessibility of CAM. Another facilitator of CAM therapies use was geographic proximity. Most participants found it easy to access CAM in their communities as they had various local stores from which they could obtain CAM. The most common stores were the health food store, Shoppers Drug Mart, and Walmart. The health food store was the most popular among all sources

because it was perceived to have more natural, less processed, CAM therapies. Suzan stated that, "Echinacea, sometimes even the pharmacies have it, or a health food store, and with the garlic we go to the health food store…". Emma found it more beneficial to go to the health food store than Walmart, "[herbs] are more in their natural form [in the health food store] than in Walmart…I tend to go to the health food store if I need a herbal, or a vitamin, or whatever I need".

In addition, study participants' limited access to the health care system made them look for more locally available CAM therapies. Study participants living in remote rural areas stated that distance to medical health care facilitated their CAM use because CAM was more accessible than medical health care. For example, Mary had to drive 45-60 minutes to the nearest hospital which made her turn to her local community for CAM therapies.

Therefore, because CAM resources were geographically accessible, and because the health care system, including physicians, nurse practitioners, and hospitals, were farther away and less accessible, CAM use was facilitated. In addition, because most CAM therapies, such as herbs, are available without needing physicians' prescriptions, study participants found CAM therapies easier to access compared to prescribed medications.

Familiarity. Familiarity, knowing everyone or most people in a rural community, was the most common influencing factor for CAM use. Familiarity facilitated the use of CAM primarily due to its discouragement of the use of conventional medications. Nine of the study participants described familiarity as a disadvantage of living in rural community as this related to accessing

conventional medical care. The primary concern was that a consequence of familiarity was limited privacy and fear of breaching confidentiality, as Tamara noted, "When you're in the pharmacy trying to buy something without everybody knowing, it [familiarity in the rural community] can definitely be a negative". In addition, Jenny stated:

> The first time I went to go … get my prescription filled for…the [birth control] pills, one of my friends was working the counter and I was devastated because…I mean, I knew her and I didn't want her to think I was like some skank 'cause it wasn't for those reasons I was getting it. And so I made my mom go up and fill it [the prescription] up for me.

Some study participants admitted they hesitated at times to go to a pharmacy for their prescriptions from a physician, especially if they suffered from a mental illness. Marina explained:

> I think it's because we know each other, we live around here and you know your pharmacist, it's not a stranger, you get called by your first name. Like if say you had some mental disorder or something, and you didn't want people to know. Yes, I know it's supposed to be confidential, but still it may be embarrassing, something like that. 'Cause they know you so well.

Jessica and Robyn struggled to maintain confidentiality in their communities, which resulted in tension, "Because you see people you know in the pharmacy and… maybe you begin to recognize the pharmacist, and they know you've been in so like it's something really personal. You might feel awkward". Robyn also explained:

> I guess living in a small town. The confidentiality and people aren't supposed to say anything, but, [the] reality is that people do say things and I've even heard things that I shouldn't know about people, what medication they're taking or something that's going on in their family because they've gone to the pharmacy, or they've gone to the doctor's office.

Thus, some participants hesitated to visit their local pharmacy in order to avoid dealing with the same pharmacists who they feared may breach their confidentiality, and they turned to CAM as an alternative, more confidential, health care choice.

However, although familiarity was a facilitator for study participants in helping them access CAM, some participants were still not able to access CAM. Familiarity helped participants further in that various supports from family and neighbours were experienced by study participants. Mary found it really helpful when she could drop her kids off at her neighbours' house so that she would pick up her supplements from the health food store, "Like, we take turns a lot babysitting or I've got friends that I could drop them off". Participants sometimes implied that it is easier to access CAM therapies because they could ask each other to bring them from the store. For example, some participants would offer to bring herbs or vitamin supplements to their neighbours to facilitate access.

In summary, dissatisfaction with conventional medical care attitudes and behaviours, influences of family and friends, geographical accessibility of CAM, and familiarity all acted as influencing factors that promoted CAM use. For example, study participants often found it difficult to get their prescriptions if they knew the pharmacist or the health care provider, and experienced shame because of familiarity, especially when accessing conventional medications for mental illness. Thus, study participants preferred to turn to CAM therapies in order to avoid familiarity and to maintain privacy concerning their medical needs. In addition, most of the participants experienced resistance from their physicians

regarding CAM and often described physicians as unsupportive. Therefore, most of the participants preferred not to divulge their CAM use to their physicians.

Barriers to Use CAM

Participants discussed two barriers to using CAM: lack of information and limited literacy regarding CAM, and cost due to limited health insurance coverage.

Lack of Information and Limited Literacy Regarding CAM. It was clear that there was lack of access to information and limited literacy about CAM among study participants. For example, many study participants stated that they would find it helpful if they could access more and clearer information about CAM, "I would say that's a barrier [lack of information about CAM]. Like, I've read those papers, and I really don't know what they're …talking about sometimes, right?" (Emma); "And I think that's really wonderful [education sessions about CAM side effects] for seniors 'cause most think that herbals don't hurt! Ninety percent of them think that way. I said, 'You cannot mix anything together'." (Tamara); "Like, [information] that is regular maybe every three months, or if there's a new study out, I'd like that". (Mary)

In addition, most study participants reported that they have internet access in their rural communities but they often do not have the knowledge or time to use it. Thus, access to CAM information was also affected by personal circumstances, such as time and ability to access information electronically. As Mary stated, "I think that we have access [to the internet], but we don't have it [at home]"; and Sarah stated that she has internet, but she did not have the knowledge to use it,

"Of course now the internet has got everything on it [but I] can't check out anything on it".

Some participants considered CAM harmful to their health because they perceived that CAM may interact with other conventional medications such as antibiotics; other participants seemed ill informed about this matter. For instance, they often responded with statements like, "I won't use it [CAM] because there is a chance of interaction with other conventional medications".

