

Is there a correlation between locus of control, health-promoting lifestyle profile and the utilization of a primary care provider for wellness activities in adults with schizophrenia?

Thesis

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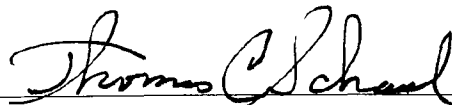
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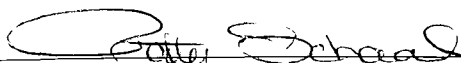
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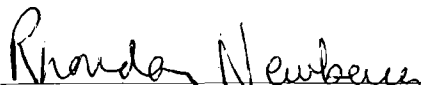
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ABSTRACT

Objective: The purpose of this research was to examine the health beliefs and health practices of adults diagnosed with schizophrenia.

Methods: A correlational study was done using a convenience sample of 30 adults diagnosed with schizophrenia. Each subject completed demographic information as well as the Multidimensional Health Locus of Control Scale (Cronbach's alpha=.830 to .859) and the Health Promoting Lifestyle Profile II (Cronbach's alpha=.943). The results of the instruments were analyzed using Pearson's product moment correlation to determine if a correlation between aspects of the demographic data as well as the instruments was found.

Results: Responses were statistically significant between whether subjects had had a physical exam within the last 12 months and if they had had any screening tests ($p=.026$), as well as where the subjects went for their medical care ($p=.003$ level). Also, the internal health locus of control (IHLOC) was positively correlated with the powerful others health locus of control (PHLOC) ($p=.003$) and both were positively correlated with the overall health promoting lifestyle profile score ($p=.002$ and $.003$ respectively). A positive correlation was also found between many of the Health Promoting Lifestyle Profile subscales ($p=.000$ to $.049$)

Conclusions: Based on the results of this study, adults diagnosed with schizophrenia that had an IHLOC or PHLOC were found to be more likely to participate in health promoting activities. Further research related to this topic is needed.

CHAPTER I

INTRODUCTION

It has long been recognized that regular medical care is fundamental to the physical well being of individuals. It is also a well-documented fact that many people do not seek the services of a health care provider until they are seriously ill. "More than 40 million Americans do not have a particular doctor's office, clinic, health center, or other place where they usually go to seek health care or health-related advice" (US Department of Health and Human Services, 2000, p. 45). There are numerous studies that have explored the reasons that people do not utilize seemingly available health care services (Cary, et al. 1995; Cykert, Kissling, Layson, Hansen, 1995; Shi, Starfield, Kennedy, Kawachi, 1999; Stewart, et al 1997).

Having health insurance, does not always guarantee that people will make use of available services. Cary et al. (1995) looked specifically at non-financial barriers that affected an individual's failure to access primary health care. The report specifically cited education, language, personal experiences, attitudes and beliefs, transportation, and social support as well as race, ethnicity, gender, economic status, geography and environment as important factors. Carey et al. go on to state that vulnerable populations (including but not limited to the elderly, persons with disabilities, the homeless, persons with HIV or migrant workers) are at a higher risk of being susceptible to these non-financial barriers. Aday (1994) defines vulnerable populations as those that are "at risk of

poor physical, psychological, and/or social health” (p. 487). This would include those with a severe and persistent mental illness.

Crews, Batal, Elasy, Casper, and Mehler (1998) report that many of the severely mentally ill do not get regular medical care, or if they do get it, they do not get it until a late stage in the disease. This may be related to education, the result of an established personality trait that does not value regular health care or due to problems with accessing the health care system. Another factor may be the difficulty that this population has in differentiating between somatic symptoms of the mental illness, medication side effects and the medical illness itself. King and Nazareth (1996) as well as Burns and Kendrick (1997) report that the mortality rate of adults with schizophrenia is double that of the normal population, while Crews, et al. cite a rate four times that of the baseline population. They go on to state that these deaths are frequently related to cardiovascular or respiratory disorders—smoking, a sedentary lifestyle, obesity, hypertension and the cardiac effects of antipsychotic medications—all which contribute to their increased mortality rate.

Schizophrenia is a severe psychotic illness that affects the mood, regulation of emotion, thought process, behavior and the total personality (Huelskoetter, 1983). It is usually diagnosed during adolescence or early adulthood (seldom after age 30). The cause is not certain, but research has shown a possible genetic and biochemical etiology. Schizophrenia is identified by the presence of distinct alterations in many areas of interpersonal functioning. It is characterized by both positive and negative symptoms. The positive

symptoms include hallucinations, delusions, and disorganized speech or behavior, while negative symptoms consist of restriction of emotion, poverty of speech and a lack of motivation (American Psychiatric Association, 2000). Those with schizophrenia experience ambivalence as well as difficulty in trusting others (Holmberg, 1993). All of these factors influence how the person with schizophrenia interacts with individuals and with systems (such as the health care system).

Why are the severe and persistently mentally ill (SPMI) so vulnerable to high morbidity and mortality rates? Farnam, Zipple, Tyrrell and Chittnanda (1999) relate this problem to several factors: the stigma of having a mental illness, poverty, differences in lifestyle as well as limited social networks and knowledge and accessibility of resources. Aday (1994) cites the reason for poor health as the result of communities' failure to invest in and assume responsibility for the well-being of its members.

If the mortality rate of adults with schizophrenia is to decrease, health care providers must be cognizant of both the financial and non-financial barriers that this population must overcome in order to access primary health care. Even though severe mental illness is not specifically identified, this deficit is addressed by *Healthy People 2010* which has listed as objectives four and five in its first focus area to "increase the proportion of persons who have a specific source of ongoing care" and to "increase the proportion of persons with a usual primary care provider" (US Department of Health and Human Services, 2000, p1-18 & 1-20).

One of the principal responsibilities of a primary care provider (PCP)

is to educate their patients in methods of primary disease prevention, otherwise known as health promotion. The health promotion model is a nursing model that places emphasis on the patient in the development of and participation in health promoting behaviors. These behaviors develop as a result of the patient's individual characteristics and experiences, as well as, the ideas and beliefs that they have regarding the value of health promotion behaviors. It is a middle range theory that integrates what is already known about health promoting behavior and provides a framework for more clearly understanding how the results of previous research fit together and how concepts can be manipulated for further study (Tillett, 1998).

CHAPTER II

REVIEW OF THE LITERATURE

Buschbacher, DeLisa and Kevorkian (1997, p 149), the US Department of Health and Human Services (2000, p. 1-5) and Safran, et al. (1998, p. 213) utilize the definition of primary care developed by the Institute of Medicine Committee on the Future of Primary Care in their writing. It is defined as,

the provision of integrative, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.

There is evidence that access to this kind of primary care is the most significant predictor of health status (Shi, Starfield, Kennedy & Kawachi, 1999). The purpose of primary care as defined by Buttaro and Trybulski (1999) is “to encourage wellness, prevent illness, treat chronic disease and provide palliative care” (p. 3).

Visits to emergency departments rose by almost 50 percent from 1973 to 1993 (Clark, 1996). Clark points out that in a 1993 survey, 42 percent of patients interviewed stated their reason for coming to the emergency department for non-emergent care was due to their lack of a primary care provider, followed by 18 percent going to the ER because of after hours availability and 18 percent for reasons related to convenience. There has been a push in recent years to limit the utilization of emergency services for non-emergent care because some analysts say emergency care costs two-to-three times as much as the same care elsewhere.

Urgent care clinics have been developed in an attempt to decrease the public's reliance on hospital emergency departments and cut health care costs. They do not however, address the problem of patients who do not identify a primary care provider (PCP) for coordination of routine, health maintenance and preventative care.