Cost due to Limited Health Insurance Coverage. The cost of CAM was cited by study participants as a deterrent to its use. Some participants stated that CAM therapies such as massage and chiropractor services are very expensive and they can not afford them. In addition, CAM is not covered by government-funded health insurance, and this discouraged study participants from using CAM. Jessica suggested that CAM could be affordable if insurance fees were based on individual income, "I've been once and it was a hundred [dollars]. Like in a Utopian world I'd think that they could bill it as just as fees based on someone's income, that could work…". Suzan noted:

> Yeah, I usually go as needed. Unfortunately the government doesn't fund it [chiropractors and massage therapies] as much as it used to. I think that a lot of problems could be taken off of… regular doctor's shoulders if the chiropractors and massage therapists were more ... funded by the government.

Many study participants recommended that CAM therapies be included in health insurance plans and subsidized health care because they found CAM very effective. However, at present the personal cost of CAM therapies discouraged women from using them and thus acted as a barrier to CAM use.

Facilitators and Barriers

(In) accessibility of CAM providers and resources and professional influences acted as both barriers and facilitators to CAM use.

(In) Accessibility of CAM Providers and Resources. CAM providers and resources were often inaccessible to participants due to distance and lack of particular CAM such as chiropractor services. This inaccessibility discouraged CAM use. For example, Emma stated that she was not pleased that some CAM resources were removed from the stores by Health Canada:

> I'm thinking, like, from the health food store, those things are taken off the shelf by [Health Canada]. It did come back. So that was kind of a barrier. 'Cus it works really well. And I find my kids do really well on it.

CAM providers often did not exist in rural communities. Most participants stated that they had to spend extra time to reach CAM providers, "about 20 minutes [to chiropractor]. He's in Tillsonburg"(Suzan); "forty-five, fifty minutes [to the closest naturopathic doctor]" (Jessica). Alexandra noted:

> Yeah, I think you could go to a bigger…type drug store in maybe a bigger city or like a specialty store, but you would definitely have to come to London, which is an hour away, or Sarnia, which is about 40 minutes away… there are a lot of women who will go out to the bush or go wherever they need to go to get the stuff they need. But I think for the younger women who aren't in tune with that whole thing, they just want to go to a store and buy something; they would have to travel a bit.

On the other hand, other study participants focused on the accessibility of CAM providers and resources. For example, Sarah and Tamara preferred to order CAM online from drug retailers or herb websites so that CAM could be delivered to their door, "I just order the products online. They bring it right to your door with Purolator. So it's as easy as pie", and "I just go over to [drug retailers] and I

order it, and she sends me a magazine every month". These participants found it easier, more private and confidential, and more reliable to access CAM providers by internet rather than visiting CAM providers. Online access saved study participants the time and the effort of travelling far distances to obtain CAM, and also helped them avoid the embarrassment of obtaining conventional medications from people they knew.

Professional Influences. Study participants found that some professionals, such as massage therapists and naturopathic practitioners, were more supportive of CAM, and that other health care professionals, such as physicians, were less supportive or even hostile to CAM use. As a result, participants, such as Jessica, preferred to consult the former practitioners:

> The natural doctor [made supportive comments] like "Your diet can change a lot of things and the way that like, you carry on your everyday life and…" I'm losing more faith in the pharmaceutical industry and the whole medical industry in itself.

On the other hand, study participants also noted that some of the more conventional health care personnel, such as pharmacists and nurse practitioners, were very helpful and respectful regarding their health conditions. They were satisfied with this care, and thus were discouraged from using CAM. For example, Mary and Sabine stated, "She [Nurse practitioner] really spends time with you. She takes the time to talk with you. She really listens. She's just yeah, another woman that understands more", and "Yeah. And very respectful [Pharmacist] and he doesn't talk down to you. He's wonderful".

Thus, professional influences acted as both a barrier and a facilitator to CAM use. As a facilitator, participants found CAM practitioners in particular

were more supportive of their health needs and use of CAM therapies. On the other hand, professional influences also acted as a barrier to CAM use because some health care professionals, especially nurse practitioners and pharmacists, were helpful and supportive, which made them satisfied with conventional medicine and gave them no reason to look for other options such as CAM.

Comparing Conventional Medication Use and CAM Use

Findings from this study revealed that study participants compared conventional medication use and CAM use. Regarding CAM use, approximately 18 of the 20 participants were using or had used one or more CAM therapies simultaneously with conventional medications, or alone. Study participants used various types of CAM therapies. The most commonly used were herbs, vitamin supplements, massage, and the chiropractor. For example, Mary and Alexandra stated that they were using various types of CAM including calcium and vitamin B supplement, fish oil and cod liver oil, milkweed, and ginger. Mary stated, "My husband and I are taking calcium, vitamin B, and the 'maxifa'- the triple fish oil pills and I have great faith in cod liver oil". In addition, Alexandra stated, "The only thing that I could really remember was the milkweed and ginger stuff but she [her grandmother] definitely always had things she went out in the bush and got and treated us for". Tamara found it useful to have Shaklee and Echinacea in her house, "I did some Shaklee for a few years back … but I always have Echinacea in the house. When they [her kids] have a cold I would tell [them] to take their Echinacea". "I tend to use herbal more than like any other medication, actually".

CAM was the obvious health care choice for one participant who had an Aboriginal background. Alexandra described CAM as her precious legacy from her family and chose to use CAM therapies rather than conventional medications so as to follow her Aboriginal cultural background:

> I think definitely it's [past CAM use experience] a cultural type [of] thing… being Aboriginal. But I think she [her mother] definitely would have heard it from her mother and her grandmother. So things that were passed on to her that she passes it on to her children as well as her grandchildren.

In addition, some study participants preferred to use CAM because it was perceived to be a more natural and less processed product, as Alexandra stated:

> Maybe there's other things, herbal-type medications, that you could be using instead [of medications] more natural things. So… you know, that's how she [her mother] was and I think that's sort of [how I've] been conditioned to be.

Others stated that they preferred to use CAM depending on the nature and severity of their illness. For example, Suzan would go to see her chiropractor if she had a sore muscle or neck:

> Depending on what it was … [and its] severity… [like] sore back ... sore neck …muscles sore … I'm gonna have to go see him[chiropractor] soon because ... my hands have been starting to go numb on me.

While most of the participants used CAM to provide care for themselves and their family members, some also relied on conventional medication use as their primary health care choice. The conventional medications were used in two forms: prescribed pharmaceuticals such as antibiotics, and non-prescribed/over the counter medications such as advil. The participants relied on these conventional medications in order to deal with various health challenges such as skin problems, headache, cold, and menstrual pain, as well as for children's colds

and infections. For example, Jenny described her experience with prescribed medication:

> I take it [prescribed medication] because I was having really hard time with my periods and stuff. So, the doctor that's what he put me on cus it's one of the mildest forms of the pill. And … it cleared up [my] skin and did everything.

Tylenol or Advil were the most used over-the-counter medications. On the other hand, other study participants relied totally on CAM therapies.

In summary, comparing conventional medication use and CAM use was important among most study participants. Participants used their cultural backgrounds, family influences, and illness needs to determine which treatment to use: CAM or conventional medicine. However, some participants preferred to use both CAM and conventional medications. Vitamin supplements and non-prescribed/over the counter medications were the most common types of CAM used by study participants.

Evaluating Effectiveness of CAM

Experiences with the effectiveness of CAM use varied among study participants. Nonetheless, perceived effectiveness of CAM use was evaluated by most participants according to its utility in the promotion of health and illness prevention, and in treatment.

Health promotion and illness prevention. The majority of study participants valued the effectiveness of CAM use in enhancing their immune system and preventing illness. For example, Emma stated that, "I believe that it [CAM] really helps. And some people say that you have to believe in it, but I say that it really helps. Like, if you keep your body healthy then you don't need the

…medical doctor, right?", and Ellen noted, "So when my immune system was down with the fibromyalgia, I started taking it [CAM therapies], and I haven't had the laryngitis since". Timmy commented:

> I've read about it like you know where they have ads on it, and I know people that do take apple cider vinegar and I've been taking it and I think it helps with digestion . Like I don't have any problems with my bowels or anything, so I think it must be doing something.

Mary found Vitamin B effective for her memory and stress, "Vitamin B, they say that it is good for stress and that it's really good for your memory. It's just over all good for you". Angela used milk thistle and cod liver oil to enhance her immune systems:

> I just started taking some milk thistle. Now I've been told it's supposed to be good for care of your liver and stuff. And I thought, after I've had the chemo. And I just started it the first of June.

In addition, Ellen stated that," For my immune system [I take cod liver oil]. I used to end up with several flus and colds. I had a real problem with the menopause. So, I've been taking an herbal remedy [Estervan] for that and it does seem to help a little". Maggie used multivitamins and folic acid in order to improve her immune system by giving her more energy, and explained that, "The B-6, 12, the folic acid give me energy and I think 3, 6, and 9 was just because I need those essential oils". In conclusion, the majority of the study participants evaluated CAM according to its utility to maintain and promote their health status and to enhance their immune system, and found CAM products beneficial.

Treatment. Participants often evaluated CAM for its utility in treating various illnesses and conditions, such as the common cold, menopause symptoms, cancer, and infections. For example, Ellen explained:

> It's called Life Fiber. So I use it, I've used it for probably twelve- fifteen years. And I would say I'm free of… the irritable bowel now. The fiber has really helped. So I'm faithful to that. Calmagtilate helps with sleeping patterns because with the fibromyalgia, there's a lot of problems with sleeping and the sleep patterns.

CAM effectiveness often led to long-term use, as Robyn stated, "Yeah. And I'm gonna keep giving it [herbal therapy] to her [daughter], until I'm sure that it's gone".

Thus, CAM effectiveness was evaluated by the absence or because of illness symptoms following CAM use and by general increased comfort such as in palliative care. Physical or psychological cure and comfort were the most useful evaluating criteria for CAM use from the participants' perspective.

In summary, most of the study participants selected CAM as their primary health care choice. Herbs and vitamin supplements were the most reported CAM types used by the study participants, probably because they are easily accessible in their rural communities. CAM use facilitators and barriers were influenced by various rural factors such as limited health care accessibility, familiarity, and financial insecurity. Criteria that participants used to determine whether to use CAM or conventional medicine included cultural backgrounds, influences of family and friends, illness needs and severity, and factors such as professional knowledge of CAM use. Finally, participants evaluated CAM effectiveness according to its ability to address health promotion, illness prevention, and treatment needs.

These findings are depicted in Figure 1 on page 66. Rural women decided to use/reuse CAM if they found it effective for health promotion, illness

prevention, or treatment purposes. However, rural women tended to not use CAM or tended to turn to conventional medicine in cases where CAM therapies were not effective. Finally, the decision to use CAM and the CAM evaluation criteria used were affected by many rural factors which can be identified as facilitators and/or barriers.

Discussion

This secondary analysis study explored the experiences of Canadian rural women in Southwest Ontario regarding CAM use. Five main findings were revealed: rural facilitators to CAM use, rural barriers to CAM use, factors that acted as both facilitators and barriers to CAM use, CAM evaluating criteria, and a comparison between conventional medications use and CAM use. The findings of this study afford two main insights as described below: interconnection between deciding to use CAM and evaluating CAM therapies, and considering rural environmental factors and CAM use.