Cary et al. (1995) point out that despite this country's huge outlay of health care dollars, Americans continue to lag behind those of other developed nations in terms of health status. The current life expectancy for American women is 78.9 years and for American men is 72.5; this is ranked 19th and 25th respectively, among all countries in the world (US Department of Health and Human Services).

One vulnerable group that seemed to be largely missing from the literature is that of the severe and persistently mentally ill (SPMI), specifically those with schizophrenia. Before 1955, patients with a chronic and persistent mental illness were cared for in public institutions that guaranteed food, shelter and medical care (Crews, Batal, Elasy, Casper & Mehler, 1998). The advent of medications in the 1950's that allowed control of previously uncontrolled symptoms and a return to functioning in those with chronic mental illness was the first step in reintroducing the severe and persistently mentally ill into the community. In 1963, there was a directive from the Federal Government that mandated a reduction in the population of state mental hospitals by returning these people to the community and caring for them through a system of community mental health facilities. The deinstitutionalization of the mentally ill

from these facilities that continued through the 1960's and into the 1970's, created gaps in services for this population. The medical community was not prepared to treat the high influx of mentally ill into a system that was not equipped to care for their needs. Because of their psychiatric symptoms, Shore (1996) states that they are unlikely to receive adequate medical care. Shore as well as Golomb et al. (2000) point out, that the psychiatrist is often the first and only physician that they have contact with on a regular basis.

Dickerson, Boronow, Ringel and Parente (1997) found a correlation between individual high symptom ratings scores on the Positive and Negative Syndrome Scale (PANSS), and an increased impairment of function and insight in relationship to their schizophrenia. The PANSS is a 30-item rating instrument that evaluates both positive and negative symptoms as well as other symptoms (including thought disturbance, paranoia and depression) in patients with schizophrenia. This impaired insight carries over into other aspects of their lives such as accessing health care. The SPMI often place a low priority on preventative health care because of more pressing psychological or social stressors or because of a lack of understanding of the benefits of these types of services (Crews et al., 1998). Holmberg and Kane (1999) identify poor judgment about health needs, low socioeconomic status and inadequate detection of physical illness by providers as factors that play a role in the increased risk of physical illness in the schizophrenic population.

In her Health Promotion Model (HPM), Pender (1996) uses social learning theory from Bandura, which suggests the importance of cognitive processes in the changing of behavior. It has as one of its primary principles the idea that current health promotion behavior is in some way, whether negatively or positively, influenced by past similar behaviors. It also takes into consideration the way that these past behaviors influence one's thinking related to health-promotion, influences perceptions of self-efficacy, benefits, barriers and activity-related affect (Pender, 1996). It does not include "fear" or "threat" as sources of motivation for health behavior as the Health Belief Model (HBM) does.

The HBM is one of the most widely used models to explain and predict health behavior and change in individuals (Skinner & Kreuter, 1997). It was developed in the early 1950's by psychologists to explain and predict preventative health behaviors. The HBM suggests that people are more likely to engage in a health action if they think they are at risk for a condition that they consider severe (Skinner & Kreuter). Therefore the focus of the HBM is primarily on the avoidance of negative events as the motivation to change behavior rather than the broader view of the HPM, which also includes behaviors that improve health (Tillett, 1998). Fishbein's theory of reasoned action that emphasizes that behavior is a function of personal attitudes and social norms (Tillett) is also essential to the HPM.

Figure 1 schematically describes how a person's individual characteristics and experiences, behavior-specific cognitions and affect and behavioral outcomes can and do influence their participation in health-promoting

behaviors. According to the HPM, people move back and forth in a reciprocal manner between the phases of decision-making and action.

The HPM identifies eleven cognitive-perceptual factors in the individual (defined as primary motivational mechanisms), which are modified by situational, personal and interpersonal characteristics impacting on the individual's participation in health-promoting behavior (Tillett, 1998). These were developed after an extensive review of health behavior research.

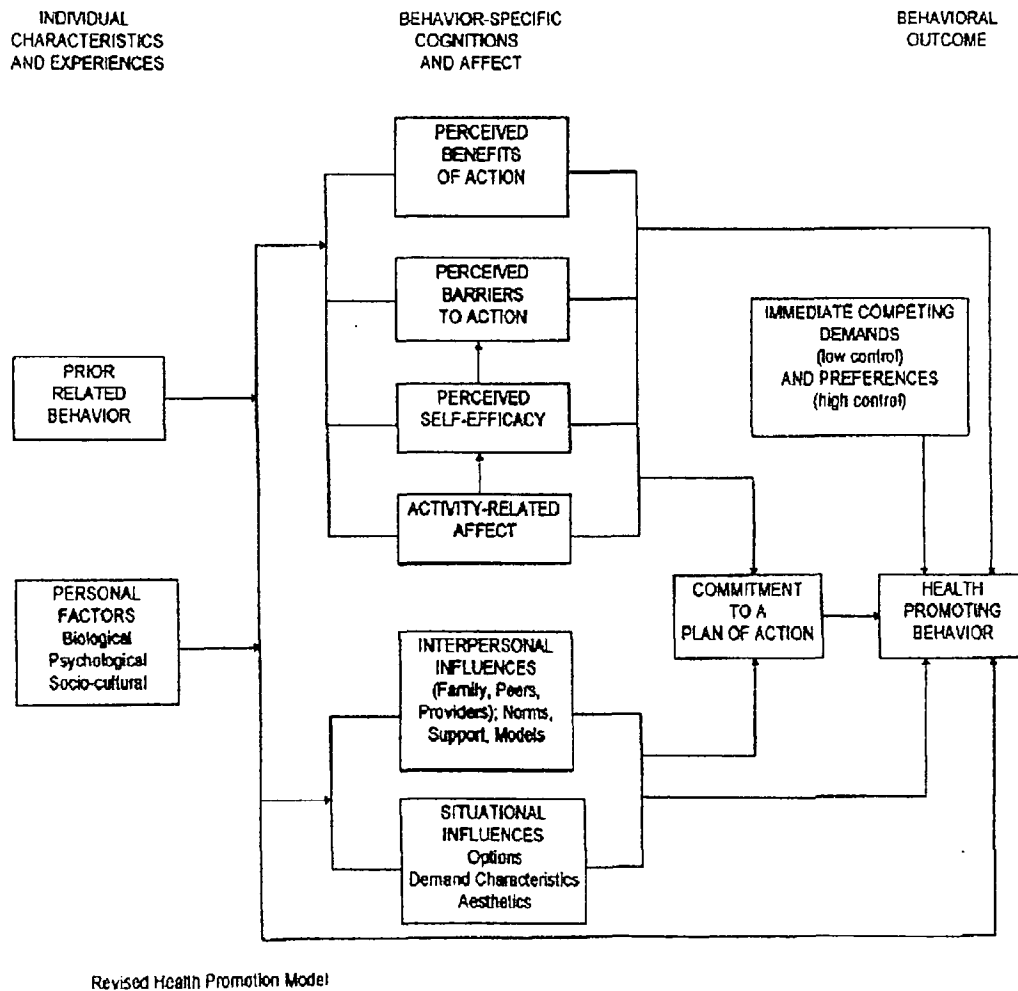


Figure 1 The Health Promotion Model

From *Health Promotion in Nursing Practice* (p. 67), by Nola J. Pender, 1996, Stamford, Connecticut: Appleton & Lange.

The primary motivational factor that is the focus of this research project is that of perceived control of health. Perceived control of health as defined by Tillett (1998) is the individual's perception of his own ability to change his health, which in turn, can motivate his desire for health. This desire for health would then influence the individual's participation in health-promoting behaviors.