Interconnection Between Deciding to Use CAM and Evaluating CAM Therapies

The study findings provide valuable insight regarding the interconnection between the decision to use CAM and CAM evaluation criteria. Consistent with the findings of others (Glover, Amonkar, Rybeck, & Tracy, 2003; Glover, Rybeck, & Tracy, 2004), herbs were the most common CAM types used by rural women, separately or in combination with other conventional medications. Nurses can assist rural women in their health care choices by first identifying the available health care options including CAM use. The appropriateness of

providing care to rural women should also be addressed, as some nurses may not have the knowledge about CAM therapies.

The conventional medication usage by rural women in the Glover et al. study was substantial, and the frequency and types used varied based on personal reasons, cultural backgrounds, and severity of illness. Moreover, herbs and vitamin supplements were the most common types of CAM used by American rural women and men for many reasons such as geographical accessibility (Glover et al., 2004; Mundo, Shepherd, & Marose 2002). My findings were similar in that herbs and vitamin supplements were the most common CAM types used by rural women. This finding suggests that nurses should consider the use of CAM therapies by rural women to meet their needs, and not simply advocate conventional medicine use.

Existing Canadian studies focus on the percentage of CAM use by rural dwellers in general, without giving specific attention to rural women. My study addresses this gap in the existing literature by examining rural women's experiences with CAM use in terms of the factors, reasons, and evaluating criteria for its use. In addition, my study findings introduce new aspects of CAM use by rural women, such as the environmental factors effect on the decision to use CAM including all the facilitators and/or barriers. My study findings suggest that the effectiveness of CAM therapies is evaluated by rural women using various criteria, such as its effectiveness in illness prevention purposes. In addition, most study participants used CAM to promote their health or to prevent illnesses by

enhancing their immune system while others used CAM to treat illnesses from the common cold to cancer.

Most of the available literature has focused on CAM use by populations with specific diseases such as cancer. Similarly in my study participants used CAM to treat diseases such as cancer and arthritis. However, my study findings expand our understanding by detailing rural women's use of CAM for other reasons such as for health promotion or illness prevention. This detailed knowledge can assist rural nurses to develop better health promotion plans. For example, as findings in this study reveal, rural factors such as accessibility of CAM and consultation of friends and family in decision making should be considered in health promotion programs. In addition, CAM education can be initiated by rural nurses, as recommended by study participants, to address CAM therapies' side effects, appropriateness and effectiveness.

Considering Rural Environmental Factors and CAM Use

A second insight from this study is that several rural environmental factors contribute to CAM experiences among Canadian rural women and translated into facilitators and/or barriers. Rural environmental contributing factors to health have been found in the literature (Morgan et al. 2002). For example, familiarity in rural communities may contribute to rural women's resistance to using conventional health services. Morgan et al. and Sutherns (2005) concluded that as a result of the familiarity and lack of privacy that comes with living in a rural community, it can be difficult to access health care services, especially with stigmatized illnesses, such as dementia. My findings are consistent with the

Morgan et al. study, confirming that lack of privacy is considered one of the most common barriers to using conventional health care. However, my study findings expand our understanding regarding the positive effects of familiarity for CAM use. For example, some participants preferred to use CAM rather than conventional medications because access to CAM was more confidential. As a result of my findings, rural nurses should carefully assess clients' needs regarding CAM and other conventional medication use, especially with clients who have health issues, such as mental illnesses, that can be stigmatized in rural settings. In addition, structural change might be required in some rural pharmacies, such as assigning a private room for dispensing medications so their privacy will be protected.

In my study, the inaccessibility of conventional medications was reported as a major characteristic of rural health care systems. As a result, some study participants turned to alternatives such as CAM. Similar to Arcury et al. (2005), study participants in my study found some CAM therapies accessible and more available than conventional medications because they could access them without prescriptions from various resources such as Walmart and health food stores. Interestingly, however, rural participants were concerned that their use of CAM therapies might interfere with other conventional medications, so they recommended more educational programs about CAM therapies' side effects and possible interactions with other medications. Thus, my study findings suggest that health care professionals should work with CAM practitioners to ensure the safe and effective use of CAM medications and conventional interventions. For

example, health care professionals and CAM practitioners in each rural community could meet together regularly to discuss safe and effective medication use. In addition, CAM practitioners could initiate health promotion programs, such as introducing the most effective CAM therapies used, side-by-side with health care professionals, to enrich the care services in rural communities. This also will help to create a stronger health care system in Canadian rural communities.

Furthermore, in my study the Aboriginal rural woman defined CAM as her precious legacy passed down from generations, so she preferred to use CAM first, then turn to conventional medications. Consequently, there is a need to educate rural nurses on the needs and preferences of various cultural groups such as the Aboriginal population regarding CAM use. Further research is needed about cultural use of CAM therapies and various CAM therapies that are based on cultures such as Aboriginal, Chinese, and Indian medicine.

Based on my findings, access to some CAM therapies required effort in isolated communities, as some CAM providers and resources such as chiropractors were not available in all rural communities. As a result, some study participants expressed hesitation in revisiting CAM providers, such as chiropractors, for a second time because they seemed to be "hard to reach". Conversely, other CAM therapies such as herbs are easily accessible through the internet and were consequently used more often among study participants. However, rural women, such as those in my study, may tend to use the most available CAM therapies, although these might not be the most suitable.

Therefore, nurses could provide educational sessions to rural women about better and more suitable CAM therapies. In addition, nurse practitioners could assist rural women to access appropriate CAM therapies by discussing CAM treatment options appropriate to their health situations (CNO, 2009). Moreover, rural nurses could assist clients by asking CAM providers to stock particular CAM medications that are deemed safe, effective, and appropriate to the health needs of the population.

Study participants described how they were influenced by the negative responses of certain providers, such as physicians, regarding their health needs and health care preferences. Consequently, they preferred not to share their CAM use with these health professionals who were not knowledgeable or supportive, which could affect rural women if their CAM therapies interacted with other conventional medications. On the other hand, some study participants preferred not to use CAM if they felt supported by conventional medicine. This may encourage physicians to attract rural women to use conventional medications by being more supportive and inclusive of their health care decisions including CAM.

In summary, these findings are important because they shed light on a new aspect of CAM use, which is the consideration of the effects of rural environmental factors on rural women's CAM use. For example, rural nurses could assess CAM therapies available in their communities and how they are utilized to study the influences of rural factors on CAM use. More research about CAM use and the influence of rural environmental factors, which acted as barriers

and/or facilitators, is needed to better understand the relationship between these rural factors and rural women's decision to use CAM. Rural women should be asked about their definition for and use of CAM therapies in order to better understand their experiences and decision making processes. In addition, nursing scholars could use grounded theory research to explore CAM use decision making processes and how the effectiveness of CAM is situated within these processes (Glaser & Strauss, 1967). In the end, more research is needed to explore the informational usage, evaluation criteria, and other needs of rural women specifically concerning CAM therapies and their use in illness prevention, treatment and health promotion.

Study Limitations

This study helps to inform our understanding about the health care choices rural women make. While this secondary analysis provides an important perspective on CAM use by rural Canadian women, further research is needed. Firstly, most of the study participants were relatively homogenous in terms of ethnicity, ability, and location. A more heterogeneous sample representing a variety of social, cultural, and geographical backgrounds would help to better understand CAM use experience. Secondly, no family members participated in my research study. Their perspectives could provide insight regarding women's decision-making processes regarding CAM use, and should be included in future research. In addition, because rural factors significantly influenced rural women's experiences with CAM use, further investigation is also required to examine the experiences of those in urban areas, and how urban factors influence CAM use.

Thirdly, most of the literature included in this study was American in origin because of the limited available Canadian CAM literature, which may have implications for a Canadian study such as this due to different health care systems and CAM definition and inclusion criteria. For example prayer is considered a CAM therapy in the United States, but not in Canadian definitions. Finally, I could not validate my findings with the original study participants, which might have affected the nature of my findings.

Conclusion

This qualitative secondary analysis examines Canadian rural women's experiences with CAM use. The main findings reveal that many rural factors influenced rural women's experiences with CAM use. In addition, the study reveals that participants used two strategies to make decisions regarding their CAM use. First, they compared the effectiveness and availability of CAM and conventional medicine. Secondly, they evaluated CAM use according to its effectiveness in health promotion and illness prevention. These study findings are important because they address the gap in research regarding CAM use in Canada, especially regarding the very limited knowledge of how rural factors influence CAM use by rural women.

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CHAPTER THREE

The purpose of this qualitative secondary analysis was to explore the experiences of rural Canadian women and their use of CAM. Conventional medication use and CAM use, along with the facilitators and barriers to CAM use, affect rural Canadian women's experiences (Figure 1). Study participants focused on providing care to themselves and their family members while evaluating the effectiveness of CAM use. Evaluating CAM effectiveness was determined according to two criteria: health promotion and illness prevention, and treatment. These findings illuminate important implications for nursing practice within rural contexts, nursing practice and education, and future nursing research. These implications are important because nurses may be the primary and only health care providers in many rural communities (Leipert, 1999).

Implications for Nursing Practice Within Rural Contexts

Rural women's social and physical health issues result from a number of contextual rural factors such as limited health promotion and illness prevention programs initiated by health care providers, especially nurses (Leipert, 2005). In addition, rural nurses should be aware of their clients' health care practices (CNO, 2009), especially in limited health care services areas such as rural settings. In rural areas women are the primary care giver for the family (Crosato & Leipert, 2006), so they are often the primary decision maker for health care options in rural settings. Based on my study findings, rural women used a variety of CAM therapies; however, the cost of CAM therapies due to limited insurance coverage

was noted as an important barrier to CAM use. Most of the study participants recommended including CAM in national health insurance coverage. Thus, rural nurses should advocate for possible ways of including CAM (O'Connell & Russel, 2003) in Canada's provincial health insurance programs.

In my study, most participants tended to use CAM therapies alone or with conventional medications. These findings demonstrate that rural women's health needs and health care preferences must be recognized and respected by health care professionals because their health care treatment choice may have a direct effect on their overall health and future treatment choices. In addition, health care professionals should provide education regarding medication and therapy choices to their clients (Glanz, Rimer, & Lewis, 2002). Otherwise, poor decisions related to health care and health care professionals may be made by rural women.

Health care policies and procedures should ensure appropriate communication among rural women, nurses, and other health care professionals. As my study indicates, lack of communication about health care options, including CAM, between health care professionals and rural women about CAM use is often problematic. Many of the study participants expressed hesitation and concern when discussing their CAM use with health care professionals, especially physicians. One possible strategy to address this issue is for health care professionals to recognize CAM as an option for rural women. In addition, many participants suggested information sessions about CAM therapies, especially for seniors, in order to select and use CAM based on scientific knowledge. Thus, the development of resources such as information sessions and open dialogue to

facilitate accurate information about CAM therapies would be beneficial. Moreover, sessions about CAM therapies are especially important in rural communities that do not have access to the internet. Clearly, more accessible and understandable information about CAM, including its effectiveness, side effects, and possible reactions would be beneficial for study participants and their families. Health care professionals should also have access to such information by having access to the most up-to-date research studies about any CAM therapies.