In the study by Koran et al. (1989) complete medical evaluations of 529 patients in eight California state mental health system programs, demonstrated that the mental health system had documented only 47% of the patients' physical diseases. Twelve percent of the patients had diseases that were newly diagnosed by the study team.

Farnam, Zipple, Tyrrell and Chittinanda (1999) surveyed 154 consumers with mental illness that lived in congregate residential sites in Eastern Massachusetts. Eighty-five percent of those questioned had a diagnosis of schizophrenia. Results showed that 90% of them had had a medical check-up within the previous 12 months. This rate, which is higher than that of the general population, (Farnam et al.) reflects the providers' requirement for regular physicals as a requirement for residing in their facility. Farnam et al. did find in this population, that 75% of the consumers smoke, 42% are overweight and 22% consume alcohol (versus 25%, 27.5% and 54.8% respectively in the general population).

The high incidence of substance abuse in this population also increases the risk of serious medical consequences (Crews et al. 1998). According to Van Dongen (1999) the rate of smoking among people with schizophrenia may be as

high as 90%. The high rate of smoking is attributed to nicotine's role in regulating the neurotransmitters of the brain. Nicotine acts as an antagonist to the negative symptoms of schizophrenia (increasing stimulation and activation) while the calming effect of nicotine may make delusions and hallucinations more manageable. This increased rate of cigarette use puts this population at an increased risk for coronary heart disease, respiratory illnesses and cancer. It is believed that as many as 30 to 50 percent of people with schizophrenia may meet the diagnostic criteria for alcohol abuse or dependence (Kaplan & Sadock, 1998). The two other most commonly used substances are cannabis at a rate of 15 to 25 percent and cocaine in about 5 to 10 percent of people with schizophrenia. The potential health consequences related to the use and abuse of these substances is well documented. Cardiac, respiratory and hepatic sequelae are common and increase the need for regular medical care.

A study done by Karlsson, Lehtinen and Joukamma (1995) looked at the psychiatric morbidity of frequent attender patients in a primary care setting. They defined frequent attenders as patients with 11 or more visits to a physician in the last 12 months. They found that with a focus on the frequent attenders, 54% (N=27) had a comorbid psychiatric illness such as a non-schizophrenic (N=3) psychotic disorder, depression (N=12) or, anxiety disorder (N=12). This finding supports the theory that people with schizophrenia are not high-utilizers of health care. In their review of the literature, Karlsson, et al. sites a study by Katon in which 82% of the distressed frequent attenders had a diagnosis of major depression, dysthymic disorder, generalized anxiety disorder or somatization

disorder. There was no mention of the presence of any psychotic disorders in the distressed frequent attenders in this study.

Another possible reason that this population may not utilize health care as readily as the rest of the population is due to an altered perception of pain. Bickerstaff, Harris, Leggett and Cheah (1988) report the cases of five schizophrenic patients who underwent laparotomy for acute intra-abdominal surgical emergencies. They reviewed their preoperative presentations, operative findings and postoperative courses with special attention given to the review of the use of post-operative pain medications in these patients. In all five patients, their presenting symptoms were mild. In most cases, it was the diagnostic testing that was troublesome and indicated surgery was necessary. The operative findings of these patients included a gangrenous gallbladder, peritonitis, adenocarcinoma, ruptured appendix, bowel obstruction and aortic dissection. In the three patients whose post-operative pain could be quantified, the amount of pain medication used was well below that amounts expected. In one case, he was given the medication by the nurse because he 'appeared slightly uncomfortable' (even though it was never requested), while another patient required no pain medication at all. Apter (1981); Dickson & Neill (1987); Fishbain (1982); and Lewis (1937) site case reports that further support the idea of altered pain perception in this population.

In his letter to the editor, Torrey (1979) reports on a study of 102 lumbar punctures done on 100 patients with schizophrenia over an 18-month period. Only six patients complained of any headache, none lasting more than a day and

all were well controlled with aspirin. This is in contrast to 26 normal controls of which eight had post-lumbar-puncture headaches that lasted three days or longer. Four required codeine and six missed work because of these headaches. Because of the high incidence of headache in this group, the remainder of the control group participants were told to lie on their stomachs for at least an hour after the procedure to decrease the prevalence and severity of their headaches. Another letter to the editor in the same journal (Gowdy, 1979) relates that its writer has had experiences in which the fractures of patients with schizophrenia have not been identified for several days, yet they continue normal daily activities with no sign of pain or discomfort. Gowdy also reports that he seldom anesthetizes these patients before laceration repair and that there have been no objections to this practice.

There are several theories that attempt to explain this pain insensitivity in people with schizophrenia. One theory reported by Bickerstaff et al. (1988), looks at the problem as multifactorial. It combines biological, sociological and psychological elements. Other theories cited by Bickerstaff et al. focus on strictly biological causes including high levels of endogenous endorphins or over activity of the modulating system. The medications used to treat schizophrenia can also mask the subjective symptoms of an acute illness (Bickerstaff et al.). Kietzman (1985) reports findings of numerous studies that show people with schizophrenia are slower to process stimuli than people with other mental illnesses such as depression or mania.

Another possible reason that people with schizophrenia do not seek regular health care is the attitude of the non-psychiatric practitioner. Patients with schizophrenia may be seen as unrewarding to care for, or the practitioner may be at a loss as to how to manage patients with vague difficulties and poor follow-through (King and Nazareth, 1996). There may also be fear on the part of the provider that people with schizophrenia may create an uneasy atmosphere in their office for the patients who do not have a serious mental illness (Golomb, et al. 2000). These feelings and beliefs are unintentionally conveyed to the patient. "They don't understand what it is like to be mentally ill, and you usually get shuffled through rather quickly" (Schneidt, 2000, p. 19).

It is clear from the literature reviewed that there are millions of Americans that have insurance, but do not utilize primary preventative health care services. Studies have identified the non-financial barriers that keep the majority of these people from accessing care (Bickerstaff et al., 1988; Cary, et al., 1995; Crews et al., 1998; Golomb et al., 2000; Shore, 1996;). Do these same barriers apply to people with schizophrenia, or is there an element of the disease process that is a larger factor in their reluctance to seek regular health care? There is a notable weakness in the literature in that the wellness behaviors and barriers to accessing health care for this population have not been adequately studied. Haq and Griffin (1996) state, "All behavior is motivated" (p. 155). For this reason, it is important to determine what motivates the schizophrenic population to seek or not to seek regular preventative health care from a PCP.

The purpose of this research project is to determine if there is a correlation between health locus of control (Pender's perceived control of health), frequency of participation in health promoting behaviors and the utilization of a PCP in adults with schizophrenia. Once there is an improved understanding, programs that better meet the needs of this special population can be developed to assist them to adequately attend to their health care needs while improving the overall well being of the nation as outlined in *Healthy People 2010*. The true measure of the success of providing primary health care will be assessed based on the health outcomes of this group (Crews et al. 1998).

CHAPTER III

METHODOLOGY

Sample/Setting

The study participants were obtained from a convenience sample of currently open cases at a community mental health agency in Northern Oakland County. Any adult consumer with an open case in the agency and a primary Axis I diagnosis of schizophrenia was eligible to be considered.

Consumers who had had a psychiatric hospitalization within the last three months were excluded from the study. This is to address the issue of recent psychiatric instability and the intent to only survey those who are considered stable. Consumers were also excluded from the study if they resided in an adult foster care (AFC) home or other structured, supervised settings. This is due to the fact that these facilities usually require an annual physical examination as a condition of residence and would skew the data regarding service utilization.