Nurses are ideally situated to introduce CAM information sessions because, as study participants indicated, nurses are approachable and knowledgeable. In addition, rural nurses need to lobby ministries of health and rural physicians' associations, such as the Society of Rural Physicians of Canada, to be more inclusive of rural clients' treatment decisions. This would help rural women to disclose their CAM use to physicians. Moreover, rural nurses could initiate more research to study the effectiveness of rural CAM practices. For example, rural nurses could be engaged in evidence-based practice research about the effectiveness of CAM therapies.

Rural women may engage in health-promoting activities, such as using the internet to access updated information about health products (Paluck, Allerdings, Kealy, & Dorgan, 2006). However, they often have limited access to information and programs that promote their physical and mental health (Halma, Mitton, & Donaldson, 2004). Rural women's use of CAM can be considered health-promoting behaviour, mainly because rural women not only use CAM to restore and/or maintain their health, but also to improve their health (Millar, 2001). My

findings confirm this by predicting the evaluation criteria for CAM use. For example, most of the study participants engaged in health promoting activities related to CAM, by considering what to use, what not to use, and how it is effective.

This study generates new knowledge which can be used to develop health promotion programs and initiatives to introducing CAM as a viable choice for rural women. As a result of this study, health promoters may have a clearer picture regarding the health needs of rural women, especially if rural women are expecting to use CAM as their first health care choice. In addition, they need to ensure that they have up-to-date knowledge regarding CAM in order to be a reliable resource to rural women. Finally, rural nurses can increase their knowledge of CAM by taking special courses about CAM therapies use and their effectiveness.

Implications for Nursing Practice and Education

Study findings revealed numerous implications for nursing practice in rural communities. In such communities, CAM therapies are or could be an integral part of holistic nursing practices because they encompass various therapies that address both physical and spiritual/emotional health needs, such as meditation and prayer. As stated by Snyder & Lindquist (2010), "Nurses have assumed leadership roles in making complementary therapies more available to patients in diverse settings and to providing evidence-based guidelines for the use of these therapies" (p. 453). The increasing use and diversity of CAM therapies requires that nurses develop guidelines for these therapies in their practices by

considering each population's needs. For example, based on my findings, Aboriginal women may be more likely to use CAM therapies than other rural dwellers, so more attention is needed regarding Aboriginal CAM use experience. In addition, nurses should assess their clients' use of CAM therapies and assist in the identification of possible interactions with other medications.

The need for professionals to truly listen to their patients' health needs regarding their health care options was a paramount concern in this study. Regardless of the age or health condition of the participants, they felt that they and their health care options, including CAM, were entitled to be treated with respect, so health care professionals are responsible to integrate their clients in treatment decision making processes. However, rural participants in this study often experienced negative reactions when disclosing their use of CAM to health care professionals, especially physicians. Therefore, study participants often consulted family and friends when deciding about using CAM, as they often received support when their decision to use CAM was shared with a close family member or friend. Health care professionals should show positive responses to CAM users in order to encourage them to express their CAM use. For example, one of the participants described her family physician as disrespectful to CAM therapies because he was really upset and treated her differently after knowing about her CAM use. As this study shows, all health care professionals, but especially physicians, should respect each client's health care choices in order to support them. This respect can encourage clients to express their thoughts about

treatment and to, thus, experience the most effective treatment, weather it be CAM or conventional medicine.

Regarding nursing education, integrating CAM content in nursing curricula will expand nurses' knowledge about health care choices (Pestka & Cutshall, 2010), especially in rural areas. Educators and practitioners must know about the current scope of standards of practice and ethical guidelines to guide CAM performance (Reed, Pettigrew, & King, 2000). This study indicates the importance of having educational programs for all rural nurses that provide up-to-date information about CAM therapies, especially nurses who have been practising for a number of years. In-depth education on types of CAM therapies may not have been offered in nursing programs that these nurses undertook. Thus, activities such as workshops should be available and accessible for those who are currently practicing and may require further education in CAM therapies. These workshops could provide concrete knowledge that can be utilized by nurses in their practices. For example, nursing assessment should explore with rural women CAM use, ensuring that their health is appropriately and safely maintained and promoted. Health care professionals' acknowledgment of the value of CAM therapies can assist rural women to seek and receive appropriate health-related information and services from CAM providers, as well as others, such as nurses and physicians.

Implications in Future Nursing Research

Nurses need to be actively involved in CAM research because it has been identified as one of the newest health care choices (Snyder & Lindquist, 2010).

This qualitative study expands our understanding about various aspects of CAM use by rural Canadian women, such as the most common types of CAM used and CAM evaluation effectiveness criteria used by rural women. Previous studies (Canadian Women's Health Network, 2004; Health Canada, 2005; Sutherns, 2005) rarely specifically address how rural factors affect rural women's use of CAM. In addition, there have been studies conducted regarding the health beliefs and practices of urban residents with particular diseases or health conditions, such as depression and menopause, without considering such implications for rural residents and how they are affected (Freeman, Mischoulon, Tedeschini, Goodness, Cohen, & Papakostas, 2010; Lunny & Fraser, 2010). My study findings address this gap in the literature by revealing the influence of contextual rural factors on rural women's use of CAM. However, more research is needed to fully examine factors and reasons for CAM use among rural women. In addition, rural men's experiences with CAM use could be influenced by rural women's experiences and rural men may have different health care needs and preferences, so more research is needed to study the rural environment.

More research is also needed regarding several topics, such as the safety and benefits of various CAM therapies as well as their effects and interactions when used in combination with other CAM therapies as well as with conventional medicine (Lindquist, Snyder, & Song, 2010). This may enhance CAM use in the future, because it would override the barriers to CAM use, such as lack of information and limited CAM literacy, and could thus increase CAM use by rural residents and their health care providers.

Conclusion

This qualitative secondary analysis study explored the experiences of rural Canadian women who use CAM. The study revealed that rural women tend to compare conventional medicine and CAM when deciding to use CAM. In addition, various factors in rural communities act as facilitators to CAM use, barriers of CAM use, and both facilitators and barriers. Moreover, the rural women in this study primarily used CAM to prevent illness/promote their health status or treatment, while others used CAM to treat health-related problems. Consequently, numerous implications for nursing practice, education and future nursing research were identified.

Most of the literature, as well as health care professionals, such as nurses, continue to focus on conventional medicine therapies without considering CAM use. CAM should be recognized as a viable health care option by health care professionals in rural areas. In addition, the relationship between the rural environment and the use of CAM by rural women has to be explored more in future research because it appears as a major and critical theme in this study. Moreover, there is a need to investigate CAM use by rural women in terms of their decision-making processes and their experiences with CAM over an extended period of time and for various purposes.

The responsibility lies with those in decision-making positions, such as heath care practitioners, educators, and policy makers, to increase awareness regarding the provision of CAM use, to implement appropriate education, and ultimately to optimize the health of all in rural settings. This is especially

important for nurses, who may be the only health care provider in a rural setting, and for rural women, who are often the health care provider and decision-maker for the family. As this study highlights, CAM use may and could figure prominently in rural health, and nurses have a significant role to play in ensuring CAM's safe and effective utilization.

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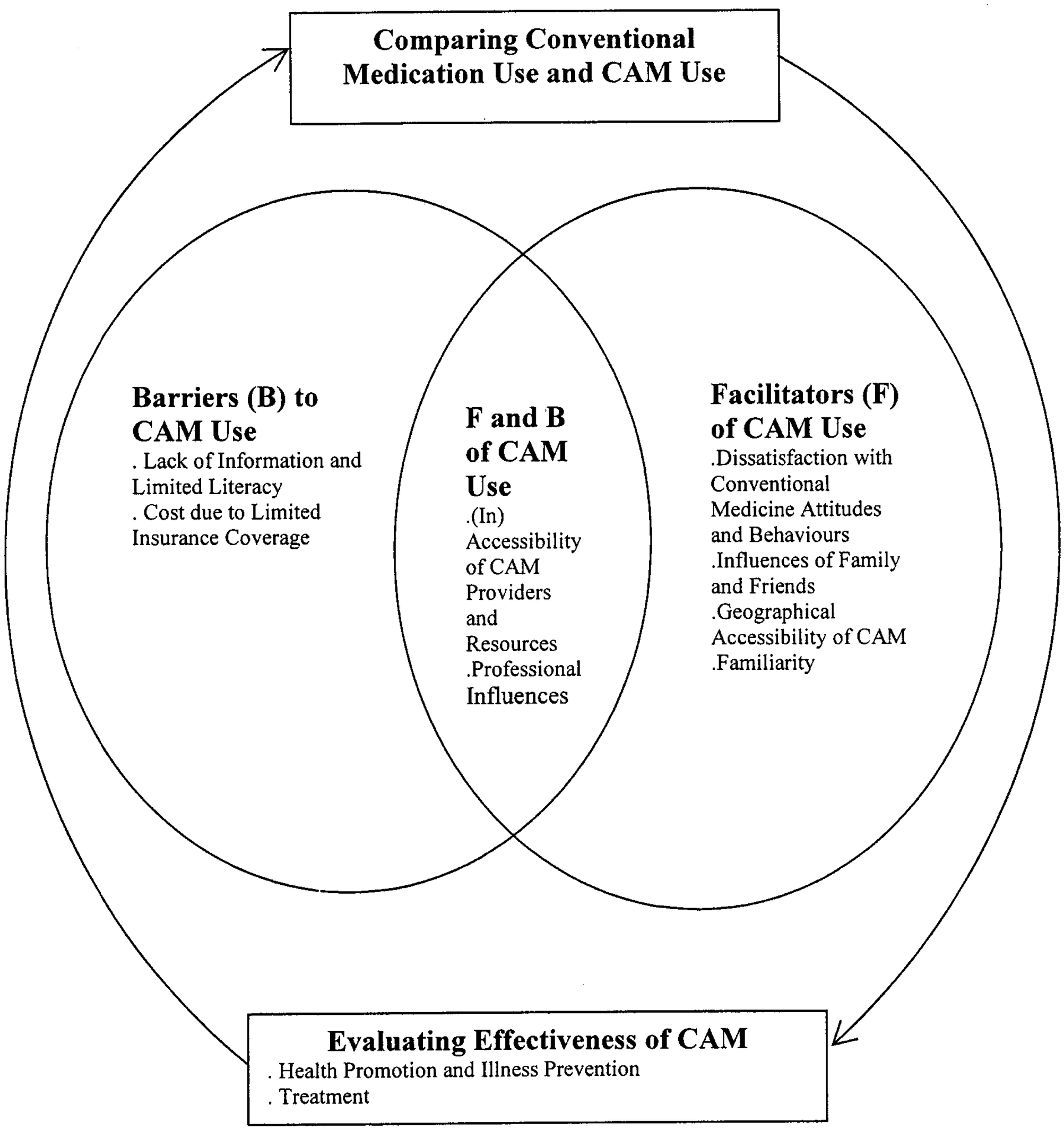
Figure 1. Complementary and Alternative Medicine Use by Rural Canadian Women



APPENDIX A

Consent Form

RURAL WOMEN AND PHARMACEUTICAL USE: ISSUES, CHALLENGES, AND SOLUTIONS

PRINCIPAL INVESTIGATORS: Dr. B. Leipert
Dr. D. Matsui

I have read the letter of information, have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction.

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Signature of participant Date

Printed Name of Participant

---------- ----------

Signature of person Obtaining Consent Date

Printed Name of Person Obtaining Consent

APPENDIX B

Letter of Information

Study Title: rural women and pharmaceutical use : issues, challenges, and solutions.