Thirty subjects were recruited. All consumers in the mental health agency who met the previously outlined criteria had an equal opportunity to participate.

Design

This study was a nonexperimental quantitative study. Polit and Hungler (1995) define quantitative research as “the investigation of phenomena that lend themselves to precise measurement and quantification” (p. 712). The availability of valid and reliable tools to measure the desired attributes made this suitable for a quantitative design. A nonexperimental descriptive correlational study design was appropriate because this project set out to explore the preexisting ideas

about health, behaviors regarding wellness and their correlation in adults with schizophrenia.

Procedure

Before the beginning of data collection, the primary investigator was required to obtain project approval from the Human Subjects committee at the University of Michigan-Flint (Appendix A) and from the administration of the community mental health agency (Appendix B).

Once the project had been approved, the information services department at the mental health agency generated a list of all consumers who met the study criteria of having a primary Axis I diagnosis of schizophrenia. The researcher then reviewed the records of these consumers and eliminated those consumers with a psychiatric hospitalization within the previous three months or who lived in an AFC or other structured, supervised setting. From this list a simple random selection of subjects was completed.

The case managers of the consumers who were randomly selected were asked to provide each of the potential subjects with an introductory letter (Appendix C) that explained the nature of the research project and asked the consumers to consider participating in the study. If they were willing to participate, they were asked to review and sign a consent form (Appendix D) that stated that they were (1) willing to participate, (2) that their participation was voluntary and that they could withdraw at anytime before receipt of payment, (3) that they would not directly benefit from the study, (4) that they would receive \$5 cash after the completion of the questionnaire, and (5) the

information gathered would be held in confidence and would not permit their identification.

The case manager returned the signed consent form to the researcher who then contacted the subjects to schedule a mutually convenient time and place for the completion of the questionnaire.

Instruments

Each participant was given a survey to complete. The first thirteen questions (Appendix E) were designed to collect data regarding the subject's use of a PCP for wellness related activities in the twelve months prior to completing the survey as well as perceived barriers to obtaining the care. The second part of the survey was the Multidimensional Health Locus of Control (MHLC) Scale (Appendix F) (Wallston, Wallston, & DeVillis, 1978). This survey measures the respondents perceived control over their physical health. People with a strong internal locus of control are thought to be more health oriented and more likely to comply with recommended treatments than those who have a stronger external locus of control (Oberle, 1991).

The MHLC uses a 6-point, Likert-type format ranging from "Strongly Disagree" (scored as one) to "Strongly agree" (scored as six). There are two forms of the MHLC scale-A and B. Each form asks 18 questions, six in each of the three possible areas of control—internal (self control), chance (fate), or powerful others (medical personnel) to produce three separate scores. The forms may be used individually or together. When used individually, the alpha reliability ranges from .673 to .767 but when both forms are used together for a

total of 36 questions, the alpha reliability increases to .830 to .859. Both forms (36 questions) were used in this study.

The MHLC scale has been tested in a psychiatric population to measure the locus of control in regard to their psychiatric illness (Wall, Hinrichsen, & Pollack, 1989). In the study by Wall et al. the alpha reliability was between .79 and .81, (when 36 questions were used) which paralleled those reported by Wallston et al. (1978). No studies have been found to date that measures the locus of control in this population with respect to their physical health.

The MHLC tool has been found to be valid in several reviewed studies. The initial testing by Wallston, Wallston & DeVillis (1978) found that the internal health locus of control (IHLC) and the powerful others health locus of control (PHLC) scales are statistically independent, the IHLC and the chance locus of control (CHLC) are negatively correlated and PHLC and CHLC are positively correlated. Similar results were obtained in the previously cited study by Wall, Hinrichsen and Pollack (1989), as well as a study by Holm, Frank and Curtin (1999) that looked at locus of control and mammography use in women and Russell and Ludenia's (1983) study that used the MHLC scale in an alcoholic population.

The final part of the questionnaire was the Health Promoting Lifestyle Profile II (HPLP II) (Appendix G) (Walker S., Sechrist K., & Pender N., 1995). It is a 52-item rating scale that uses a 4-point response format to measure the frequency of self-reported health-promoting behaviors. It measures these behaviors within the domains of health responsibility, physical activity,

nutrition, spiritual growth, interpersonal relations and stress management. Permission to use this tool is in Appendix G. It is a revision of the original Health-Promoting Lifestyle Profile (HPLP) that first became available in 1987.

For the HPLP II, the Cronbach's alphas are as follows: Health responsibility, .861; physical activity, .850; nutrition, .800; spiritual growth, .864; interpersonal relations, .872; stress management, .793; total HPLP II, .943.

The original HPLP was used in this population to measure the health and self-care practices of persons with schizophrenia (Holmberg S., & Kane, C., 1999). When used with this population, subjects with schizophrenia had similar scores on three HPLP subscales compared to non-psychiatric working class subjects (Weitzel, 1989) and significantly lower scores on measures of self-actualization, nutrition, interpersonal support and overall health promotion.

Data Analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) software. Descriptive statistics were run using the demographic data (Appendix E) to examine the characteristics of the sample such as age, gender and type of insurance coverage.

The results of the instruments (MHLOC and HPLP II) were analyzed using Pearson's product-moment correlation. The results of each of the locus of control scales (internal, external and powerful others) and the overall HPLP II score were correlated along with the results of three demographic questions that indicated the subjects' participation in and utilization of preventative health care services. These questions addressed whether the subjects had had a physical

exam or any screening tests during the 12 months prior to completing the survey and inquired what type of facility they utilized for their health care. The results of the MHLOC were correlated using pearsons product-moment with the results of each of the subscales of the HPLP II as well as the overall HPLP II score.

CHAPTER IV

RESULTS

Thirty subjects completed questionnaires for the study. The mean age of the subjects was 38.16 years. The gender was evenly divided—15 male and 15 female subjects. Eighty-three percent (n=25) of the subjects were Caucasian, 13% (n=4) were African American and 3% (n=1) were Native American. Seventy-three percent (n=22) of the subjects had had a physical exam during the past year, while 27% (n=8) had not. All of the subjects had some type of health insurance, although this was not a criterion for inclusion in the study. Forty-four percent (n=13) had only Medicaid coverage, 13% (n=4) had only Medicare, 40% (n=12) had both Medicaid and Medicare coverage, and 3% (n=1) had only State Medical coverage. See Table 1.

Screening tests done within the past year, 60% (n=18) had their blood pressure checked, 60% (n=18) had lab work of some type completed, while 10% (n=3) of the subjects stated that they had had other screening tests done. When looking at the results of the screening tests that are gender specific, 60% of the female subjects (n=9) had had a pap smear, and 13.4% of the female subjects (n=2) had had a mammogram. According to the Center for Disease Control (2002), women over the age of 40 should have a mammogram every 1-2 years. Six of the female subjects who participated in the study were over the age of 40. This result then actually represents 33% of the subjects who were within the recommended age range for having a mammogram. In the study, 20% of the male subjects (n=3) had had a prostate exam within the past year. The Center for

Disease Control does not recommend prostate exams based on the low sensitivity and specificity of the digital rectal exam in the diagnosis of prostate cancer. Assuming that a health care provider would only recommend the exam for someone over the age of 40, 7 of the male subjects who participated in the study were over the age of 40. This indicates that 42% of the male subjects over the target age of 40 had had a prostate exam within the last year. See table 2.

	n	Percent
Medicare Only	4	13
Medicaid Only	13	44
Medicare and Medicaid	12	40
State Medical	1	3

Table 1 Insurance coverage

	n	Percent	Notes
Blood Pressure	18	60	
Blood work	18	60	
Mammogram	2	33	Only female subjects over 40
Pap Smear	9	60	Female subjects only
Prostate Exam	3	20	Only male subjects over 40
Other	3	10	
None	4	13	

Table 2 Screening tests

Forty-three percent (n=13) reported that they drove themselves to their medical appointments, 36.7% (n=11) received a ride from family or friends, 10% (n=3) stated that they walked to their appointments and 10% (n=3) reported having difficulty getting to their appointments. None of the subjects reported using public transportation or other methods to get to the appointments. See table 3.

It took 30% (n=9) of the subjects less than 15 minutes to get to their medical appointments, 46.7% (n=14) 15 to 30 minutes, 13.3% (n=4) 30 to 45 minutes and 10% (n=3) 45 minutes to one hour to get to their medical appointments. See table 4.

	n	Percent
I drive myself	13	43.3
I get a ride from friends or family	11	36.7
I use public transportation	0	0
I walk	3	10
I have a problem with transportation	3	10
Other	0	0

Table 3 Method of transportation

	n	Percent
Less than 15 minutes	9	30
15 to 30 minutes	14	46.7
30 to 45 minutes	4	13.3
45 minutes to 1 hour	3	10

Table 4 Travel time

Ninety percent (n=27) of the subjects reported that they usually go to a doctor's office for their physical health care. 3.3% (n=1) indicated they went to an emergency room, 3.3% (n=1) indicated they went to a free clinic and 3.3% (n=1) indicated they went somewhere else for their care. See table 5.

	n	Percent
Doctors Office	27	90
Urgent Care Clinic	0	0
Emergency Room	1	3.3
Free Clinic	1	3.3
Other	1	3.3

Table 5 Where subjects usually go for medical care

When asked if the subjects had trouble understanding what the medical provider tells them, 6.7% (n=2) responded 'usually', 43.3% (n=13) stated 'sometimes', 13.3% (n=4) reported 'seldom' and 36.7% (n=11) stated 'never'. The subjects in the study were generally satisfied with their medical provider: Eighty percent (n=24) responded 'usually' and 20% (n=6) answered 'sometimes'. None of the subjects responded with 'seldom' or 'never'.

When asked if they felt that their schizophrenia affected the quality of the medical care that they receive, 13.3% (n=4) responded 'usually', 36.7% (n=11) responded 'sometimes', 16.7% (n=5) answered 'seldom' and 33.3% (n=10) reported 'never'. The majority of the subjects, 73.3% (n=22) felt that their medical providers attitude towards their schizophrenia was 'usually positive' while 20% (n=6) responded 'sometimes positive'. One subject (3.3%) felt that their medical providers attitude toward their schizophrenia was 'usually negative'. None of the subjects responded 'sometimes positive'. This question was omitted by one of the subjects. See table 6.

	Usually	Sometimes	Seldom	Never	Notes
Do you have trouble understanding what your medical provider tells you?	n=2 6.7%	n=13 43.3%	n=4 13.3%	n=11 36.7%	
Do you feel satisfied with your medical provider?	n=24 80%	n=6 20%	–	–	
Do you think having schizophrenia affects the quality of the medical care that you receive?	n=4 13.3%	n=11 36.7%	n=5 16.7%	n=10 33.3%	
	Usually Positive	Sometimes Positive	Sometimes Negative	Usually Negative	
What is your medical providers attitude toward your schizophrenia?	n=22 73.35%	n=6 20%	–	n=1 3.3%	One subject did not respond

Table 6 Responses regarding quality of medical care

There was a statistically significant correlation between whether the subjects had had a physical within the last 12 months and if they had had any screening tests (.047 at the .026 level), as well as where the subject's usually went for their health care (.531 at the .003 level). Also the IHLOC was positively correlated with the PHLOC (.524 at the .003 level) as well as with the subjects

HPLP II lifestyle score (.534 at the .002 level). The final area of significance is PHLOC and the subject's HPLP II lifestyle score (.529 at the .003 level). See table 7.

	Last 12 months/ physical exam	Last 12 months/ screening test	Where usually go	IHLOC	PHLOC	CHLOC
Last 12 months/ screening test	.407 <i>p</i> .026					
Where usually go	.531 <i>p</i> .003	.316 <i>p</i> .088				
IHLOC	.162 <i>p</i> .393	-.187 <i>p</i> .323	.185 <i>p</i> .328			
PHLOC	.226 <i>p</i> .230	.102 <i>p</i> .591	.063 <i>p</i> .742	.524 <i>p</i> .003		
CHLOC	.263 <i>p</i> .161	.130 <i>p</i> .494	.167 <i>p</i> .378	-.081 <i>p</i> .672	.343 <i>p</i> .064	
HPLP II Lifestyle	-.156 <i>p</i> .412	-.109 <i>p</i> .565	.037 <i>p</i> .099	.534 <i>p</i> .002	.529 <i>p</i> .003	-.025 <i>p</i> .896

Table 7 Correlation between use of preventative health care and LOC

The MHLOC was correlated with the HPLP II and its subscales. The IHLOC was found to have a statistically significant correlation with: the PHLOC (.524 at .003 level), health responsibility (6.33 at .000 level), spiritual growth (.543 at the .002 level), interpersonal relations (.363 at .049 level) and the overall HPLP II (.534 at .002 level). The PHLOC demonstrated a significant correlation with: nutrition (.433 at .017 level), spiritual growth (.480 at .007 level), stress management (.463 at .010 level) and the HPLP II score (.529 at .003 level). Health responsibility was found to have a statistically significant correlation with: spirituality (.453 at .012 level), interpersonal relations (.581 at .001 level), and HPLP II score (.685 at .000 level). Physical activity demonstrated a significant correlation with: nutrition (.481 at .007 level) and the HPLP II score (.461 at the

.010 level). Nutrition was found to have a statistically significant correlation with: interpersonal relations (.379 at .039 level), stress management (.468 at the .009 level) and the HPLP II score (.686 at the .000 level). Spirituality had a statistically significant correlation with: interpersonal relations (.780 at .000 level), stress management (.662 at the .000 level) and the HPLP II score (.816 at the .000 level). Interpersonal relations demonstrated a statistically significant correlation with: stress management (.530 at .003 level) and HPLP II score (.808 at the .000 level). Finally, stress management and the HPLP II score were significantly correlated (.761 at .000 level). See table 8.

	IHLOC	PHLOC	CHLOC	Health Responsibility	Physical Activity	Nutrition	Spiritual Growth	Interpersonal Relations	Stress Management
PHLOC	.524 <i>p</i> .003								
CHLOC	-.081 <i>p</i> .672	.343 <i>p</i> .064							
Health Responsibility	.633 <i>p</i> .000	.301 <i>p</i> .106	-.231 <i>p</i> .218						
Physical Activity	.196 <i>p</i> .300	.249 <i>p</i> .185	.116 <i>p</i> .540	.143 <i>P</i> .451					
Nutrition	.214 <i>p</i> .255	.433 <i>p</i> .017	.346 <i>p</i> .061	.334 <i>p</i> .071	.481 <i>p</i> .007				
Spiritual Growth	.543 <i>p</i> .002	.480 <i>p</i> .007	-.166 <i>p</i> .382	.453 <i>p</i> .012	.199 <i>p</i> .291	.287 <i>p</i> .124			
Interpersonal Relations	.363 <i>p</i> .049	.350 <i>p</i> .058	-.157 <i>p</i> .408	.581 <i>p</i> .001	.004 <i>p</i> .984	.379 <i>p</i> .039	.780 <i>p</i> .000		
Stress Management	.273 <i>p</i> .145	.463 <i>p</i> .010	.032 <i>p</i> .868	.354 <i>p</i> .055	.291 <i>p</i> .119	.468 <i>p</i> .009	.662 <i>p</i> .000	.530 <i>p</i> .003	
HPLP II Lifestyle	.534 <i>p</i> .002	.529 <i>p</i> .003	-.025 <i>p</i> .896	.685 <i>p</i> .000	.461 <i>p</i> .010	.686 <i>p</i> .000	.816 <i>p</i> .000	.808 <i>p</i> .000	.761 <i>p</i> .000

Table 8 Correlations between MHLOC and HPLP II subscales

CHAPTER V

DISCUSSION AND SUMMARY

The results of this study were found to be statistically significant with respect to several areas. The first category of significant results were gathered from the demographic data and related to the subjects' use of health care services. Correlations were found between whether subjects had had a physical exam during the previous twelve months and where the subjects went for their health care, as well as, if they had had any screening tests during the same twelve-month period. This means that those consumers who utilized a physician's office for most of their care, were more likely to have had a physical and have some form of screening tests completed.

The next category of statistically significant results related to the subjects' scores on the Multidimensional Health Locus of Control (MHLOC) and the Health Promoting Lifestyle Profile II (HPLP II) scores. Both internal and powerful others locus of control was found to have a significant correlation as they related to the overall score on the HPLP II as well as with each other. This demonstrates that those consumers who exhibited a more internal or powerful others locus of control were more likely to participate in health promoting behaviors.

There were many correlations found between internal locus of control and the HPLP II subscales—health responsibility, spiritual growth and interpersonal relations. Relationships were found to exist between powerful others locus of control and the HPLP II subscales for nutrition, spiritual growth and stress

management. No statistically significant correlations were found between chance locus of control and any of the HPLP II subscales. This supports the theory that those with an IHLOC believed that they have a responsibility to take care of their health and were more likely to work on interpersonal relationships as a method to care for them selves. Those with a PHLOC demonstrated that they employ nutrition as well as stress management strategies to care for their health. Subjects in both groups were likely to care for their spiritual needs.

The HPLP II lifestyle score was found to have a statistically significant correlation to all of the subscales in the tool. The HPLP II subscales that were found to have the most statistically significant correlation with other subscales were those that were more psychosocially based; spiritual growth with interpersonal relationships and stress management; and interpersonal relations with health responsibility and stress management. The one subscale with a more clinical perspective was nutrition with stress management and physical activity. These results may indicate that the SPMI are better suited to interventions of a more psychosocial nature and less adept at implementing more clinical strategies as a means of health promotion. Further study is needed in this area.

Discussion of the Theoretical Framework

The purpose of this study was to determine if there was a correlation between health locus of control and the practice of health promoting behaviors in adults that are diagnosed with schizophrenia. Pender's health promotion model represents the association between cognitive-perceptual factors and modifying factors that have an influence on the occurrence of health-promoting behaviors.

This study supports the premise that perceived self-efficacy is a predictor of health behaviors as it was in the study by Weitzel (1989), which found that the cognitive-perceptual factor of perceived self-efficacy was predictive of health promoting behaviors. The ability to develop health-promoting behaviors is enhanced by a perception of internal control. This has been documented in weight loss programs, smoking cessation and the use of seat belts (Murray & Zentner, 1989).

This study did not show a correlation between chance locus of control and the HPLP II tool or its subscales. This may indicate that the health promotion theory does not support the idea of chance as a predictor of health promoting behaviors (whether that be to act on a behavior or not to act on that behavior).

Limitations and Alternative Explanations

A number of the limitations of this study were related to sampling. This includes a small n, and a convenience sample that was not representative of the population of adults diagnosed with schizophrenia with regard to many variables. Only 30 subjects were recruited for this study. Had a large randomized sample been used, the sample would have been more representative and the results may have varied.

Many demographic variables within the sample population were not representative of the SPMI population, such as race, insurance status, and age. Eighty three percent of the sample was Caucasian, 13% were African American and 3% were Native American. As compared to the population as a whole, Caucasians were over represented and minorities were under represented in this

study. All of the subjects had some form of health insurance, which again is not representative of the target population. The subjects in this study were relatively young. The mean age of the subjects was 38.16 years with a range from 19 to 55 years of age.

Another possible limitation of the study is the fact that all of the subjects had the opportunity to participate in annual person centered planning as mandated by the Michigan mental health code. This meeting is an opportunity for consumers to develop their treatment plan for the next year. One issue that may be addressed during these meetings is the health care needs of the consumer. The identification of these needs and the assistance that the case manager provides in meeting these needs may have affected the subjects usage of a PCP.

Although none of the subjects in the study had had a psychiatric hospitalization during the three months prior to completion of the questionnaire (which was an inclusion criteria), this does not account for that fact that some of the subjects may have been experiencing psychotic symptoms at the time of their participation in the study that affected their ability to comprehend or concentrate on the survey questions. An additional limitation includes the measurement of only positive health promoting behaviors but does not address negative health practices such as smoking and substance abuse.

Implications for Practice

Advanced practice nurses are the health professionals that are most suitable to promote and teach the importance of health promoting behaviors to

costs. The implications of future research studies could potentially decrease the mortality rate of this vulnerable population.

Future Recommendations

Future research related to the health beliefs and health promotion practices of adults with schizophrenia should focus on identifying and then modifying those factors that may be the most amendable to change that increases the participation of the SPMI in health promoting behaviors. Ideally, studies with a larger, randomized sample and a population that is representative of the SPMI population should be done. Although not directly addressed in this study, the impact of health insurance (particularly managed care) on the participation of the SPMI in routine physicals and screening tests would provide additional guidance for the development of programs that can address this problem.

This study only focused on the positive health promoting factors that the subjects participated in but does not address negative health practices such as smoking and substance abuse, both of which are prevalent in the SPMI population. It would broaden knowledge in this area and assist those who treat the SPMI if future research in this area also focuses on these types of negative health behaviors. Another recommendation for future research is to focus on an area of the patient's behavior that may be more amendable to change than locus of control. Locus of control is often described as an enduring, established personality trait. If this is true, the focus of future research should be on characteristics of the patient's behavior that can be changed.

Another area of study should be the impact of having the psychiatrist and psychiatric mental health nurse practitioner provide mental health as well as primary care for the SPMI population. Studies have demonstrated that this does decrease morbidity in this population (Crews, Batal, Elasy, Casper, & Mehler, 1998; Shore, 1996).

Ongoing education regarding the benefits of participating in health promoting behaviors needs to come from mental health providers who may be the only contact that a consumer has with the health care system. This would mean providing the results of research such as this study to mental health providers so that they can better understand and therefore better educate and advocate for their consumers.

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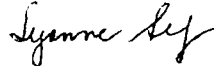
APPENDIX A

Letter of Approval from Human Subjects Committee

THE UNIVERSITY OF MICHIGAN – FLINT

July 20, 2001

To: Tom Schaal, Nursing

From: Suzanne Selig, Human Subjects Committee, 

Re: Is there a correlation between health locus of control, health promoting lifestyle profile and the utilization of a primary care provider for wellness activities in adults diagnosed with schizophrenia? (Approval #81/00)

This is to inform you that your proposal "Is there a correlation between health locus of control, health promoting lifestyle profile and the utilization of a primary care provider for wellness activities in adults diagnosed with schizophrenia?" has been approved by the Human Subjects Committee. Should you decide to make any changes in the use of human subjects which differ from the approved proposal, please advise this committee prior to making these changes.

Should you observe any negative change in the health or behavior of a human subject attributable to this research, you are required to suspend your project. If this happens, please inform the committee as soon as possible for our further review and decision as to the continuation/termination of your project.

This approval for your project is valid for a period of twelve months. If your project extends beyond this period (twelve months), please re-submit your proposal for reconsideration.

APPENDIX B

Letter of Approval from Mental Health Agency



NORTH OAKLAND
OFFICE
1450 S. Lapeer Rd.
Oxford, MI 48371
Phone:
248/969-9932
Fax:
248/969-03-0
Admin. Fax:
248/969-0950

July 30, 2001

To whom it may concern,

Denise Will, BSN, RN, BC is requesting to collect data at Training and Treatment Innovations for her research project titled "Is there a correlation between health locus of control, health promoting lifestyle profile and the use of a primary care provider for wellness activities in adults with schizophrenia?" I have had the opportunity to review this research project and I have given her authorization to conduct her research at this agency. The project is a requirement for graduation from the Masters of Science in Nursing program at the University of Michigan—Flint.

If there are any further questions, you may contact me at (248) 969-9932.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacqueline Kiss-Wilson".

Jacqueline Kiss-Wilson
Executive Director

APPENDIX C

Letter to Potential Subjects

August 1, 2001

I would like to invite you to participate in a study that I am conducting as a requirement for my studies as a Psychiatric Mental Health Nurse Practitioner at the University of Michigan-Flint. I am interested in learning more about the health practices and beliefs of adults with schizophrenia.

You will be asked to fill out a questionnaire about yourself and your health care practices related to your physical health, not your schizophrenia. It should take 45 minutes or less to complete. Your response is important to the completion of this study and I hope that you agree to participate. For taking the time to participate in the study, you will be paid \$5 cash immediately after you complete the entire survey.

Your responses will be kept confidential. Neither your name nor any other identifying information will appear on any of the materials used in this study. All information you provide will be analyzed as group data and no individuals will be identified.

You will be asked to sign a consent form that will indicate your agreement to participate in this study. Participation in this study is voluntary. You may discontinue participation at anytime before accepting payment without penalty. Your decision to participate or not to participate will not in any way affect your treatment at TTI.

If you have any questions about the research, you may contact me at (248) 969-0760.

Thank you in advance for your participation. Your responses are extremely important to the study.

Sincerely,

Denise Will, BSN, RN,BC
MSN Candidate

APPENDIX D

Consent Form

1. I agree to participate in a research study to examine the health practices and beliefs of adults with schizophrenia that is being conducted by Denise Will BSN, RN,BC for her studies in the Masters of Science in Nursing at the University of Michigan-Flint. I understand that I will be required to complete a questionnaire that should take 45 minutes or less.
2. I have been informed that my participation is voluntary and that I have the right to withdraw my consent at any time before I receive payment. In order to receive payment, I will be asked to complete all items on the questionnaire. If I do withdraw, my withdrawal will not have any negative affect for myself or on my treatment at TTI.
3. I understand that the information learned about the health practices and beliefs of adults with schizophrenia will be used to broaden the already available knowledge but will not benefit me directly.
4. I understand that in order to receive payment of \$5 cash, I will need to complete the questionnaire in full and sign a form acknowledging receipt of the cash.
5. I understand that all information that would permit my identification will be held in strict confidence. No information that would allow for my identification will be disclosed or released to others for any purpose.

Signature of Participant

Date

Signature of Primary Investigator

Date

APPENDIX E

Demographics

1. Age _____
2. Sex
 - a. Male
 - b. Female
3. Race
 - a. White
 - b. African American
 - c. Middle Eastern
 - d. Hispanic
 - e. Asian
 - f. Other (please list)_____
4. Current health insurance? (Circle all that apply)
 - a. Medicaid
 - b. Medicare
 - c. State Medical
 - d. Private Insurance
 - e. Other (please list)_____
 - f. None
5. In the last 12 months, have you had a physical exam by your medical care provider?
 - a. Yes
 - b. No
 - c. I don't see anyone but the staff at the mental health agency.
6. In the past 12 months, have you had any of the following screening tests when you were not sick? (Circle all that apply)
 - a. Mammogram
 - b. Pap Smear
 - c. Prostate Exam
 - d. Blood Pressure Check
 - e. Blood Work
 - f. Other tests (please list)_____
 - g. None
7. How do you usually get to your medical appointments?
 - a. I drive myself
 - b. I get a ride from friends or family
 - c. I use public transportation such as the bus
 - d. I walk
 - e. I have a problem with transportation
 - f. Other (please list)_____

8. How long does it usually take you to get to your medical appointments?
Less than 15 minutes
a. 15 to 30 minutes
b. 30 to 45 minutes
c. 45 minutes to 1 hour
d. More than 1 hour
9. Where do you usually go for your physical health care?
a. Doctors office
b. Urgent care clinic
c. Emergency room
d. Free clinic
e. Other (please list) _____
10. Do you have trouble understanding what your medical provider tells you?
a. Usually
b. Sometimes
c. Seldom
d. Never
11. Do you feel satisfied with your medical provider?
a. Usually
b. Sometimes
c. Seldom
d. Never
e. Not Applicable
12. Do you think having schizophrenia affects the quality of the medical care that you receive?
a. Usually
b. Sometimes
c. Seldom
d. Never
If yes, how? _____
13. What is your medical providers attitude toward your schizophrenia?
a. Usually positive
b. Sometimes positive
c. Sometimes negative
d. Usually negative

APPENDIX F

Multidimensional Health Locus of Control

Below are 36 statements that reflect how people might feel about their health. After each statement are 6 numbers. Please circle the number that relates to the answer that most closely reflects how you feel about each of the statements in terms of your physical health and not your mental health.

	1 strongly disagree	2 moderately disagree	3 slightly disagree	4 slightly agree	5 moderately agree	6 strongly agree
1. If I get sick, it is my own behavior which determines how soon I get well again.	1	2	3	4	5	6
2. No matter what I do, if I'm going to get sick, I get sick.	1	2	3	4	5	6
3. Having regular contact with my physician is the best way for me to avoid illness.	1	2	3	4	5	6
4. Most things that affect my health happen to me by accident.	1	2	3	4	5	6
5. Whenever I don't feel well, I should consult a medically trained professional.	1	2	3	4	5	6
6. I am in control of my health.	1	2	3	4	5	6
7. My family has a lot to do with my becoming sick or staying healthy.	1	2	3	4	5	6
8. When I get sick I am to blame.	1	2	3	4	5	6
9. Luck plays a big part in determining how soon I will recover from an illness.	1	2	3	4	5	6
10. Health professionals control my health.	1	2	3	4	5	6
11. My good health is largely a matter of good fortune.	1	2	3	4	5	6

	1 strongly disagree	2 moderately disagree	3 slightly disagree	4 slightly agree	5 moderately agree	6 strongly agree
12. The main thing which affects my health is what I myself do.	1	2	3	4	5	6
13. If I take care of myself, I can avoid illness.	1	2	3	4	5	6
14. When I recover from an illness, it's usually because other people (for example: doctors, nurses, family, friends) have been taking good care of me.	1	2	3	4	5	6
15. No matter what I do, I am likely to get sick.	1	2	3	4	5	6
16. If it is meant to be, I will stay healthy.	1	2	3	4	5	6
17. If I take the right actions, I can stay healthy.	1	2	3	4	5	6
18. Regarding my health, I can only do what my doctor tells me to do.	1	2	3	4	5	6
19. If I become sick, I have the power to make myself well again.	1	2	3	4	5	6
20. Often I feel that no matter what I do, if I am going to get sick, I will get sick.	1	2	3	4	5	6
21. If I see an excellent doctor regularly, I am less likely to have health problems.	1	2	3	4	5	6
22. It seems that my health is greatly influenced by accidental happenings.	1	2	3	4	5	6
23. I can only maintain my health by consulting health professionals.	1	2	3	4	5	6

	1 strongly disagree	2 moderately disagree	3 slightly disagree	4 slightly agree	5 moderately agree	6 strongly agree
24. I am directly responsible for my health.	1	2	3	4	5	6
25. Other people play a big part in whether I stay healthy or become sick.	1	2	3	4	5	6
26. Whatever goes wrong with my health is my own fault.	1	2	3	4	5	6
27. When I am sick, I just have to let nature run its course.	1	2	3	4	5	6
28. Health professionals keep me healthy.	1	2	3	4	5	6
29. When I stay healthy, I am just plain lucky.	1	2	3	4	5	6
30. My physical well-being depends on how well I take care of myself.	1	2	3	4	5	6
31. When I feel ill, I know it is because I have not been taking care of myself properly.	1	2	3	4	5	6
32. The type of care I receive from other people is what is responsible for how well I recover from an illness.	1	2	3	4	5	6
33. Even when I take care of myself, it's easy to get sick.	1	2	3	4	5	6
34. When I become ill, it's a matter of fate.	1	2	3	4	5	6
35. I can pretty much stay healthy by taking good care of myself.	1	2	3	4	5	6
36. Following doctor's orders to the letter is the best way for me to stay healthy.	1	2	3	4	5	6

APPENDIX G

Health Promoting Lifestyle Profile II

Directions: This questionnaire contains statements about your *present* way of life or personal habits. Please respond to each item as accurately as possible, and try not to skip any item. Indicate the frequency with which you engage in each behavior by circling:

N for never, S for sometimes, O for often, or R for routinely

1. Discuss my problems and concerns with people close to me.	N	S	O	R
2. Choose a diet low in fat, saturated fat and cholesterol.	N	S	O	R
3. Report any unusual signs or symptoms to a physician or other health professional.	N	S	O	R
4. Follow a planned exercise program.	N	S	O	R
5. Get enough sleep.	N	S	O	R
6. Feel I am growing and changing in positive ways.	N	S	O	R
7. Praise other people easily for their achievements.	N	S	O	R
8. Limit use of sugars and food containing sugar (sweets).	N	S	O	R
9. Read or watch TV programs about improving health.	N	S	O	R
10. Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber).	N	S	O	R
11. Take some time for relaxation each day.	N	S	O	R
12. Believe that my life has purpose.	N	S	O	R
13. Maintain meaningful and fulfilling relationships with others.	N	S	O	R
14. Eat 6-11 servings of bread, cereal, rice and pasta each day.	N	S	O	R
15. Question health professionals in order to understand their instructions.	N	S	O	R
16. Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week).	N	S	O	R

Please circle: **N** for never, **S** for sometimes, **O** for often, or **R** for routinely

17. Accept those things in my life which I cannot change.	N	S	O	R
18. Look forward to the future.	N	S	O	R
19. Spend time with close friends.	N	S	O	R
20. Eat 2-4 servings of fruit each day.	N	S	O	R
21. Get a second opinion when I question my health care provider's advice.	N	S	O	R
22. Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).	N	S	O	R
23. Concentrate on pleasant thoughts at bedtime.	N	S	O	R
24. Feel content and at peace with myself.	N	S	O	R
25. Find it easy to show concern, love and warmth to others.	N	S	O	R
26. Eat 3-5 servings of vegetables each day.	N	S	O	R
27. Discuss my health concerns with health professionals.	N	S	O	R
28. Do stretching exercises at least 3 times per week.	N	S	O	R
29. Use specific methods to control my stress.	N	S	O	R
30. Work toward long-term goals in my life.	N	S	O	R
31. Touch and am touched by people I care about.	N	S	O	R
32. Eat 2-3 servings of milk, yogurt or cheese each day.	N	S	O	R
33. Inspect my body at least monthly for physical changes/danger signs.	N	S	O	R
34. Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking car away from destination and walking.)	N	S	O	R
35. Balance time between work and play.	N	S	O	R
36. Find each day interesting and challenging.	N	S	O	R

Please circle: **N** for never, **S** for sometimes, **O** for often, or **R** for routinely

-
- | | | | | |
|---|----------|----------|----------|----------|
| 37. Find ways to meet my needs for intimacy. | N | S | O | R |
| 38. Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day. | N | S | O | R |
| 39. Ask for information from health professionals about how to take good care of myself. | N | S | O | R |
| 40. Check my pulse rate when exercising. | N | S | O | R |
| 41. Practice relaxation or meditation for 15-20 minutes daily. | N | S | O | R |
| 42. Am aware of what is important to me in life. | N | S | O | R |
| 43. Get support from a network of caring people. | N | S | O | R |
| 44. Read labels to identify nutrients, fats, and sodium content in packaged food. | N | S | O | R |
| 45. Attend educational programs on personal health care. | N | S | O | R |
| 46. Reach my target heart rate when exercising. | N | S | O | R |
| 47. Pace myself to prevent tiredness. | N | S | O | R |
| 48. Feel connected with some force greater than myself. | N | S | O | R |
| 49. Settle conflicts with others through discussion and compromise. | N | S | O | R |
| 50. Eat breakfast. | N | S | O | R |
| 51. Seek guidance or counseling when necessary. | N | S | O | R |
| 52. Expose myself to new experiences and challenges. | N | S | O | R |

APPENDIX H

Permission to use Health Promoting Lifestyle Profile II

PERMISSION FORM

I plan to use the *Health-Promoting Lifestyle Profile II* in a research or evaluation project entitled:

Is there a correlation between health locus of control,
health promoting lifestyle profile + utilization of a
primary care provider for wellness activities
in adults diagnosed w schizophrenia?

I am enclosing a check for ten dollars (\$10.00) payable to the **University of Nebraska Medical Center College of Nursing**.

Denise Will BSN, RNC

Print Name

[Signature]

Signature

MSN Candidate

Position

(70) 695-2294

Area Code Telephone #

557 Boutell Drive

Mailing Address

Grand Blanc, MI

48439

Permission is granted to the above investigator to copy and use the *Health-Promoting Lifestyle Profile II* for non-commercial data collection purposes such as research or evaluation projects provided that content is not altered in any way and the copyright/permission statement at the end is retained. The instrument may be reproduced in the appendix of a thesis, dissertation or research grant proposal without further permission. Reproduction for any other purpose, including the publication of study results, is prohibited without specific permission.

[Signature]

Susan Noble Walker

6/12/01

Date

Please send two signed copies of this page to:

Susan Noble Walker, Ed.D., R.N., F.A.A.N.
 University of Nebraska Medical Center
 College of Nursing
 600 South 42nd Street
 Omaha, Nebraska 68198-5330

Receipt of Cash

I acknowledge that I have received \$5 cash on this date for my participation in a study regarding the health practices and beliefs of adults with schizophrenia that is being conducted by Denise Will, BSN, RN,BC for her thesis project at the University of Michigan-Flint.

Signature of Participant

Date

If you would like to have a copy of the results of this study sent to you, please indicate so by completing the following information:

NAME _____

ADDRESS _____

CITY _____

STATE _____ ZIP CODE _____