Study Investigators:

Dr. Beverly Leipert, PHD, RN, Chair, Rural Women's Health Research, University of Western Ontario.
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You are being invited to take part in a research study looking at the needs of rural women regarding their use of prescription and non-prescription medications, from the perspective of rural women. The purpose of this letter is to provide you with the information you require to make an inform decision on participating in this research.

The study involves interviewing fifteen women who are 16 years of age of older and who live in rural areas of Southwest Ontario. If you are participating in another study at this time, please inform the investigator right away to determine if its appropriate for women to participate in the study.

What will I have to do if I choose to take part?

You will be asked to take part in an individual interview conducted by one of the investigators or the research assistant. The interview will include questions about drug-related needs, issues and behaviours with respect to prescription, non-prescription and herbal preparations. The interview will last about 2 hours, and will be audiotape recorded and typed out. The individual interview will be conducted in confidential location (your home, in the researchers office or another convenient location in your community) mutually agreed upon by you and the researcher.

Are there any risks or discomforts?

There are no risks to your participation in this study apart from the time inconvenience. Sometimes talking about certain issues can be uncomfortable; however you may decline to answer any questions that you find discomforting.

What are the benefits of taking part?

There are no direct benefits to you associated with your research participation in this research. However, your first hand experience of rural life and how it affects the health of rural women is very important information that only you have. Your views can help influence the services, programs, and policies that are put in place for rural women. Results may also help people in rural setting think about rural women's health and make changes.

You will receive compensation of $50.00 in appreciation of your participation in this research.

What happens to the information that I tell you?

The individual interview will be audio tape recorded. What you say on the tape will be typed out. The only people who will listen to the tapes will be the study investigators, the research assistant, and the typist. To protect your identity, only numbers will be used to identify tapes and transcripts of the tapes and the tapes will be erased after 7 years. Your research report will be locked in a secure office at the University of Western Ontario or children's hospital of western Ontario.
If the results of the research are published, your name will not be used and no information that discloses your identity will be released or published without your specific consent to the disclosure.
Representatives of the University of Western Ontario Health Sciences Ethics Board may require access to your study-related records or may follow up with you to monitor the conduct of the research.

Other information about this study:

Participation in this study is voluntary. You do not have to be in this study if you do not wish to be. If you decide to be in the study you may drop out at any time by telling the investigator. If you drop out of the study, any information that you have provided may still be used in the research findings. You may refuse to answer any questions during the individual interview. Refusing to participate in this study or dropping out will not affect your care in a hospital, or in the community. You do not wave any legal right by signing the consent form.

If you have any questions or require additional information, please contact: Dr. Beverly Leipert

If you have questions about the conduct of this study or your rights as a research participant you may contact: The Director, Office of research office, University of Western Ontario: (519)661-3036.

This letter is for you to keep

APPENDIX C

The Interview Guide

1. **<u>Rural women's experiences of pharmaceutical/drug use</u>**

Prescription Drugs
What prescription drugs are you taking?
What d you take these drugs for?
Who prescribes these medications for you?
Where do you buy these drugs?

Non-Prescription Over-the-Counter Drugs
What non-prescription over-the-counter medications do you take?
What do you take these medications for?
Where do you buy these medications?

Herbal Medications
Do you use herbal medications and if so, which ones?
What do you take the herbal medications for?
Where/how did you find out about these herbal medications?
Where do you obtain these preparations?
Does your regular doctor know about your use of these herbal medications? If not, why not?
How involved are you in the decisions as to which medications you take?
How do you decide what medications to take?
Most people occasionally forget to take a dose or 2 of their medication. What percentage of your medication does do you take?
With whom are you most comfortable talking about drug-related issues?

2. **<u>Rural women's daily experience of living in a rural setting and its impact on their pharmaceutical/drug use</u>**

What do you think are the benefits of living in a rural community regarding drug use?
What are the disadvantages of living in rural community regarding drug use?
Does living in a rural setting affect your drug therapy?
Do you think that there are any problems with the health care system as it relates to living I a rural community?
Do you have a family doctor or GP?
Are any other health care providers involved in your medical care for eg. Other doctors, nurse practitioners, public health nurses, social worker, addiction counsellors, naturopaths, etc.?
Do you travel to the city for your medical care? for medications? Why do you travel to the city for these resources?
How close is the nearest pharmacy to your home? Do you travel to locations with a pharmacy for other than access to medications? For what? How often? Where?
How far do you have to travel to get your medications?

What is your access to transportation? Do you drive? Have a vehicle?

3. **Rural women's knowledge or and preference for pharmaceutical/drug use**
   Where do you go or who do you ask for information about drugs?
   Where do you get information on the medications you are taking?
   Where would you like to get this information?
   In what form would you like to have this information?
   Do you have access to the internet and if so, have you used it to obtain information on drug therapy? how do you decide about the quality of the information? If so, who do you ask?
   have you heard of telehealth? what do you know about telehealth? have you used this service? If you have used this service did you find it useful? if you have not used telehealth do you see a role for it in your health care, in particular related to your use of medications?

4. **Barriers and facilitators to access and use of pharmaceuticals/drugs**
   Have you encountered barriers in your rural community when you've tried to obtain medication? Please describe these barriers.
   What in a rural community helps you obtain the medication you need? Please describe.

5. **Suggestions for solutions to pharmaceuticals/drug related issues in rural communities**
   What suggestions do you have for improving drug therapy in rural communities?
   If you were in charge and money was not an object what would you do to improve rural women's access to medications and medication-related information? To improve prevention regarding drug misuse and abuse?

Now that the research is over….

How was this research experience for you?
Why did you volunteer for this research?
How important do you think this topic is?
Would you change anything about the research?

Any other comments: