

TOBACCO USE AMONG INDIVIDUALS WITH MENTAL ILLNESS:  
NURSES' KNOWLEDGE, CONFIDENCE, ATTITUDES, AND PRACTICE

BY

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## Abstract

The prevalence of smoking among individuals living with mental illness is high due to a variety of factors, with many consequences for smokers. Traditionally, minimal assistance has been offered by psychiatric/mental health practitioners to nicotine dependent patients. The purpose of this study was to describe the knowledge, confidence, attitudes, training, nursing practice, perceived overall ability, interest and demographics of psychiatric/mental health nurses regarding tobacco use among inpatients being treated for mental illness. It examined the preceding variables and developed four hypotheses. A non-experimental descriptive correlational cross-sectional design was used, including descriptive and inferential statistics. The survey included open-ended questions about the practice environment and implementation of smoke-free policies. Sixty surveys were returned with an overall response rate of 39%. The majority of psychiatric/mental health nurses were knowledgeable about tobacco use and smoking cessation. However, only a minority of nurses were knowledgeable about the “5As” of smoking cessation, (*Ask about smoking, Advise to quit, Assess readiness to quit, Assist with quitting, Arrange follow-up*), a well known intervention framework. Most psychiatric/mental health nurses were confident about assisting patients with tobacco use and attitudes toward intervention were more positive than reported in the literature. However, actual nursing practice was sub-optimal. Minimal tobacco-related training during entry level into nursing practice may be one reason for this situation. Educations about tobacco-related intervention frameworks and studies on nicotine withdrawal in psychiatry are needed. Nurses require systemic support to enhance tobacco-related nursing practice.

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## Dedication

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## CHAPTER 1: INTRODUCTION

*Smoke! Smoke! Smoke! That Cigarette!  
Puff, Puff, Puff and if you smoke yourself to death  
Tell Saint Peter at the Golden Gate  
That you hate to make him wait  
But you've just got to have another cigarette.  
Merle Travis (Keltner & Grant, 2006)*

If you have ever stood outside a psychiatric/mental health facility, particularly first thing in the morning or at the end of the day, you will have seen patients (and often staff) satisfying their craving for a cigarette, now that many hospitals are smoke-free. Traditionally, minimal assistance has been offered to patients within the psychiatric/mental health system to assist them to address their tobacco use in a substantive manner. Researchers have identified a number of factors related to the low level of cessation intervention by health professionals and these factors range from micro to macro level influences. However, until recently, the psychiatric/mental health specialty was often excluded from these studies due to lack of awareness of the high rates of smoking among individuals with mental illness (Doolan & Frelicher, 2006; Rigotti, Munafo, & Stead, 2007; Schroeder, 2009; Wells, Sarna, & Aguinaga Bialous, 2006).

As a nurse, I have observed the significant physical, psychological, social and financial consequences to individuals living with mental illness due to the high rate of cigarette smoking in this population. I have heard many patients express interest in reducing and/or quitting smoking. But I have witnessed a limited amount of assistance from mental health professionals in general and psychiatric/mental health nurses in particular to address this challenging addiction. It stands to reason that improving nursing interventions with patients who use tobacco would increase their chances at reducing or quitting smoking. Patients' quality of life would be enhanced by

ameliorating the significant morbidity and mortality that is associated with nicotine dependence. However, as the following discussion will demonstrate, this is no easy task due to the entrenched role of tobacco in the psychiatric/mental health culture and the difficulty of integrating tobacco-related education, knowledge and smoking cessation interventions into the practice of psychiatric/mental health nurses who work in acute care hospitals.

The focus of this thesis is to examine the tobacco-related practice of nurses employed in acute care psychiatric/mental health inpatient units. I have chosen to write in the first person and include personal reflections, in keeping with feminist research philosophy, while at the same time, conducting this quantitative study in a scientific manner.

## Background

### *Community and Clinical Observations*

#### *Clients/Patients Were Trying To Quit*

The idea to examine the nursing practice of psychiatric/mental health nurses with respect to tobacco use by their patients came from my own experiences working as a nurse in a community psychiatric rehabilitation program with individuals living with mental illness and on psychiatric inpatient units. I also draw upon my experiences as a nurse therapist in a general psychiatry outpatient program at a tertiary care facility. While working in the community, I noticed that non-smoking clients had better physical health. I found non-smokers had more money for rent and, consequently, better quality housing was an option for them. I noticed that they also had more money for food, clothing, a phone, transportation and recreation because they weren't diverting their

money from basic needs to smoking. Non-smokers had money for the bus, could go to the occasional movie on cheap night at the theatre, or take advantage of a special membership at the YM/YWCA for those on limited income. Their non-smoking status afforded them such “luxuries”, because they had not spent the majority of their income on smoking cigarettes.

I thought that if I could assist smoking clients to quit, then they would have more money for basic needs, better physical and social well-being, and an improved quality of life. I noticed that many of the clients who smoked were trying to quit on their own, without assistance, often unsuccessfully. Consequently, they felt discouraged and ashamed of their inability to “kick this habit”. I wondered why the psychiatric/mental health system was not doing more to assist patients with this challenge, especially since it was the “drug” most frequently used by our patients. I observed a limited amount of knowledge about nicotine dependence and smoking cessation in my own practice, as well as in those of my colleagues. Many did not feel they possessed the expertise to tackle this problem with their patients. I know I certainly did not. In many cases, the attitudes of nurses were paternalistic about the benefits of smoking for patients and pessimistic about their ability to quit. I often heard comments like: *“it’s their only friend”*, *“they don’t have anything else in their life why take that away from them”* and *“they can’t quit”*. Nurses’ interest in addressing tobacco use by their patients was low due to other clinical priorities.

Around that time, I came across an article by Addington, el-Guebaly, Campbell, Hodgins, & Addington (1998) that confirmed individuals living with mental illness could quit smoking, if they received the appropriate supports. Since Addington et al.’s (1998)

study, other researchers have confirmed that individuals living with mental illness are interested in addressing their tobacco use (Evins et al., 2001, 2004, 2005, 2007; Green & Clarke, 2005; Tidey, O'Neill, & Higgins., 2002; Van Dongen, 1999). Unfortunately, clinicians have been slow to respond with interventions to assist patients to address their cigarette smoking, despite available and effective treatments (Hall & Prochaska, 2009; Ziedonis et al., 2008).

### *The Cigarette and Addiction*

When a patient is physically injured in an accident, it is important to understand the mechanism of injury for treatment and rehabilitation. The same parallel can be drawn when mental health professionals assist patients with tobacco use.

As a health professional, it is important to understand what it is about cigarettes that can ultimately be deadly in order to fully grasp the development of tobacco-related diseases and consequences. This knowledge is helpful in trying to educate patients about the dangers of smoking and in understanding larger tobacco control issues with respect to the tobacco industry, i.e. how ingenious the industry has been in bringing and keeping such a harmful product on the market. Cigarettes are a modern invention, using mostly flue-cured and sugared burley tobaccos, with inhalation of the mildly acidic smoke allowing ready and efficient absorption of nicotine into the lungs (Giovino, Henningfield, Tomar, Escobedo, & Slade, 1995). Cigarette users smoke cigarettes in a way that is highly dependence-producing and extremely toxic to the respiratory system (Giovino et al., 1995).

A cigarette consists of tobacco, paper wrap and a filter. Only part of a cigarette comes from the leaf of a tobacco plant. The shredded brown part of most modern

cigarettes is “reconstituted tobacco”, made from the pulp of tobacco stems and other parts of the tobacco leaf. Nicotine and several chemicals are added to the reconstituted tobacco paper including ammonia which aids in the delivery of nicotine and chocolate to mask the bitter taste of tobacco. Manufacturers saturate the reconstituted tobacco with Freon and ammonia gases and freeze dry it to increase its volume. The cigarette paper also contains a host of chemicals such as titanium oxide, which accelerates and maintains burning so the cigarette doesn’t go out and burns more evenly. The filter was added to modern day cigarettes in the 1950s by the industry to counter claims by physicians and researchers that there was a possible link between lung diseases and smoking. The tobacco companies claimed filters reduced tar and nicotine levels. However, no evidence exists that filtered cigarettes are less harmful, despite industry claims (Hoffmann & Hoffman, 1997).

Cigarettes contain over 4,000 chemicals, toxic metals and poisons, including 50 that are known to cause cancer. Carcinogens include tobacco-specific N-nitrosamines, benzene, pesticides and formaldehyde; toxic metals include arsenic and cadmium. The types of poisons found in cigarettes include ammonia, carbon monoxide, hydrogen cyanide and nicotine (Martin, 2008). Cigarettes have been referred to by tobacco control researchers as a “sophisticated nicotine delivery device” because of the rapidity with which it delivers nicotine to the brain. Neuroadaptive changes occur in the brain at the level of the reward pathway and nicotinic receptors with chronic exposure to nicotine and other chemicals in tobacco smoke, resulting in tobacco addiction (Els & Kunyk, 2008; Picciotto, Zoli, Rimondini, Lena, Marubio, & Pich et al., 1998; Tapper, McKinney, Nashimi, Schwarz, Deshpande, & Labarca et al., 2004; Wise, 2002).

Nicotine Related Disorders including Nicotine Dependence (ND) and Nicotine Withdrawal (NW) are listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (American Psychiatric Association, 1994). This manual is the prevailing nomenclature used in psychiatry by clinicians and researchers. The American Psychiatric Association also has Practice Guidelines for the treatment of patients with Nicotine Dependence (American Psychiatric Association, 1996, 2005, 2007). Although ND and NW are included in the DSM-IV, I have, only once, observed a psychiatrist code the diagnosis of ND on the chart (at a community hospital), in twenty years of being employed as a nurse in psychiatry/mental health.

Tolerance to nicotine involves the absence of nausea, dizziness and other characteristic symptoms despite using significant amounts of nicotine or a diminished effect observed with continued use of the same amount of nicotine-containing products. Cessation of nicotine use or reduction in the amount of nicotine produces a well-defined withdrawal syndrome within 24 hours that includes four (or more) of the following signs:

- (1) dysphoric or depressed mood
- (2) insomnia,
- (3) irritability, frustration, or anger,
- (4) anxiety,
- (5) difficulty concentrating,
- (6) restlessness,
- (7) decreased heart rate,
- (8) increased appetite or weight gain (American Psychiatric Association, 1994).



Other symptoms of withdrawal have been proposed since the DSM-IV was published including: constipation, mouth ulcers, upper respiratory tract infections and craving/urges to smoke (Hughes, Higgins, & Bickel, 1994; West, Ussher, Evans, & Rashid, 2006).

#### *Prevalence, Costs and Consequences of the Tobacco Problem*

There are approximately 1.3 billion smokers around the world (“Public Health,” 2006). Tobacco use is the second leading cause of death in the world, causing 1 in 10 adult deaths or more than 4.9 million deaths each year (“Public Health”, 2006). In Canada, the annual results for the first half of 2008 (February to June) from the Canadian Tobacco Use Monitoring Survey (CTUMS) reported the overall prevalence rate for current smokers as 18% of the population (about 4.9 million smokers) aged 15 years and older and that the rate was unchanged for the same period one year previously (Health Canada, 2008). In its most recent progress report on tobacco control, CTUMS stated that although the prevalence rate continues to decline, it is declining in smaller increments. They concluded that this trend may be due to “*a harder-to-reach population of Canadian smokers*” (p. 3) including individuals living with mental illness. Manitoba reported one of the highest smoking rates at 22% of the total population (Health Canada, 2007).

Tobacco is estimated to cost governments US \$200 billion per year through direct health care costs and loss of productivity from death and illness (“Public Health,” 2006). The direct health care costs of tobacco use in Manitoba are estimated to be approximately \$130 million annually. Over 1800 Manitobans die each year from smoking-related illnesses (Province of Manitoba, 2003).

In a frequently cited US study, individuals with mental illness were almost twice as likely to smoke as other persons (Lasser et al., 2000). International prevalence rates of

smoking among individuals with schizophrenia and bipolar disorder are three times higher than the general population, ranging from 58% to 88% (Robson & Gray, 2007).

For individuals with a mental illness, there is an additional concern that smoking can impact pharmacological treatment by decreasing the blood level of medications. The hydrocarbons within tobacco smoke increase the metabolism of many psychotropic medications through the induction of liver cytochrome P450 1A2 isoform. Therefore, blood levels of many psychotropic medications can change if individuals with mental illness alter their smoking habits during admission or upon discharge (Desai, Seabolt, & Jann, 2001). Smoking can lower the blood levels of some antipsychotics by as much as 50%, requiring a corresponding increase in dosage to achieve therapeutic blood levels (Lyon, 1999). This situation is of real concern given the frequent side effects experienced by patients on psychiatric medications and the high cost of first line medications. Consequently, helping individuals with mental illness to reduce or quit smoking can have real therapeutic and financial benefits for the patient and a publicly funded Canadian mental health system.

### *Physical Consequences*

The health consequences of smoking have been well established since the first Surgeon General's Report of 1964 stated, "*it is the judgment of the Committee that cigarette smoking contributes substantially to mortality from certain specific diseases and to the overall death rate*" (U. S Department of Health, Education and Welfare, 1964, p. 31). In the report it stated cigarette smoking was causally related to cancer in men, was the most important cause of chronic bronchitis, and increased the risk of dying from chronic bronchitis and emphysema. Other principal findings were related to

cardiovascular disease, lip cancer, cancer of the larynx, esophagus, and urinary bladder. A report of the Surgeon General in 1988, confirmed “*the addicting properties of nicotine, which is present in all forms of tobacco*” (U. S Department of Health and Human Services, 1988, p. 2). It is important to note that although nicotine is the behavioural and biological basis for smoking, it is the inhalation of tobacco smoke that causes the physical consequences (Hoffman & Hoffman, 1997). Despite these facts, smoking rates remain high in the psychiatric population.

As previously discussed, smoking prevalence is higher in the psychiatric population as compared to the general population (Lasser et al., 2000). In terms of specific diagnostic groups, individuals with schizophrenia have the highest prevalence of smoking (70-80%) (de Leon, Dadvand, Canuso, White, Stanilla, & Simpson, 1995). Several the reasons have been advanced by researchers as to why individuals with schizophrenia smoke, including the pharmacotherapeutic explanation and the self-medication hypothesis (Winterer, 2010). The pharmacotherapeutic explanation suggests that smoking reduces the common side effects of antipsychotics such as extrapyramidal symptoms (de Hann, Booij, Lavalye, van Amelsvoort, & Linszen, 2006; Desai et al., 2001). The self-medication hypothesis suggests patients with schizophrenia may smoke to “self-medicate” the negative symptoms (avolition, social withdrawal, anhedonia) and cognitive deficits (inattention, memory problems and difficulty with information processing) of schizophrenia (Adler, Hoffer, Wisner, & Freedman, 1993; George, Termine, Sacco, Allen, Reutenauer, Vessicchio, et al., 2006).

Individuals with schizophrenia are more likely to be heavy smokers and to smoke high tar cigarettes when compared to the general population (Lasser et al. 2000). They

tend to smoke their cigarettes to the very end, where the highest level of nicotine is found. Consequently, they are at increased risk of burns and staining to the fingers (Lyon, 1999).

A recent review of tobacco industry documents revealed that the industry actively promoted the belief that individuals with schizophrenia needed to smoke, that there were hazards to quitting, and that they were less susceptible to lung cancer (Prochaska, Hall & Bero, 2007). However, it is now recognized that smokers with mental illness are affected physically, just like the general population, and perhaps to a greater extent because they continue to smoke and are compromised when it comes to other determinants of health because of their illness and the poverty that often accompanies it. The high morbidity and mortality rates from cardiovascular disease, chronic obstructive pulmonary disease and cancer are well documented among those living with mental illness (Carney, Woolson, Jones, Noyes, & Doebbeling, 2004; Davidson et al., 2001; Goff et al., 2005; Himelhoch, Lehman, Kreyenbuhl, Daumit, Brown, & Dixon, 2004; Lasser et al., 2000; Lichtermann, Ekelund, Pukkala, Tanskanen, & Lonnqvist, 2001; Ruschena et al., 1998).

Of additional concern was the fact that the negative effects of tobacco use are compounded by the existence of metabolic syndrome (MS), leading to further health disparities among individuals with mental illness. Since the advent of atypical antipsychotics, the prevalence of MS has increased and is an important risk factor for cardiovascular disease. Literature on this syndrome, also called the dysmetabolic syndrome or Syndrome X, has been available in the cardiology and endocrinology literature for twenty years but has only recently received attention in the psychiatric literature. The metabolic syndrome is defined by a cluster of clinical features, i.e.

increased abdominal or visceral adiposity (as measured by waist circumference), atherogenic dyslipidemia (low high density lipoprotein and elevated fasting triglycerides), hypertension, and impaired fasting glucose or overt diabetes mellitus (McEvoy et al., 2005).

#### *Psychological/Social Consequences*

The actual activity of smoking can be a very stigmatizing experience for individuals living with mental illness. As tobacco control efforts increase, smoking becomes less the norm and smokers become ostracized. As noted earlier, one often sees smokers outside of public buildings. Individuals with mental illness often stand out because of how they dress, how they look, and from the physical side effects of medication such as weight gain, extrapyramidal side effects, and tardive dyskinesia. Given the denormalization strategies of tobacco control advocates, they may be even more noticeable as they smoke or in some instances as they “hunt for butts” because they are nicotine dependent and survive off limited financial resources. All the above factors, combined with a tobacco addiction result in further stigmatization that often comes with having a mental illness.

#### *Financial Consequences*

Tobacco use has high financial costs for individuals with mental illness, who are typically on a limited budget. Between 50-70% of cigarettes consumed in the United States are smoked by individuals with psychiatric disorders (Grant, Hasin, Chou, Stinson, & Dawson, 2004). Participants in the United States spent a median of \$142.50 US per month on cigarettes and 87.2% were receiving public assistance at a median benefit of \$596 US per month; with a median percentage of income spent on cigarettes per month

of 27-36% (Steinberg, Williams, & Ziedonis, 2004). Individuals with schizophrenia spent almost 30% of their public assistance income on cigarettes (Steinberg et al., 2004). They often struggle to look after their basic needs because much of their income is spent on cigarettes. In Britain, it has been estimated that a patient who smokes 26 cigarettes per day returns 18-31% of his benefits to the Treasury and that individuals with schizophrenia are actually covering a good part of their health care costs as a result of their mental illness through tobacco and value-added taxes! (McCreadie & Kelly, 2000). To bring the financial consequences a little closer to home, the author's own calculations revealed that an individual on a general psychiatric inpatient unit in Manitoba spent approximately \$20-\$100/week, with the average being \$50/week on cigarettes. The amount of funding from Employment and Income Assistance for housing and basic needs that year was \$696.40/month (Green, 2005).

#### *Contextualizing Tobacco Use in Psychiatry/Mental Health*

Until recently, for a variety of reasons, mental health professionals did not identify smoking among individuals with mental illness as a problem that required treatment despite the high prevalence rate (Lawn & Condon, 2006; Soloway, 2009; Williams, 2008). For many years, cigarettes were used (and in some places may still be used) as a reward and a way to develop therapeutic rapport with patients (Lawn & Condon, 2006; Lawn & Pols, 2005; Lawn & Pols, 2003; Soloway, 2009). In fact, many staff trained in a nursing system that condoned smoking by staff and patients (Lawn & Condon, 2006; Lawn & Pols, 2005; Lawn & Pols, 2003; Morris, Waxmonsky, May, & Giese, 2009; Reilly, Murphy, & Alderton, 2006; Ziedonis, Williams, & Smelson, 2003) as illustrated by the following:

The culture of smoking in psychiatric settings is perceived to be an entrenched process that has been central to the history of mental institutions over the past three centuries with the development of asylums and their evolution into our current psychiatric inpatient facilities. Tobacco rations were an assumed part of day to day life in many such institutions. The idea of imposing smoking bans in psychiatric settings is thought to be a recent phenomenon (Lawn & Pols, 2005, p. 867).

In part, the “tobacco culture” in psychiatry/mental health was a reflection of tobacco industry strategies. A recent analysis of tobacco industry documents from the 1998 Minnesota Consent Judgment and Master Settlement Agreement revealed that the tobacco industry engaged in a variety of efforts to hamper progress in addressing tobacco dependence in the psychiatric population (Prochaska et al., 2008). Tactics included slowing the development of nicotine dependence treatment for those with mental illness and slowing the rate of smoke-free policy implementation on psychiatric units (Prochaska et al., 2008). Documents from The R.J. Reynolds Tobacco Company revealed that social interaction, mood enhancement and positive stimulation and anxiety relief were examined as part of their marketing strategy in an attempt to target and exploit the unique psychological/psychosocial needs of smokers with mental health issues (Le Cook, Wayne, Keithly, & Connolly, 2003; Reynolds, 1981). Approximately 400 tobacco industry documents from 1977 to 2000 made available from legal settlements in the United States between the state attorney general and tobacco industry companies were examined by researchers. These researchers concluded that the tobacco industry tried to

court positive media coverage and political support campaigns that were supportive to the homeless and individuals with serious mental illness (Appollonia & Malone, 2005).

The perception of tobacco being acceptable in psychiatry/mental health settings likely also played a role. In the clinical mental health area, the terms “tobacco” or “nicotine dependence” are not used. Smoking is seen as a “habit” or “lifestyle choice”, rather than an addiction (Lawn & Condon, 2006; Lawn & Pols, 2003; Schultz, Bottorff, & Johnson, 2006) or as an “epidemic”, the way the tobacco control community views it. Even though tobacco was not conceptualized within psychiatry/mental health the way it was by the tobacco control community, protection efforts by tobacco control advocates eventually impacted the tobacco culture that surrounded individuals who were being treated for mental illness, consequently forcing the psychiatric/mental health system to deal with tobacco use through smoke-free policy implementation.

Finally, Farchaus Stein (2009b) reported that *The American Psychiatric Nurses Association (APNA)* surveyed its members (n=1288) on tobacco dependence and was “**alarmed**” by its findings. It found that 28% of survey respondents did not think that tobacco dependence treatment was a necessary part of recovery from mental illness or addictive disorders and 33% rated intervention as a low priority. Only 30% provided intensive tobacco dependence treatment (defined as four to eight sessions exceeding thirty minutes total contact time with pharmacotherapy or behavioural counselling) as part of their care. However, even though the APNA was dissatisfied with the state of tobacco use intervention by psychiatric/mental health nurses, these numbers are encouraging. They suggest that the “tobacco culture” is shifting and nurses are interested in tackling this rampant addiction.



### *Development of Smoke-Free Policies*

In Canada, smoke-free policies were developed after a decision in 2002 by the Ontario Workers' Compensation Board in Ontario to address a claim by a hospitality employee who developed and subsequently died of lung cancer (despite never having been a smoker). Consequently, other provincial governments made amendments to their Health Protection Acts out of concern that they may be liable for future claims if legislation to protect workers from the effects of tobacco smoke was not implemented (Province of Manitoba, 2006).

The shift regarding attitudes towards tobacco use in the psychiatric population began with the implementation of hospital wide smoke-free policies that came out of the larger national and international tobacco control movement. Most smoke-free policies were broad and not designed with the specific needs of the psychiatric population in mind. Their aim was the protection of the public from second-hand smoke (Green, 2005). Nonetheless, psychiatric units were no longer exempted from hospital smoke-free policies. Consequently, the issue of tobacco use in this population came to the fore as many facilities removed smoking rooms for patients. Psychiatric units were forced to devise a strategy on how to intervene with patients who could no longer smoke once admitted to hospital (Parle, Parker, & Steeves, 2005). In addition, a landmark population based prevalence study (n=4,411) by Lasser et al. (2000), reporting the high prevalence of smoking in the psychiatric population (at a time when rates were decreasing for the general population), highlighted the significant problem of tobacco use in the psychiatric population. This publication from the National Comorbidity Survey in the United States was seen as a turning point for mental health professionals to stop neglecting the tobacco

problem because it provided evidence of how prevalent tobacco use was for individuals with mental illness (Soloway, 2009).

While workplace bans are critical to tobacco control, they have very little impact on reducing smoking in the psychiatric population. A literature review by a team of Canadian researchers (el-Guebaly, Cathcart, Currie, Brown, & Gloster, 2002) on smoking bans found that the policies did not produce behavioural indicators of unrest or non-compliance as was/had been feared. However, neither did the policies have any significant effect on rates of smoking and smoking cessation. Therefore, these researchers concluded that smoking cessation strategies need to be an inherent component of smoke-free policies, i.e. nicotine dependence treatment needed to be more fully integrated into most programs.

Another factor that made the tobacco problem different in psychiatry/mental health was how the administrative system situated the issue. Although there was a recent move in psychiatry/mental health to address mental illness and substance use simultaneously (given the common co-occurrence of substance use disorders and mental illness in the psychiatric population), nicotine dependence was not included in the Co-occurring Disorders Initiative (CODI) (Manitoba Health, 2009). Nicotine dependence was not included in CODI due to the magnitude of addressing the tobacco issue in combination with other addictions (Barry Fogg, personal communication, March 24, 2006).

Lastly, the approach or lack of an approach by mental health consumer/advocacy groups contributed to the low profile of tobacco use in psychiatry/mental health. (Although, I recognize that this may not be true of other self-help groups such as

Alcoholics Anonymous (AA), drug co-morbidities were specifically excluded from this thesis study). Interestingly, literature from these groups was visibly absent from the literature on tobacco use. A search of Pub Med produced few results involving research with mental health self-help groups and tobacco use. The lack of studies in this area is interesting given the prominence of self-help and advocacy groups within mental health and the establishment of a leading journal (*Psychiatric Rehabilitation*) that tends to publish work salient to consumers. A policy statement on tobacco use and mental illness from the self-help organization in England for individuals with schizophrenia was located on the web (Rethink, 2003). None of the self-help groups in Canada (Schizophrenia Society of Canada, Mood Disorders Society of Canada) had policy statements on tobacco use and mental illness. Although, the national website for the Canadian Mental Health Association did have “Stop Smoking” website links. Williams (2008) argued lawsuits brought forth by consumer/advocacy groups that smoking is “a right”, are really perpetuating stigma because it has “*the potential to worsen health inequalities for people with mental illness and further their stigmatization*” (p. 572).

A significant difference noted between psychiatric/mental health nurses as compared to other nurses was the role of tobacco within the clinical/workplace culture, i.e. the use of tobacco was and is a way of doing business with patients and was/is an entrenched part of the psychiatric culture in a way that was not typical of other nursing specialties. A review of the tobacco-control literature, particularly the role of the tobacco industry, the development of smoke-free policies, how tobacco (as opposed to other addictions) was conceptualized by mental health, how the administrative system situated tobacco use, and the absence of consumer/advocacy groups was important background

literature to discuss. It serves to provide a context for the tobacco problem in mental health, to explain how tobacco is different in this specialty versus others, and to highlight the complexity of integrating tobacco-related interventions into the practice of psychiatric/mental health nurses.

### *Benefits of Quitting Smoking*

Most people could probably tell you that there are benefits to quitting smoking, but I wonder if individuals living with mental illness could. A recent search of the PsychINFO and Cochrane databases yielded few results on the benefits of quitting smoking for those with mental illness. One study found that,

*“Most participants said that cigarette smoking is unhealthy, and they had a general understanding that it can lead to heart and lung problems and to cancer. Some showed detailed health knowledge, while others voiced only vague awareness.”* (Lucksted, Dixon, & Sembly, 2000, p. 1546)

Some studies by researchers on individuals with mental illness, especially schizophrenia have reported smoking related fatal disease such as Coronary Heart Disease (CHD), breast and lung cancer as more prominent than in the general population, with a recommendation to reduce patients' smoking (Brown, Inskip, & Barraclough, 2000; Hennekens, Hennekens, Hollar, & Casey, 2005; Hwang, Wilkins, Tjepkema, Campo, & Dunn, 2009; Tran, Rouillon, Loze, Casadebaig, Philippe, & Vitry, 2009). It appears that most of the literature focused on the negative rather than on the positive, i.e. illness rather than wellness. Few studies took a qualitative approach such as (Lawn, Pols, & Barber, 2002). In my conversations with patients over the years, those who quit smoking have taken a more positive approach to trying to reduce or quit smoking. They

told me that they felt proud of this accomplishment that they had more money, felt less isolated socially, and that exercising was easier. One of the few studies that mirrored my experience was by Lucksted et al. (2000). It described similar benefits from the patients' perspective but that study was published ten years ago.

Other benefits that nurses and patients need to know are cited in *The United States Public Health Service sponsored- Clinical Practice Guideline for Treating Tobacco Use and Dependence* (Fiore et al., 2008) and *The Tobacco Dependence Treatment Handbook* (Abrams et al., 2007). The latter is a clinical handbook for professionals from various specialties who are interested in delivering smoking cessation treatment.

Short-term benefits include:

- Improved circulation
- Improved sleep, taste, and smell
- Less shortness of breath
- Reduced risk of home fires
- Improved effectiveness of medications that are affected by smoking (e.g. propranolol, theophylline, insulin, phenylbutazone, as well as medications for pain, depression, anxiety, and insomnia)
- Availability of money that was previously spent on cigarettes

Long-term benefits include:

- Risk of dying from a heart attack is cut by half within one year of quitting
- Risk of developing emphysema and bronchitis is greatly reduced
- Improved memory, compared with those who continue to smoke
- Reduced risk of osteoporosis and cervical cancer

- Increased life expectancy and quality of life (Abrams et al., 2007, p. 85).

The previous discussion has sought to illustrate that smoking cigarettes was/is addictive for individuals living with mental illness and has many significant consequences that impact numerous determinants of health. The ensuing discussion will discuss the importance of psychiatric/mental health nurses' practice as an important factor that can both foster and mitigate smoking among individuals with mental illness.

### Significance of the Study

#### *Nursing's Role*

The importance of addressing tobacco use and dependence among individuals with mental illness has been identified as a role for general duty and advanced practice nurses in the nursing literature (Cataldo, 2001; Schultz, 2003). Psychiatric/mental health nurses are in a unique position to address and impact tobacco use among individuals living with mental illness. They spend considerable time with patients in comparison to other health care professionals, particularly on inpatient units. Their counselling skills place them in an ideal position to utilize the "5As" for intervention, i.e., "Ask", "Advise", "Assess", "Assist", and "Arrange" (Cataldo, 2001, p. 114). It is imperative that nurses make tobacco use a clinical priority, given the increasing recognition of the poor physical health experienced by many individuals with mental illness (Robson & Gray, 2007).

Leading nurse researchers have stated that "*tobacco use is an important healthcare priority of great concern to nurse clinicians and scientists*" (Sarna & Lillington, 2002, p. 247). The International Council of Nurses (1999) has a position statement encouraging nurses to integrate tobacco use prevention and cessation as part of

their regular nursing practice and to become smoke-free role models. The Canadian Nurses Association published a document called “Working with Canadians Affected by Tobacco (1997) and issued a joint statement called “Tobacco: The Role of Health Professionals in Smoking Cessation” (Canadian Nurses Association, 2001). Finally, the Registered Nurses Association of Ontario has a Nursing Best Practice Guideline “Integrating Smoking Cessation into Daily Nursing Practice (2007).

### Rationale for the Study

Tobacco, the most common substance used by individuals with mental illness, has significant physical, psychological, social and financial consequences. Yet, as has been noticed in my practice and is substantiated in the literature, psychiatric/mental health nurses are not intervening in an attempt to decrease the high rate of smoking among their patients (Buchanan, Huffman, & Barbour, 1994; Dalton, Swenson, Nettles-Carlson, & Jones-Friedman 1991; Dickens, Stubbs, & Haw, 2004; Farchaus Stein, 2008; Lawn & Condon, 2006; Lawn & Pols, 2005; Lawn & Pols, 2003; Morris, Tedeschi, Waxmonsky, May, & Giese, 2009; Sarna, Aguinaga Bialous, Wells, & Kotlerman, 2009). The entrenched role of tobacco in psychiatric/mental health settings and a lack of tobacco-related knowledge about effective treatments inhibit mental health professionals from assisting individuals with mental illness to decrease their rate of smoking (American Psychiatric Association, 1996, 2005, 2007; Cataldo, 2001; Fiore et al., 1996, 2000, 2008). Moreover, there is a paucity of nursing research in the psychiatric/mental health nursing specialty. A listing of 175 data-based papers related to nurses and tobacco did not have any publications from psychiatry/mental health (Wells et al., 2006). Therefore, this study addresses a gap in the research literature. Psychiatry/mental health specific research is

required to find out what strategies are required in order to loosen the grip tobacco has on our clinical/workplace culture.

### Purpose of the Study

The purpose of this study was three-fold. First, to describe the knowledge, confidence, attitudes, tobacco-related training, nursing practice, perceived overall ability, interest and demographics of Winnipeg nurses working in psychiatry/mental health regarding tobacco use among inpatients being treated for mental illness. Second, the researcher wanted to examine the interrelationships and develop hypotheses among the above variables. Third, to provide psychiatric/mental health nurses the opportunity to express views on their practice environment with respect to the use of nicotine-replacement therapy (NRT), the impact of smoke-free policies on nursing views and practices, and to explore nursing knowledge of resources to address tobacco use, through the use of open-ended questions.

### Conceptual Framework

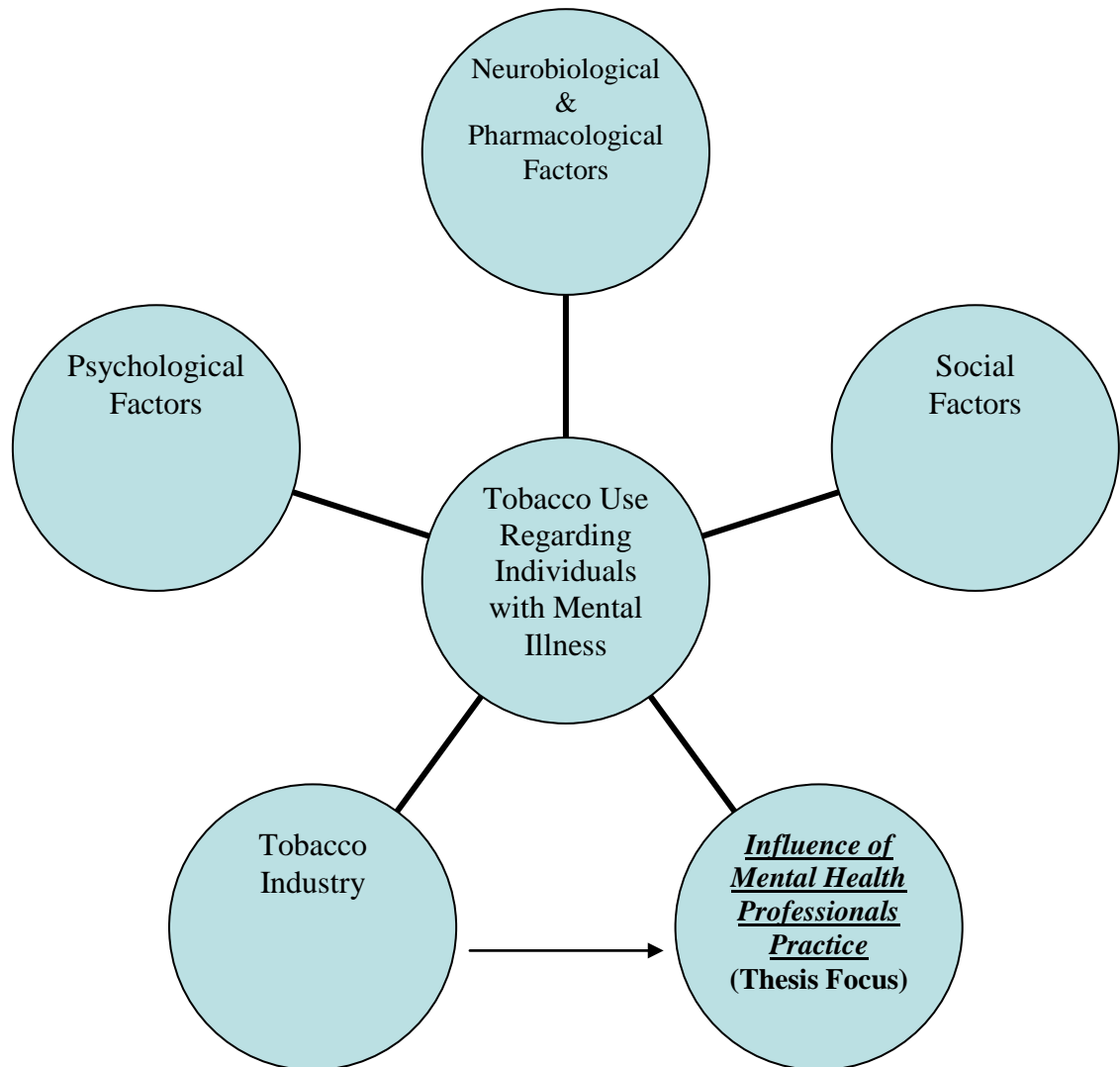
The framework for a study is an explanation based on the literature of how the variables in the study are expected to relate to each other. A conceptual framework is chosen (rather than a theoretical framework) when the explanation is based on the literature and research about the variables or when the literature does not contain a particular theory that explains the relationship among the variables (Wood & Ross-Kerr, 2006). Unfortunately, few studies have been conducted with mental health professionals and their tobacco-related practice. A recent review of tobacco use and cessation in the psychiatric population stated that many unstudied research questions remain (Ziedonis et al. 2008).



In order to understand smoking dependence in psychiatric populations, there needs to be a multivariate, comprehensive exploration of this complex issue rather than an emphasis on a few causal factors. What is needed is a framework that incorporates the pharmacological, psychological, social reasons for drug use and dependence, as well as the meaning people give to it. Such a framework would also include people's beliefs about themselves and the intentions that inform how they make lifestyle choices. (Lawn et al., 2002, p. 94)

I developed the framework shown in Figure 1: Framework for Influences on Tobacco Use Regarding Individuals Living with Mental Illness after reading the above quote by Lawn et al. (2002). This framework was used to guide this thesis study and could ultimately evolve into one that would guide research in the area of tobacco use among the mentally ill as Lawn et al. (2002) suggested. However, I suggest that this evolving framework should include patients in the middle because the ultimate aim of research on tobacco use and smoking cessation is to improve the lives of the mentally ill who suffer many negative consequences from smoking. I would also include neurobiological factors and, in particular, the influence of mental health professionals' tobacco-related practice; the latter being the focus of this thesis study.

Figure 1: Framework for Influences on Tobacco Use Regarding Individuals Living with Mental Illness



This thesis study sought to develop the “Influence of Mental Health Professionals Practice” aspect of this overarching evolving theoretical framework. In that regard, the work by Prochaska et al. (2005) provided the conceptual framework for the thesis study.

The study by Prochaska et al. (2005) was of particular interest to me in understanding how provider practice played a role in the larger issue of tobacco use among individuals with mental illness. Prochaska and colleagues (2005) examined the preparedness of psychiatry medical residents in treating nicotine dependence. My thesis study was a replication of their work with acute care psychiatric/mental health nurses using a non-experimental descriptive correlational cross-sectional design.

Prochaska et al. (2005) surveyed psychiatry medical residents (n=105) in northern California using a three page self-report survey on knowledge, attitudes, engagement in smoking cessation counselling practices, confidence, training, interest and demographics. This study assisted me in six ways. First, it was the only study I located that was conducted with mental health staff concerning nicotine dependence among individuals living with mental illness. Second, it helped me in developing research questions for my thesis study and provided direction related to which variables to measure, i.e. knowledge, attitudes, behaviours, confidence, perceived overall ability, and training. Third, a relevant measurement tool was available to adapt for my sample population. Fourth, it guided the type of data analysis (i.e. descriptive statistics and correlations). Fifth, it introduced me to the “5As” tobacco intervention framework. Sixth, since this was an exploratory study, it suggested the type of results I might expect to find with respect to the level of tobacco-related knowledge among mental health professionals.

## Definition of Terms and Concepts

The following terms are defined as they were used in this study:

### Mental illness

Any serious and persistent mental illness as classified in the *Diagnostic and Statistical Disorder (DSM-IV)* (American Psychiatric Association, 1994) such as schizophrenia, schizoaffective disorder, major depressive disorder, bipolar disorders, obsessive compulsive disorder, or borderline personality disorder.

### Psychiatry/Mental Health

This term refers to hospital units that are primarily responsible for the care and treatment of individuals with a major mental illness, as opposed to addiction or chemical withdrawal units. Addiction-based and community literature has been mostly excluded.

### Nurses and Psychiatric/Mental Health Nurses

This term primarily refers to those individuals who are licensed to practice the profession of nursing after completing a professional nursing education program, i.e. Registered Nurses (RN), Registered Psychiatric Nurses (RPN).

### Professional Nursing Education

The entry level educational preparation required at the diploma or baccalaureate level (Bachelor of Nursing or Bachelor of Science, Psychiatric Nursing) in order to be licensed as an RN or RPN.

### Service Providers

This term is used in the rehabilitation/recovery literature to contrast professionals in a variety of disciplines who are employed in psychiatry/mental health from patients (i.e., consumers).

## Patients

Individuals living with mental illness who received service via a hospital based program either as an inpatient or outpatient. (I acknowledge that individuals living with mental illness or self-help/advocacy organizations may prefer other terms such as client, consumer or participant).

## Tobacco Use

Tobacco use includes cigarette smoking, and other forms of tobacco use such as smokeless (i.e. spit) tobacco, pipes, cigars and exposure to second-hand smoke (Sarna & Lillington, 2002). However, this study is primarily concerned with cigarette smoking as it is the most common method of nicotine delivery used by individuals with mental illness (Grant et al. 2004).

## Nicotine Dependence

Nicotine-Related Disorders is a category within Substance-Related Disorders in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* and includes Nicotine Dependence and Nicotine Withdrawal (American Psychiatric Association, 1994). Substance-related disorders are disorders related to the taking of a drug of abuse, to the side effects of a medication, and to toxin exposure. They are grouped into eleven substance classes of which nicotine is one (American Psychiatric Association, 1994).

Nicotine Dependence and Nicotine Withdrawal can develop with use of all forms of tobacco including cigarettes, chewing tobacco, snuff, pipes and cigars; as well as with prescription medications such as nicotine gum and patch (American Psychiatric Association, 1994).

## The “5As”

The “5As” of treating tobacco dependence (*Ask, Advise, Assess, Assist, and Arrange follow-up*) is an intervention framework recommended as a useful way to understand tobacco dependence treatment and organize the clinical team to deliver treatment (Fiore, et al., 2008). It is commonly found in the literature related to this topic.

## Knowledge

The degree to which nurses are informed about tobacco use, including smoking-related diseases, nicotine dependence/withdrawal, smoking cessation interventions and the “5As” tobacco intervention framework.

## Confidence

This refers to a nurse’s rating of her ability on a number of individual items related to tobacco use and smoking cessation, for example, assessment, providing motivation, and knowledge of nicotine replacement therapy (NRT).

## Attitudes

This is the degree to which nurses in psychiatry positively or negatively value knowledge of and treatment for tobacco use and smoking cessation.

## Training

This term refers specifically to training in tobacco use and smoking cessation, either in a professional nursing program, specialized courses or on the job training.

## Nursing Practice

This refers to the range of activities including assessment, planning, intervention and evaluation of the care provided by nurses on an inpatient psychiatric unit to patients who have been admitted with a mental illness with respect to patients’ tobacco use.

### Perceived Overall Ability

This refers to self-estimation by a nurse of her or his overall ability to assist patients to address their tobacco use including knowledge of nicotine dependence, nicotine withdrawal, pharmacological and behavioural approaches to treating tobacco use and smoking cessation; including the “5As” protocol as a framework for tobacco use intervention.

### Interest

The value a nurse places on learning more about behavioural or pharmacological interventions to address tobacco use and smoking cessation.

### Summary

This chapter addressed the problem of smoking among individuals living with mental illness and the harm that results to them in many areas of their lives because of this addiction. My own observations and the research literature revealed that many patients would like to quit smoking. However, there are many factors that make this desire extremely challenging, including neurobiological, pharmacological, psychological, social, and tobacco industry factors. To this list, one can add the influence of mental health professionals’ tobacco-related practice, in particular, the practice of psychiatric/mental health nurses that is the focus of this study.

## CHAPTER 2: LITERATURE REVIEW

Nurses are identified as one health professional group within hospitals who could significantly impact the prevalence of tobacco use amongst their patients and subsequently, morbidity and mortality (Rice & Stead, 2007). The majority of nurses work in hospitals, they have the most contact with patients (in comparison with any other group of health professionals), and evidence exists that nursing interventions are effective in assisting individuals to stop smoking when hospitalized (Rice & Stead, 2007). Since the early 1980s, researchers have sought to explain why nurses find it difficult to address the problem of tobacco use and integrate smoking cessation interventions into their practice. In their efforts to understand the reality of nursing practice related to addressing patients' tobacco use, researchers have explored a variety of variables: knowledge, confidence, attitudes, tobacco-related training during entry level into nursing practice education or on the job training, interest in addressing tobacco use, age, sex, and smoking status. Each of these variables is discussed below, which is then followed with specifics from the literature related to psychiatric/mental health nursing. Next is a literature summary and analysis, discussion of research gaps, and how the literature informed my thesis study, in particular the study by Prochaska et al. (2005).

### Reported Nursing Practice Activities (Behaviours)

Nurses are ideally situated to intervene with patients regarding their tobacco use. However, the research literature suggests that nurses have been slow to integrate tobacco-related activities into their practice. Over the last twenty years, research has found nurses rarely intervene beyond “ask” and “advise”; “assess” patients’ quit attempts, withdrawal symptoms, provide nicotine replacement therapy or counsel patients in smoking cessation



(Chan, Sarna, Wong, & Lam, 2007; McCarty, Henrikus, Lando, & Vessey, 2001; Nagle, Schofield, & Redman, 1999; Sarna, Brown, Lillington, Rose, et al., 2000; Schultz, Johnson, & Bottorff, 2006; Whyte, Watson, & McIntosh, 2006).

Furthermore, participation rates were low when it came to counselling patients on smoking cessation. Cessation interventions were not well integrated into nursing practice and, even if they were on the “health agenda”, they were poorly done (Chan et al., 2007; Freund, Campbell, Paul, Sakrouge, & Wiggers, 2005; Houghton, et al., 2008; McCarty et al., 2001; Nagle et al., 1999; Sarna, Brown, Lillington, Rose, et al., 2000; Schultz, Bottorff, et al., 2006; Schultz, Johnson et al., 2006; Whyte et al., 2006).

#### Nurses’ Knowledge and Confidence

Knowledge of tobacco-related health effects and confidence in knowledge or in performing nursing interventions related to patients’ tobacco use has been explored in relation to nursing practice. One of the earliest studies by Knopf Elkind (1980) surveyed hospital-based staff nurses/midwives (n=785) in England as potential health educators about their opinions on three measures of cancer control including a recommendation that patients not smoke. The study found that the majority of nurses did not know that “*not smoking*” (Knopf, 1980, p. 423) would make the greatest contribution to cancer control.

Then nineteen years later, two Australian studies (Hughes & Rissel, 1999; Nagle, et al., 1999) which surveyed and interviewed hospital-based nurses (n=127, n=388 respectively), reported deficits in knowledge about the health effects of passive smoking, as well as about effective smoking cessation strategies and referral options. Shortly, thereafter, a study in the United States by Sarna, Brown, Lillington, Rose, et al. (2000) (n=1508) surveyed oncology nurses and reported a lack of knowledge about the Smoking

Cessation Clinical Practice Guideline from the Agency for Health Care Policy and Research on how to help patients quit smoking. They also reported that a lack of knowledge about how to help patients quit and lack of knowledge in general were fourth and fifth out of a list of “10 Most Common Barriers that Prevent Oncology Nurses from Helping Patients to Stop Tobacco Use” (p. 895). In Canada, Tremblay, Cournoyer, Jukie, and Loughlin (2005) concluded there was a lack of knowledge about smoking cessation counselling and medications amongst nurses surveyed in Quebec (n=260). Similarly, Schultz, Johnson, et al. (2006) found slightly less than half of the acute care nurses they surveyed (n=365) reported an adequate level of knowledge to facilitate integration of tobacco-reduction activities into their practice.

A recent qualitative study by Whyte et al. (2006) of hospital-based nurses in Scotland (n=12) reported inadequate knowledge of smoking and smoking cessation and suggested that this limited knowledge related to tobacco use was an issue that impacted on nurses' practice. Chan et al. (2007) also reported a lack of knowledge about tobacco use amongst surveyed hospital-based nurses in China (n=1690). Nurses did not recognize there was a much greater health risk from smoking when compared to air pollution which demonstrated an underestimated risk of tobacco-induced mortality. The nurses also reported limited knowledge of treatment for tobacco dependency, for example, nicotine replacement therapy (NRT). A recent survey of nurse anaesthetists (n=439) in the United States in 2008 by Houghton et al., reported knowledge deficits with respect to smoking cessation strategies and treatments, i.e. 46% of nurses responded with “*Strongly Agree*” and “*Agree*” to the statement, “*I don't know how to counsel my patients about how to quit smoking*”(Houghton, 2008, p. 126).

Confidence was found to be related to knowledge and impacted how nurses intervened with patients with respect to their smoking (Whyte et al., 2006). Lack of confidence in smoking cessation was cited as a barrier by nurses from helping patients stop tobacco use in a study by Sarna, Brown, Lillington, Rose, et al. (2000). In a rank order of factors reported as facilitating smoking cessation interventions, Chan et al., (2007) found that confidence was listed as fourth by 64.6% of the nurses they surveyed (n=2179), after improving the health of patients, recognizing that smoking cessation is the most cost-effective interventions to prevent chronic disease and cancer and, third, having sufficient knowledge about tobacco and health.

In summary, over the last thirty years, hospital-based nurses' knowledge and confidence about tobacco-related health risks, smoking cessation strategies and treatments and referral continues to be suboptimal. This finding was consistent globally and across a number of nursing specialties.

#### Nurses' Attitudes

Nurses' attitudes towards smoking and smoking-cessation activities have also been examined as possible influencing variables on tobacco-related nursing practice. The following quotes were from an article published in the *American Journal of Nursing* by two leading tobacco control researchers who asked nurses to examine their attitudes with respect to tobacco use in their patients (Aguinaga Bialous & Sarna, 2004). These quotes demonstrated that, as recently as 2004, nurses still held many attitudes that indicated a reluctance to intervene with smoking patients.

- “*Smokers don't want to quit. We shouldn't nag them; it's their right to smoke.*”

- “*I don’t want to make someone who is already sick feel guilty by talking about smoking.*”
- “*I don’t have time to provide smoking cessation intervention.*”
- “*Nurses don’t know how to help patients quit smoking.*” (Aguinaga Bialous & Sarna, 2004, p. 58).

Like the issue of tobacco use itself, nurses’ attitudes are multilayered, complex and sometimes confusing. Some studies suggest nurses have positive attitudes about assisting patients with smoking cessation (Chan et al., 2007; Houghton et al., 2008; McCarty et al., 2001; Nagle et al., 1999; Sarna, Brown, Lillington, Rose, et al., 2000; Schultz, Johnson, et al., 2006; Whyte et al., 2006). Yet, nurses had unrealistic expectations about success because they believed it was pointless to approach patients who had not expressed an interest in smoking cessation and thus often restricted their interventions to patients who expressed a desire to quit (Nagle et al., 1999; Sarna, Brown, Lillington, Rose, et al., 2000).

Even though studies reported nurses’ perceptions of addressing tobacco use to be part of their role (Chan et al., 2007; McCarty et al., 2001; Nagle et al., 1999; Schultz, Johnson, et al., 2006; Whyte et al., 2006), the literature on actual nursing practice demonstrated nurses were not intervening, i.e. there was a gap between what actually transpired in daily practice and what they reported to be part of their nursing role (Chan et al., 2007; McCarty et al., 2001; Nagle et al., 1999; Schultz, Johnson, et al., 2006; Whyte et al., 2006). Tobacco use was not identified by nurses as a “*frontline issue*” (Schultz, Bottorff, et al., 2006, p. 319) and smoking cessation intervention was of low priority clinically. Nurses often cited lack of time as a barrier to addressing the problem

of tobacco use in a discussion on attitudes, implying that it was “*a nice to do*” (*italics mine*); however, when pressed, other task-based activities took precedence (Chan et al., 2007; Houghton et al., 2008; Hughes & Rissel, 1999; Nagle et al., 1999; Sarna, Brown, Lillington, Rose, et al., 2000; Tremblay et al., 2005; Whyte et al., 2006).

#### Nursing Education, Tobacco Related Training and Interest

Nursing education, tobacco-related training and interest in tobacco-related interventions were also identified in the literature as variables that were related to how nurses intervened with patients who smoked. Early on, the lack of tobacco-related content in basic, post-basic nursing programs, and the disease-oriented philosophy of hospitals was a focus of researchers as an explanation for the decreased levels of tobacco related knowledge, confidence, and limited nursing intervention around tobacco use (Schultz, 2003). Several studies reported nurses’ perceptions of inadequate preparation during their professional nursing education, i.e. inadequate preventive and cessation content in their nursing curricula (Chan et al., 2007; Houghton et al., 2008; Nagle et al., 1999; Sarna, Brown, Lillington, Rose, et al., 2000; Tremblay et al., 2005). Gritz and Kanim (1986) reported similar findings to Sarna, Brown, Lillington, Rose, et al. (2000), with oncology nurses fourteen years earlier! A recent literature review of nursing and tobacco reduction (Schultz, 2003) suggests that nursing education programs in the United States have not begun to include the treatment of tobacco dependence in their curriculum. Furthermore, if nurses were interested in learning more about smoking cessation interventions after graduation, time to take the training or to incorporate it into their practice was an issue (Houghton et al., 2008).

Knopf Elkind (1980) cited the “*instrumental aspects of nursing*” and the “*disease oriented*” nursing education programs as barriers to nurses perceiving their role as preventative and educative. Nagle et al. (1999) suggested a “*reorientation of the nursing workforce in the area of preventive health care (and in the area of tobacco control in particular) is essential*” (p. 140). One might wonder why nurses did not seek out tobacco-related training after graduation given the fact that they regularly encountered patients in their hospital who smoked or had smoking-related diseases. However, one might conclude that the philosophical underpinnings of most nursing education programs over the years, regardless of country, were task-focused, disease-oriented, and lacked a preventive and health promotion focus (Knopf Elkind, 1980; Whyte et al., 2006). Consequently, nursing educational programs produced nurses who were ill-equipped to address tobacco use and smoking cessation in their role as clinicians once they reached the hospitals. There is now a movement afoot for a more concerted effort at integrating tobacco issues into basic nursing curricula (Schultz, 2003).

### Personal Characteristics

#### *Age and Nursing Experience*

Earlier studies found the age of nurses may influence attitude and the delivery of smoking cessation interventions. It could be speculated that, since younger nurses have grown up in an era where anti-smoking campaigns have predominated, they may be more receptive to intervening with patients. The literature on age and nursing experience with respect to tobacco use and smoking cessation unequivocally found that the older the nurse, the more likely they were to intervene. The attitudes of younger nurses seemed to be more negative in that the importance of ‘*not smoking*’ was not valued in terms of its

impact on health and were more likely to report their impressions that most smokers did not want to quit (Knopf Elkind, 1980; Hughes & Rissel, 1999; Nagle et al., 1999; Sarna, Brown, Lillington, Rose, et al., 2000). Similarly, in a study by Hughes & Rissel (1999), age was a predictor of smoking related attitudes, i.e. older nurses agreed or strongly agreed that “*Health-care workers who smoke give the impression that smoking is not harmful*” (Hughes & Rissel, 1999, p. 150). Another study found that both age and experience (i.e. number of years in nursing) are related to the provision of tobacco cessation advice more frequently (Sarna, Brown, Lillington, Rose, et al., 2000). While another found no relationship between experience and attitude toward giving smoking cessation advice (Hall, Vogt & Marteau, 2005).

#### *Smoking Status*

One might surmise that a nurse who smokes might be less likely to assist patients with their tobacco use. The smoking status of nurses was frequently measured and discussed in terms of its role as an influencing variable on knowledge, attitudes, and nursing practice (Knopf Elkind, 1980; Hughes & Rissel, 1999; McCarty et al., 2001; Nagle et al., 1999). However, the measurement of smoking status across several studies was not consistent (Bolman, de Vries, & Mester, 2002; Chan et al., 2007; Hall et al., 2005; Houghton et al., 2008; Hughes & Rissel, 1999; Knopf Elkind, 1980; McCarty et al., 2001; Nagle et al., 1999; Sarna, Brown, Lillington, Wewers, et al., 2000; Schultz, Johnson, & Bottorff, 2006). Schultz (2003) makes a similar argument in her review of the literature on nursing and tobacco reduction. Two older studies reported that smokers were more likely to have knowledge deficits in terms of the impact of tobacco use on health (Knopf Elkind, 1980; Hughes & Rissel, 1999). However, another study reported

that there was no significant difference in knowledge or attitudes based on smoking status (Nagle et al., 1999). Hughes and Rissel (1999) reported that the majority of their sample (69%) agreed that healthcare workers who smoke gave the impression that smoking was not harmful and 81% of nurses agreed that smoking in hospitals and health centres should occur in areas not visible to the public; however, smokers were less likely to agree with such a policy.

Two Canadian studies, (Schultz, Johnson, et al., 2006; Tremblay et al., 2005) reported that nurses regardless of smoking status felt they had a role in addressing tobacco use but did not venture beyond assessment of patients' smoking status in their practice. However, there was no clear connection between practice activity and being a role model or between practice activity and smoking status. Most nurses perceived themselves as role models and did not believe smokers could be effective with smoking cessation interventions (Chan et al., 2007; Hall et al., 2005; Hughes & Rissel, 1999; Nagle et al., 1999; Sarna, Brown, Lillington, Rose, et al., 2000; Sarna, Brown, Lillington, Wewers, et al., 2000). However, two American studies reported being a "current smoker" was not statistically significant in terms of differences in counselling practices (McCarty et al., 2001; Sarna, Brown, Lillington, Rose, et al., 2000). Thus, the role of smoking status on particular variables with respect to tobacco use and smoking cessation is unclear in relation to its potential influence on knowledge, and nursing practice. It is fairly consistent with respect to attitude regarding smoking status, i.e. nurses did not perceive their colleagues who smoked as good role models for patients (Hughes & Rissel, 1999; Nagle et al., 1999). Smoking was associated with more negative attitudes about



the importance of being involved with tobacco control activities (Sarna, Brown, Lillington, Wewers, et al. 2000).

### *Summary*

A review of the literature relating to nurses found that they have tobacco-related knowledge deficits, are not confident in assisting patients with addressing their tobacco use, and did not feel able to intervene beyond asking about smoking status. Although they expressed an interest in more training on tobacco use, they, more often than not, held attitudes that were not supportive of the clinical importance of intervening with patients regarding tobacco use in their nursing practice. The majority of nurses had limited knowledge of the “5As” model for treating tobacco use and dependence or still required education and encouragement to incorporate it into their practice (Barta & Stacy, 2005; Chan et al., 2007). Finally, a *Cochrane* review of nursing interventions for smoking cessation concluded that:

The challenge will be to incorporate smoking behaviour monitoring and smoking cessation interventions as part of standard practice, so that all patients are given an opportunity to be asked about their tobacco use and to be given advice and/or counselling to quit along with reinforcement and follow-up. (Rice & Stead, 2007, p. 1)

### Mental Health Professionals

#### *The Tobacco-Related Practice of Non-Nursing Providers*

The American Psychiatric Association (APA) guidelines (1996) pointed out that staff attitudes regarding smoking are one of the barriers to assisting inpatients to quit. However, there were few studies examining the practice of psychiatrists with respect to

the treatment of tobacco use and smoking cessation. As previously noted the study by Prochaska and colleagues (2005) was a seminal study on the tobacco-related practice of mental health professionals. It surveyed medical psychiatry residents (n=105, 60% female), on knowledge, confidence, attitudes, behaviours, overall ability, training and interest in tobacco use and cessation, with a 68% response rate. Key findings from this study included: 54% of residents responded correctly on knowledge items; confidence ratings averaged 3 on a 5-point Likert scale, and attitudes averaged 2.1 on a 5 point scale placing them in the negative range. Overall perceived ability to assist patients to quit was 66%, falling in the poor to fair range. In terms of engagement in the “5As”, 58% of respondents “*asked*”, 29% “*advised*”, 17% “*assessed*”, 18% “*assisted*” and only 15% “*arranged*” follow-up. Medical school or residency training in tobacco use and cessation was rated as inadequate (74% and 79% respectively). Ninety-four percent of respondents reported an interest in learning more about how to assist patients to quit. The smoking status of the respondents in this study was 11% and placed these residents with a higher rate of smoking than in comparison to other medical specialties. Current tobacco users were found to be less interested in learning more about tobacco use and had more negative attitudes toward counselling patients to quit smoking. Those who rated training as adequate reported greater knowledge, confidence, perceived ability and engagement in the “5As”. Knowledge scores were significantly correlated with engagement in the “5As”. However, there was no association between knowledge and attitudes. Lack of preparation during medical and residency programs has also been cited as a major reason why psychiatrists (like other physicians) have not integrated the treatment of tobacco use

and smoking cessation into their practice (Prochaska et al., 2005; Prochaska, Fromont, Louie, Jacobs, & Hall, 2006; Prochaska et al., 2007).

These findings with respondents may persist after the individual psychiatrists move into private practice. Himelhoch and Daumit (2003) investigated the relationship between visit characteristics and smoking cessation counselling by examining office visits (n=1610) by psychiatric patients who smoked. Psychiatrists offered smoking-cessation counselling at 12.4% of visits, where 25.2% of patients were documented as smokers. Nicotine-replacement therapy (gum or patch) was not offered by the psychiatrist and the diagnosis of Nicotine Dependence was not used.

A recent study that included both provider and consumer perspectives also found that mental health professionals were not intervening with patients in assisting them in addressing their tobacco use. Morris, Waxmonsky, et al. (2009) conducted focus groups using semi-structured discussions with mental health consumers (n=62), mental health clinicians (n=5), and administrators (n=22) in the United States. Although, it was a community study, it was the only study located since the 1994 study by Buchanan et al. that provided evidence from the perspective of both service providers and mental health consumers. Symptom relief from smoking was identified by consumers but they generally had limited knowledge about the health consequences of smoking. Knowledge by providers on evidence-based tobacco cessation treatments, treatment outcomes, consumers' desire or motivation to quit, and local tobacco control resources was not up to date. One provider was quoted as saying "*the problem is that there isn't actually evidence that it (cessation strategies) works*" (Morris, Waxmonsky et al., 2009, p. 279). This statement represents a pessimistic attitude. It is not in keeping with research that

says patients can quit (although perhaps not in the long-term) (Addington et al., 1998) and with the importance of addressing tobacco use in the psychiatric population as discussed in the most recent practice guidelines from the American Psychiatric Association (APA) (2007), guidelines from the Advanced Practice Psychiatric Nurses (Cataldo, 2001) and the US Public Health Service Clinical Practice Guidelines on the Treatment of Tobacco Use and Dependence (Fiore, et al. 2008). Both providers and consumers reported pessimistic attitudes about the ability of consumers to quit but providers did so more often (Morris, Waxmonsky et al., 2009). As well, both groups identified the need for more providers training, particularly around the harmful effects of tobacco versus the benefits of smoking with respect to symptom control (Morris, Waxmonsky et al., 2009). Lastly, consumers frequently reported smoking by staff as a barrier to treatment. *“They (mental health providers) have to not smoke or they’re not a good example for me. If they smoke, they got nothing to tell me”* (Morris, Waxmonsky, et al., 2009, p. 279). Interestingly, the study by Morris, Waxmonsky, et al. reported a similar discrepancy between consumers and providers as was reported by Buchanan et al. (1994) between nurses and patients with respect to perspective on tobacco use even though it was fifteen years later.

Finally, a qualitative study used grounded theory as a method to explore the neglect of tobacco use among individuals with mental illness with the long term goal of lowering the prevalence of smoking in this population. Soloway (2009) interviewed leaders from the National Mental Health Partnership for Wellness and Smoking Cessation in the United States (n=26) to more fully explore the “tobacco culture” in mental health. One of the subcategories that emerged when discussing barriers and

challenges to culture change was “*reframing the lack of attention to this issue as discriminatory*” (p. 44). A reluctance to address tobacco use by staff was also discovered. Specifically, the “*maintenance perspective*” rather than a “*health promotion perspective*” was one theme. In Soloway’s study, staff did not believe individuals with mental illness could embrace wellness and recovery, i.e., they were too ill psychiatrically to worry about addressing non-psychiatric health problems. This study further supported the findings that staff smoking was another barrier to shifting the cultural role of tobacco and lowering smoking rates.

The few studies that have been conducted with mental health professionals in general reported similar findings with respect to the range of variables, i.e. deficits in tobacco-related knowledge, low levels of confidence in their ability to intervene with patients, negative attitudes about patients’ ability to quit, inadequate tobacco-related training, and an interest in learning more about tobacco use.

#### Psychiatric/Mental Health Nurses

Five studies were selected as relevant to the literature review on hospital-based psychiatric/mental health nurses (Buchanan et al., 1994; Dalton et al., 1991; Lawn & Condon, 2006; Lawn & Pols, 2003; Sarna et al., 2009). These studies were selected because they specifically examined the knowledge, confidence, and attitudes of nurses in psychiatry/mental health and the treatment of tobacco use (See Table 1: Studies of Psychiatric/Mental Health Nurses), in comparison to other studies that examined staff attitudes within the context of implementing a smoking ban in psychiatry or in addiction treatment programs (Bloor, Meeson, & Crome, 2006; Dickens et al., 2004; Haller, Dale,

McNiel, & Binder, 1996; Lawn & Pols, 2003; McNally et al., 2006; Ziedonis, Guydish, Williams, Steinberg, & Foulds, 2006).

Table 1: Studies of Psychiatric/Mental Health Nurses

<b>Author/Year</b>	<b>Country</b>	<b>N/Population</b>	<b>Method</b>	<b>Data Collection</b>
Dalton, Swenson, Nettles-Carlson, & Friedman, 1991	US	27 nurses	Intervention	Questionnaire
Buchanan, Huffman, & Barbour, 1994	US	50 nurses, 50 patients	Comparative	Questionnaire
Lawn & Pols, 2003	Australia	71 inpatients, outpatients & MHP	Grounded Theory	In-depth, semi structured, open-ended interview, participant observation
Lawn & Condon, 2006	Australia	7 community & inpatient nurses	Comparative Grounded Theory	Interview
Sarna, Aguinaga Bialous, Wells, & Kotlerman, 2009	US	100 nurses	Descriptive , Cross-sectional Survey	Questionnaire

An American study by Buchanan et al. (1994) examined the status of smoking health risk counselling provided by nurses (n=50) to individuals living with mental illness by comparing nurses' and patients' responses to a questionnaire. The nurses' questionnaire gathered information on their opinions regarding: their responsibility to inform patients about smoking issues; their current practices to patients' responses to questions on smoking history, previous health risk education by nurses, and ways nurses could be helpful to them with smoking cessation. Knowledge of smoking-related diseases was limited. Nurses provided smoking health risk counselling to less than 50% of individuals living with mental illness. They did not identify nicotine dependence as a nursing problem, nor did they intervene when they identified it. Patients reported on their smoking history, previous health risk education by nurses, and ways nurses could be

helpful to them in any smoking cessation efforts. The patients wanted more help dealing with withdrawal symptoms, being taught new ways of coping with stress, more opportunities for exercise and activities to alleviate stress and boredom, and more emotional support. Nurses in this study, identified patient resistance as a barrier to planning and implementing interventions. This comparison revealed that nurses and patients perceive the issue of tobacco use very differently, i.e. nurses perceived patients as resistant whereas patients wanted to quit.

Two Australian studies were groundbreaking in reports on staff (n=26) and patient (n=45) experiences in psychiatry/mental health and the role of nicotine withdrawal, smoking and violence (Lawn & Pols, 2003) and on the ethical beliefs of nurses (n=7) as a barrier to smoking cessation (Lawn & Condon, 2006). The former study was one of the first to examine nicotine withdrawal in psychiatry and the latter study was one of the few qualitative studies conducted on the tobacco-related practice of psychiatric/mental health nurses. The studies reported nurses did not make treatment of tobacco use a clinical priority, had limited knowledge of smoking-related diseases and treatments for nicotine dependence and used cigarettes to clinically manage patients. The latter study suggested nurses could be more effective in their role of promoting smoking cessation if they received adequate institutional support.

In an attempt to encourage nurses to intervene, Dalton and colleagues (1991) evaluated the effectiveness of an educational program to teach nurses (N=27) counselling skills to help individuals quit smoking using baseline and follow-up questionnaires in a psychiatric hospital. Anecdotal comments during the educational sessions revealed that nurses perceived individuals with mental illness as having a need to smoke.

Comments were pessimistic and paternalistic in nature. For example,

- *“it’s the only thing they can enjoy,”*
- *“they need to smoke to relax,”*
- *“smoking is the only thing going for them...”*
- *“If you take away smoking you have to give something back.”* (Dalton et al., 1991, p. 211)

On the baseline questionnaire the majority of nurses reported using smoking cessation strategies. For example, they discussed the risks of smoking with patients (n=23), explored patients’ feelings about smoking (n=21) and recommended alternatives to smoking such as exercise (n=20), suggested specific things patients could do to quit or cut down more easily (n=20) and explained to patients how smoking could contribute to their illness (n=18). One month after the program, the use of all strategies increased, especially the ones nurses used before participation in the intervention program. Oddly enough, after six months, however, the researchers found use of smoking cessation strategies decreased to less than pre-intervention levels and was attributed to lack of reinforcement for continued participation by the nurses. However, one has to wonder if there was also a response bias, i.e. a social desirability response bias, given the favourable results at baseline. The researchers concluded that educational programs for nurses required continual reinforcement until smoking cessation was integrated as a routine health promotion intervention, particularly since it was not a clinical priority.

Recently, Sarna et al. (2009) conducted a descriptive, cross-sectional, web-based survey to assess frequency of cessation interventions and differences in frequency of interventions depending on nurses’ awareness of The Tobacco Free Nurses (TFN). A



secondary analysis was conducted with psychiatric nurses (n=100) about factors associated with tobacco interventions in their practice. The purpose was to describe the frequency of psychiatric nurses' delivery of tobacco treatment intervention based on the "5As. They examined the relationship between demographic characteristics, professional characteristics and awareness of TFN and its impact on the delivery of the "5As". They reported that the majority of nurses asked about tobacco use but less than half assisted with quit attempts or engaged in follow-up. Nurses with advanced practice positions (i.e., nurse practitioners, clinical nurse specialists) were less likely to assess interest in quitting than staff nurses. Finally, nurses' smoking status made a difference in intervention. "Current smokers" were 92% less likely to ask about a patients' tobacco use compared to "never smokers". "Former smokers" were also significantly less likely to ask about patients' tobacco use when compared to "never smokers". These researchers also found the rate of smoking to be higher in comparison to other nursing specialties.

A review of literature for this thesis study involving hospital-based psychiatric/mental health nurses revealed that their level of knowledge, confidence, attitudes, training, practice, ability, interest and demographics with respect to tobacco use was not greatly different compared to psychiatry medical residents or nurses in other specialties.

#### Literature Review Summary and Synthesis

The preceding review of the literature was focused on studies of hospital-based psychiatric/mental health nurses and their tobacco-related practice, in particular their knowledge, confidence, attitudes, ability, training, interest, and demographics. The review began with a survey of literature related to the tobacco-related practice of nurses

in other specialties. The comparison of the tobacco-related practice of nurses in non-psychiatric specialties with psychiatric/mental health nurses reveals that their practices with respect to the treatment of tobacco use among their patients are similar. Nurses in general, regardless of specialty, have not integrated tobacco-related interventions into their practice.

The body of literature was richer with respect to studies with nurses outside of psychiatry/mental health. Only five studies were located on the tobacco-related practice of psychiatric/mental health hospital-based nurses. Two were from the early 1990s, with small samples; only two studies had a sample size greater than 100, and none in Canada. Synthesis of results was challenging and was a reflection of the fact that each study had a slightly different purpose, sometimes sampled other populations in addition to psychiatric/mental health nurses, did not include conceptual definitions of the variables and used different measurement tools. The one exception was the recent study by Sarna et al. (2009). This study replicated a study that had previously been done with oncology nurses (Sarna, Brown, Lillington, Rose, et al., 2000) and was a secondary analysis of psychiatric/mental health nurses from a larger study with various nursing specialties.

#### *Research Gaps*

The research literature has demonstrated to me that nurses in psychiatry/mental health are not that different from other nurses or other professions when it comes to their low levels of intervention with respect to tobacco use among their patients. However, the number of studies conducted in the psychiatric/mental health specialty compared to other nursing specialties was limited. Few of the non-psychiatry studies and none of the psychiatric/mental health studies were guided by a theoretical framework.

A study on the knowledge, confidence, attitudes, training, nursing practice, perceived overall ability, interest and demographics of Winnipeg nurses working in psychiatry/mental health regarding tobacco use among inpatients being treated for mental illness will add to the limited research available. It will be one of the first to replicate another study from the psychiatry/mental health literature, i.e. the study by Prochaska et al. (2005). Finally, it provides a Canadian perspective where none existed in the literature previously and contributes to further development of pertinent variables and ultimately a theoretical framework.

### CHAPTER THREE: METHODS

This chapter describes the methods used to conduct this thesis study. It discusses the aim of the study, including an identification of the research questions and hypotheses. As well, the research design, study variables, study setting and sample, sampling approach, recruitment procedures, data collection and analysis steps are outlined.

#### Aim

The overall aim of this study was to survey nurses working in psychiatry/mental health about their knowledge, confidence, attitudes, training, practice, perceived overall ability, interest and demographics regarding tobacco use and cessation among inpatients being treated for mental illness. “The Survey of Nursing Practices in Psychiatry/Mental Health Regarding Patients Tobacco Use” (Appendix A) was adapted from an existing tool used with medical residents in psychiatry training in California (Prochaska et al., 2005).

The specific aims of the study were:

- to describe the knowledge, confidence, attitudes, training, practice, perceived overall ability, interest and demographics of psychiatric/mental health nurses regarding tobacco use and cessation
- to examine the relationships among the above variables and develop four hypotheses
- to provide nurses the opportunity to express their views on the introduction of smoke-free policies, the ward environment and general comments as they pertain to tobacco use and cessation among their patients

## Research Questions

A review of the research literature, particularly the study by Prochaska et al. (2005) and my own clinical experience in psychiatry/mental health, led to the development of the following two research questions:

1. What are the knowledge, confidence, attitudes, training, nursing practice, perceived overall ability, interest and demographics of nurses employed in an urban psychiatry/mental health setting regarding tobacco use among inpatients being treated for mental illness?
2. What are the relationships amongst the variables of knowledge, confidence, attitudes, training, nursing practice, perceived overall ability, interest and demographic characteristics (i.e. age, sex, nursing education, # of years in practice, employment status and smoking status) of nurses employed in an urban psychiatry/mental health setting regarding tobacco use among inpatients being treated for mental illness?
3. What are the views of psychiatric/mental health nurses about the impact of smoke-free policies on their practice and tobacco use in general with respect to assisting inpatients with nicotine dependence and smoking cessation?

## Hypotheses

The following directional and non-directional hypotheses were developed from the research questions, my own clinical experience and the research literature:

1. Nurses who are knowledgeable about tobacco use are more likely to intervene with patients (practice).

2. There is a relationship between the age of the nurse and her attitude toward addressing tobacco use in patients with mental illness.
3. There is a relationship between age and addressing tobacco use (practice) in patients with mental illness.
4. Smokers (current and former smokers) are less likely to intervene with patients (practice) than non-smokers (never smokers).

### Research Design

A non-experimental correlational cross-sectional design was used to examine the knowledge, confidence, attitudes, training, nursing practice, overall perceived ability, interest and demographics of nurses employed in acute care psychiatric/mental health units regarding tobacco use and cessation among inpatients being treated for mental illness.

The reasons for selecting this design were threefold. First, the literature review revealed that the quantitative research done to date on the attitudes, knowledge and practice of nurses employed in psychiatry/mental health toward tobacco use and cessation among individuals living with mental illness had been minimal, was dated (Buchanan et al. 1994; Dalton et al. 1991) and was an oft-neglected issue in this specialty (Olivier, Lubman, & Fraser, 2007; Schroeder, 2009). Second, non-experimental designs are necessary before experimental studies can be conducted in order to document the scope of the problem, describe important interrelationships between relevant variables and develop effective interventions (Polit & Beck, 2008). Third, a correlational cross-sectional research design was suitable for a masters' level thesis because it was

economical in terms of cost and time as data collection occurred once (Polit & Beck, 2008).

### Survey Development

This study draws upon work with psychiatry medical residents (Prochaska et al., 2005). The survey instrument they developed for their study was adapted for this thesis study. The Smoking Practices Survey (Prochaska et al., 2005) was a thirty-three item, self-report survey that assessed participants':

- knowledge of smoking rates, health effects and treatments (8 items)
- attitudes regarding clinical interventions for treating tobacco use (10 items)
- engagement in smoking cessation counselling practices with their patients (i.e., the "5A's") (6 items)
- perceived confidence in their ability to counsel patients to quit smoking (6 items)
- perceived overall ability (1 item)
- adequacy of prior training in smoking cessation (5 items)
- interest in further training to help patients quit smoking (1 item)
- respondent characteristics (e.g. gender, level of training, advanced degrees and smoking status (6 items)

Permission to use this survey was obtained from the lead researcher (Prochaska et al., 2005) (Appendix B). Since the survey was originally designed for American psychiatry medical residents, adaptation was required for a Canadian psychiatric/mental health

nursing population. Changes were made to the survey, with the assistance of the Thesis Committee (two of whom were national tobacco control experts).

Prochaska and colleagues (2005) reported good internal consistency, with a Cronbach alpha ranging from 0.79-0.84, N=155. In addition, many of the survey items have been used to evaluate the *Rx for Change* curriculum with pharmacy students with a larger sample (N=544). This comprehensive tobacco cessation training program was originally designed for pharmacy students but has been adapted for other health professional groups. For example, it was used to provide training to tobacco cessation counsellors in a research study of smoking cessation in patients with schizophrenia and collaborations were being established with the Georgetown University School of Nursing and Health Studies (Suchanek Hudmon, et al., 2003). Recently, *Psychiatry Rx for Change*, a tobacco treatment curriculum for psychiatry residency and graduate psychiatric nursing programs in the Western United States was developed out of the original *Rx for Change* program (Prochaska et al., 2009). The use of these survey items in both training programs specific to psychiatry and psychiatric/mental health research further demonstrates the suitability of this survey.

#### *Study Measures*

The variables of knowledge, confidence, attitudes, training, nursing practice, perceived overall ability, interest and demographics were measured by the “Survey of Nursing Practices in Psychiatry/Mental Health Regarding Patients Tobacco Use” (See Appendix A for the Survey).



### *Knowledge*

Knowledge was measured using eight multiple choice questions on tobacco use and dependence. Questions focused on knowledge of tobacco-related diseases, nicotine withdrawal, and the “5As” of smoking cessation. Each question had four possible responses, with respondents scoring one point for each correct answer, with a total score = 8.

### *Confidence*

Fifteen items on a 5-point Likert scale ranging from 1 “not at all confident” to 5 “extremely confident”, were used to assess how confident nurses felt when assisting patients to address their tobacco use. The score for this measure was calculated by totalling the responses, with a maximum possible score of 75. Survey items were related to assessment of tobacco use and interventions for smoking cessation, providing motivation to patients, knowledge of NRT, i.e., nicotine gum, patch, etc. and medications for smoking cessation; including questions on recognizing nicotine withdrawal (NW), distinguishing symptoms of NW from psychiatric symptoms and providing adequate assistance when other priorities were competing for nurses’ time.

### *Attitudes*

Attitudes toward patients’ tobacco use were measured with 12 items on a 5-point Likert scale ranging from 1 “strongly disagree” to 5 “strongly agree”. A total maximum score would be 60. Scores at the lower end of the scale would suggest more positive attitudes, while those at the higher end would suggest more negative attitudes.

### *Training*

Two questions were used to measure training with three items for each question. The first question asked psychiatric/mental health nurses to rate the tobacco-related training they received during their basic nursing education, on the job or via continuing education with respect to counselling smokers. The second question asked psychiatric/mental health nurses to rate the tobacco-related training they received during their basic nursing education, on the job or via continuing education with respect to pharmacological treatments for smoking. On each question, respondents who selected “none” would rate it as “0”, “inadequate” was to rated as “1” and “adequate” as “2”. The total maximum score possible was 12.

### *Nursing Practice*

Ten items on a 5-point Likert scale ranging from 1 “with no patients” to 5 “with all or almost all patients” was used to measure intervention behaviours and the “5As” (*Ask, Advise, Assess, Assist, Arrange*) regarding tobacco dependence and smoking cessation.” The maximum score was 50.

### *Perceived Overall Ability*

Overall perceived ability to assist patients to address their tobacco use was measured using a single item on a 5-point Likert scale with 1 “poor” to 5 “excellent”. Total maximum score was 5.

### *Interest*

Interest in learning more about how to counsel patients to address their tobacco use and about pharmacological approaches involved two questions, each rated on a 5-

point Likert scale with 1 “not at all interested” and 5 “extremely interested”. Total possible maximum score on interest was 10.

#### *Current Smoker*

A “current smoker” was defined as a respondent who currently smoked 100 or more cigarettes in their lifetime at the time of survey distribution.

#### *Former Smoker*

A “former smoker” was defined as a respondent who smoked 100 or more cigarettes at any point in their lifetime (i.e. there was no timeframe) and who was not smoking at the time of survey distribution.

#### *Never Smoker*

A “never smoker” was defined as a respondent who smoked less than 100 cigarettes in their lifetime and was not smoking at the time of survey distribution.

#### *Smokers*

This category included “current and former smokers”.

#### *Non-Smokers*

This category included “never smokers”.

#### *Open-ended Questions*

In addition, open ended questions were included on the survey related to the practice environment which produced qualitative data. These questions related to the availability of NRT and its use, the impact of smoke-free policies on views and nursing practice, the availability of resources and staff knowledge to address tobacco use. The survey included questions on nursing practice related to passes, discharges, purchase and storage of cigarettes for patients who smoke as well a question as to whether or not

addressing patient tobacco use posed on ethical dilemma. The final page of the survey allowed space for additional comments related to tobacco use/dependence.

### *Pilot Testing*

In the fall of 2008, “The Survey of Nursing Practice in Psychiatry/Mental Health Regarding Patients Tobacco Use”, was piloted for face validity with a group of outpatient advanced practice psychiatric/mental health nurses (Nurse Therapists) (n=11), ineligible for the study, with previous inpatient nursing experience (2-15 years), ranging in age from 31-65 years of age. All nurses were employed at an urban tertiary care centre and worked in a variety of programs that served individuals living with a variety of mental illnesses. These nurses had between 3-29 years of nursing experience in psychiatry/mental health. Feedback from the advanced practice nurses was used to assist in item clarity and appropriateness, items that may have been missed, determining the appropriate length of and estimating time to complete the survey. Revisions were minor and included clarifying and rewording three multiple choice questions (#4, #5 and # 14); including additional questions on NRT, smoke-free policies and handling/storage of patient cigarettes by nurses on the open-ended questions section of the survey.

### *Study Setting and Sample*

This study was conducted in five urban adult inpatient units within a regional health authority at two urban tertiary care facilities (hospitals that offer specialized consultative services) and three community inpatient psychiatric facilities. At the study sites, there were 156 eligible psychiatric/mental health nurses working during the data collection period.

### *Inclusion Criteria*

1. Nurses [registered nurses (RNs), registered psychiatric nurses (RPNs) and Graduate Nurses (GNs)] employed in an acute inpatient adult psychiatric unit at a tertiary care or community facility as a direct service provider, or as a psychiatric emergency nurse in the Emergency Department on a full-time, part-time or casual status for a minimum of one month.
2. Ability to read and write in English.

### *Exclusion Criteria*

1. Employed in a nursing management position.
2. Employed in adolescent or outpatient psychiatry.

### *Sample Size*

A power analysis was conducted by a statistician at the Manitoba Centre for Nursing and Health Research (MCNHR) at the Faculty of Nursing at the University of Manitoba. The required N was suggested to be 70-90 participants for robustness of statistical testing. (If  $n=70$ , the researcher could detect  $r=0.33$  at  $\alpha=p.05$  with 80% power. If  $n=80$ , the researcher could detect a smaller  $r=.031$  at  $\alpha=p.05$  with 80% power. If  $n=90$ , the researcher could detect an even smaller  $r=0.29$  at  $\alpha=0.05$  with 80% power. If the  $n=80$ , and the  $r$  calculated was 0.33, it would be significant).

### *Recruitment Strategy/Data Collection*

Dillman methods (2007) were consulted for guidance on survey delivery, timing and incentives. Arrangements to meet with unit nursing staff were made with program directors and or managers of patient care beginning in late September 2008 at the various facilities. At one facility, the study was advertised electronically via a newsletter in

December 2008. Information meetings were held with nursing staff at each hospital to discuss the purpose of the study, the procedure for completing the survey and to answer questions staff had about the study in an effort to solicit participation in the study; beginning at the end of November and continued into early January of 2009. Once contact was made with nursing staff at a particular unit, an information sheet was placed in the unit communication binder on each inpatient unit of each site. Posters were strategically placed on the unit advertising the study. Surveys were packaged in a postage-paid return envelope c/o Dr. Diana Clarke, University of Manitoba (or Health Sciences Centre) and marked “confidential” and distributed to nursing staff mailboxes.

The survey package contained a cover letter detailing the purpose of the study. A consent form was not required as return of the completed survey implied consent. Study participants had the option of returning a lottery ticket for a draw for pizza that was included with the survey package as a form of thank-you for participation. Pizza (from Boston Pizza, corporate sponsor for the Heart & Stroke Foundation of Manitoba) was donated at one site for the pizza lottery. Pizza was sent for one meal to staff and patients at one site in June 2008 where the winning participant was employed in appreciation for supporting the study.

During the data collection period, nursing staff were reminded in person and/or via memo of the ongoing project. Data were collected on individual nurses’ knowledge, confidence, attitudes, training, nursing practice, perceived overall ability, interest and demographics regarding tobacco use among inpatients being treated for mental illness. As this was a cross-sectional survey, data collection occurred once.

## Ethics

Ethical approval for the study was obtained through the Education and Nursing Research Ethics Board (ENREB) at the University of Manitoba. Established channels to access institutions, including the completion of research impact forms were followed. Study approval for and endorsement from directors of nursing/unit managers at each hospital site was obtained prior to recruitment. All collected data (paper and computerized) was stored in a locked filing cabinet, in a locked office when not in use. Confidentiality was maintained by ensuring that no personal identifying information was included on surveys, computer files or reports. Completion of the survey implied consent. Anonymity was maintained due to implied consent and only aggregate data was included in the results section of the thesis and in subsequent reports. No risks to participating in this type of study were identified in the literature searched. However, it was recognized that employees might feel obligated to participate in the study because they knew the researcher (at 3/5 sites) and because their directors/managers supported the project. Therefore, this concern was acknowledged at the time of recruitment and voluntary participation stressed to interested participants.

The use of an incentive could be considered evidence of coercion. However, there was support in the literature for this type of strategy. A recent study of nurses found that reminder postcards did not improve response rates or rates of return, contrary to widely accepted best practices for survey methods (Hill, Fahrney, Wheelless, & Carson, 2006). In addition, the need to conduct high quality research necessitated an adequate response rate so that accurate and useful results can be obtained. The challenges of recruitment and declining response rates of health care professionals are addressed in the

Threats to Validity Section. A recent review by the Cochrane Library of 372 trials found extensive use of incentives (Edwards, Roberts, Clarke, DiGuseppi, Wentz, & Kwan et al., 2007). A study of mental health counsellors' also explored the effectiveness of monetary incentives with mail survey data collection and recommended its use to improve response rates (Erwin & Wheelright, 2002). No ethical issues were identified in the review or study and monetary incentives were recommended in order to increase response rates (Edwards, et al., 2007; Erwin & Wheelright, 2002).

#### *Threats to Study Validity*

Three limitations were identified prior to the start of the thesis study. First, the last twenty years have seen an overall decline in response rates to surveys, with a pronounced decline in samples of health care professionals (Hill et al., 2006). The concern was that a poor response rate could reduce the effective sample size and introduce bias (Edwards et al., 2008). The representativeness of the sample could be threatened if the required sample size was not obtained. Efforts made to counter an inadequate sample included the use of incentives (i.e. a pizza lottery) and the use of a confidential survey. As well, efforts to ensure an adequate sample size were made by advertising the study using posters, electronic advertising and in person information meetings with inpatient staff by the researcher.

Second, there might be a selection bias as only those individuals with an interest in tobacco use may return the survey. The above factors could result in the attitudes, knowledge and behaviour of non-respondents being inaccurately represented by the sample (Polit & Beck, 2008). Third, there could be a social desirability bias, as the researcher was known to staff at three of the five sites. Therefore, every effort was made



to inform staff that the researcher was interested in responses from all nurses regardless of smoking status and that their responses would be anonymous and confidential.

### *Data Analysis*

Survey responses were entered into the Statistical Package for Social Sciences (SPSS) Version 16.0 for Windows; cleaned and examined for missing data. Responses to questions on age, education, number of years employed in psychiatry, and smoking status were coded. Age and number of years in psychiatry were collapsed into two dichotomous categories. Smoking status, nursing education and employment status were divided into three categories.

Univariate analysis (percentages, means, standard deviations and frequencies) were used to summarize sample characteristics, describe study variables and summarize psychiatric/mental health nurses' responses to the survey. Bivariate analysis (correlations and Mann-Whitney U test) were used to test associations amongst the constructs and to examine differences between groups. Spearman's rank-order correlation (Spearman's rho) rather than the Pearson's product-moment correlation (Pearson's  $r$ ) was selected due to the non-parametric nature of the data. The standard  $p$  value of .05 was selected. Non-parametric statistics were used because of the level at which variables were measured, i.e. nominal and ordinal. Responses from the open-ended questions on the survey were summarized and reported.

## CHAPTER 4: Results

Nurses working at five hospital-based adult psychiatry/mental health units within an urban community and tertiary care setting were invited to complete a study survey; 156 surveys were distributed to the sites. Sixty surveys were returned with an overall response rate of 39%. Missing data per survey were found to be 6.7% or less.

### Descriptive Statistics

#### *Sample Demographics*

The majority of respondents in this study were female and ranged in age from 23-70, with forty percent of the sample forty-eight years of age or older (mean = 46.49, median=47.00, SD=11.3). Most respondents were diploma prepared, had worked in psychiatry/mental health for eleven or more years, and were almost evenly distributed between full-time and part-time employment status. Age and number of years in psychiatry was recoded into two dichotomous groups based on the median to allow for group comparisons. See Table 2.

Table 2: Personal and Professional Characteristics of Psychiatric/Mental Health Nurses

<b>Demographics</b>	<b>Frequency</b>	<b>Percent</b>
<i>Sex(n=57):</i>		
Male	7	12.3%
Female	50	87.7%
<i>Age(n=51):</i>		
23-47	27	52.9%
48-70	24	47.1%
<i>Smoking Status (n=55):</i>		
Current Smoker	11	20.0%
Former Smoker	25	45.5%
Never Smoker	19	34.5%

<b>Demographics</b>	<b>Frequency</b>	<b>Percent</b>
<i>Nursing Education (n=60):</i>		
RN Diploma	16	26.7%
RPN Diploma	25	41.7%
BN/BScPN	19	31.7%
<i># of Years in Psychiatry (n=57):</i>		
0-10	18	32.1%
11 or more	38	67.9%
<i>Employment Status (n=56):</i>		
Full-time	27	47.4%
Part-time	28	49.1%
Casual	2	3.5%

### *Knowledge*

Respondents' knowledge was measured via eight multiple choice questions on tobacco use and smoking cessation. Knowledge scores were recoded into two dichotomous categories of wrong and correct in order to have a greater sense of which questions were problematic for nurses. Respondents' total scores on the knowledge scale indicated that psychiatric/mental health nurses were knowledgeable about tobacco dependence and smoking cessation (n=59, mean score=5.1, SD=1.66, Range=1-8). However, when each question was analyzed separately, knowledge scores were low on three questions. First, on question two, the majority of nurses was not aware that the rate of tobacco-related disease was higher in the psychiatric compared to the general population. Second, on question six almost forty percent of nurses did not recognize that tobacco use "*stigmatizes*" individuals with mental illness and selected a response that was only partially correct. Third, on question eight, only 23.3% of nurses selected the correct response on a multiple choice question that asked them about the "5As" of smoking cessation, i.e., "*Ask about smoking*", "*Advise to quit*", "*Assess readiness to quit*", "*Assist with quitting*", "*Arrange follow-up*". See Table 3.

Table 3: Knowledge Questions – Three Notable Exceptions to Total Knowledge Score

<b>Knowledge</b>	<b>Frequency (Percent)</b>
<p><i>Q2. Compared to the general population, the rate of cardiovascular and respiratory diseases among individuals with mental illness who smoke is:</i></p> <p>A. More (<b>Correct Answer: 26.7% of participants</b>)</p> <p>B. Less</p> <p>C. About the same</p> <p>D. Don't know</p>	<p>16/60 = 26.7%</p> <p>1/60 = 1.7%</p> <p>28/60 = 46.7%</p> <p>15/60 = 25.0%</p>
<p><i>Q6. Tobacco use and dependence impacts individuals with mental illness:</i></p> <p>A. Physically, mentally and financially</p> <p>B. Socially, i.e. it stigmatizes them</p> <p>C. A and B (<b>Correct Answer: 63.3 % of participants</b>)</p> <p>D. It has no impact</p>	<p>22/60 = 36.7%</p> <p>0/60 = 0.0%</p> <p>38/60 = 63.3%</p> <p>0/60 = 0.0%</p>
<p><i>Q8. The "5As" of smoking cessation are:</i></p> <p>A. Ask, Advise, Assess, Assist, Arrange</p> <p>B. Designed to be brief, requiring 3 minutes or less of clinician time</p> <p>C. A and B (<b>Correct Answer: 23.3 % of participants</b>)</p> <p>D. Don't know</p>	<p>19/59 = 31.7%</p> <p>26/59 = 43.3%</p> <p>14/59 = 23.3%</p> <p>0/59 = 0.0%</p>

### *Confidence*

Fifteen items on a 5-point Likert scale ranging from 1 "not at all confident" to 5 "extremely confident" were used to assess how confident nurses (n=57) felt when assisting patient to address their tobacco use. The mean of this sample was "moderately confident" at 42.84 (SD= $\pm$  7.43) and range was 35.00-58.00.

Nurses' confidence ratings were lower on "have sufficient knowledge of nicotine inhaler, nicotine lozenges and Varenicline". The majority of nurses were "not at all confident" to "not very confident" with the nicotine inhaler (75%) and nicotine lozenges (71.6%). The majority of responses (78.3%) related to Varenicline ranged from "not at all confident" to "not very confident". The nicotine inhaler, lozenges and Varenicline are not typically used on psychiatric/mental health inpatient units in this region. The

majority of nurses (81.6%) reported that they were “moderately” to “very confident” in their ability “*to recognize the signs of nicotine withdrawal (NW)*”. As well, the majority of nurses reported that they were “moderately to very confident” in response to the questions:

- “*Have sufficient skills to monitor and assist patients through their nicotine withdrawal during admission to a smoke-free unit*” (78.3%)
- “*Have sufficient skills to monitor and assist patients if they want to quit smoking upon admission to a smoke-free unit*” (73.3%)
- “*Can help recent quitters learn how to cope with situations or triggers that might lead them to relapse back to smoking to help patients cope with relapse*”(73.3%)
- *Are able to provide adequate assistance when other priorities are competing for your time on the unit*” (70%).

The majority of nurses reported they were able to “*distinguish symptoms of NW from psychiatric symptoms*” (83.3%). However, over a third of staff (35%) was not familiar with “*where to refer patients for assistance with smoking cessation*”.

#### *Attitudes*

The attitudes of psychiatric/mental nurses (n=57) toward tobacco use and dependence within the context of their patients and patient care was measured by twelve items on a 5-point Likert scale ranging from 1 “strongly disagree” to 5 “strongly agree”. Study participants’ mean score was 30.68 (SD=+5.23) and the range of scores was 22-44. Total score possible was equal to 60.

On many questions, there was almost a 50/50 split in responses from nurses about getting patients to quit smoking. Most nurses disagreed with the following attitude statements:

- *“I don’t want to take away an enjoyable and rewarding activity for my patients”*(54.4%, 32/60 disagreed)
- *“If my patients want help with quitting smoking, they will ask for it”*(56.7%, 34/60 disagreed)
- *“Attempts to quit smoking are likely to make my patients current drug or alcohol use worse or make them relapse”*(65%, 39/60 disagreed)
- *“A focus on smoking cessation would detract from management of psychiatric symptoms”* (56.7%, 34/60 disagreed)
- *“Smoking cessation should preferably be handled by a non-psychiatric provider”* (61.7 %, 37/60 disagreed)
- *“Smoking cessation is not a priority for psychiatry”* (50%, 30/60 disagreed)

Results suggested there were still a proportion of nurses who were reluctant to address tobacco use among inpatients. For example, over a quarter of nurses believed that *“Asking my patients about their smoking may make them angry or defensive”* and a quarter of nurses agreed that *“Smoking cessation is not a priority for psychiatry.”*

### *Training*

Two questions with three items each were used to measure training. Almost 60% of nurses responded that they had received no training in counselling smokers during their basic nursing education and 70% reported training on the job or through continuing education as “none” to “inadequate”. The majority of nurses (90%) rated training in

pharmacological treatments for smoking as “none” to “inadequate” during their basic nursing education and on-the-job or continuing education was rated by 66.7% of nurses as “none” to “inadequate”. Almost one-third (33.3%) rated “overall” training as adequate.

### *Nursing Practice*

The frequency of nursing interventions related to smoking cessation was measured using ten items on a 5-point Likert scale ranging from 1, indicating that the intervention was used “with no patients” to 5 “with all or almost all patients”. Nurses were asked how often they intervened with patients seen in the last thirty days, including new patients and patients still on the unit. Study participants’ mean score was 23.05, SD  $\pm$ 8.45 and Range 10.00-43.00. The majority of nurses were not intervening with patients using the “5As” framework and only 30% (18/60) provide medications for smoking cessation. Interestingly, it would appear that “never smokers” (mean=21.89, SD=7.91) tended toward intervening less compared to “current smokers” (mean=23.55, SD= 10.04) and “former smokers” (mean=23.83, SD=8.77), although it was not a statistically significant result. Responses to nursing practice questions are displayed in Table 4a-g.

Table 4a: Nursing Practice: *The “5As – Ask your patients if they use tobacco”*

	Frequency	Valid Percent
1. with no patients	3	5.0
2. with some patients	13	21.7
3. with about half	6	10.0
4. with more than half	5	8.3
5. with all or almost all	33	55.0
Total	60	100.0

Table 4b: Nursing Practice: “*The 5As – Advise patients who use tobacco to quit?*”

	Frequency	Valid Percent
1. with no patients	26	44.1
2. with some patients	19	32.2
3. with about half	3	5.1
4. with more than half	9	15.3
5. with all or almost all	2	3.4
Total	59	100.0

Table 4c: Nursing Practice: “*The 5As – Assess patients readiness to quit using tobacco?*”

	Frequency	Valid Percent
1. with no patients	20	33.3
2. with some patients	19	31.7
3. with about half	6	10.0
4. with more than half	8	13.3
5. with all or almost all	7	11.7
Total	60	100.0

Table 4d: Nursing Practice: “*The 5As – Provide medication to patients who want to quit smoking (Assist)?*”

	Frequency	Valid Percent
1. with no patients	15	25.0
2. with some patients	17	28.3
3. with about half	10	16.7
4. with more than half	4	6.7
5. with all or almost all	14	23.3
Total	60	100.0

Table 4e: Nursing Practice: “*The 5As – Provide counselling to patients who want to quit (Assist)?*”

	Frequency	Valid Percent
1. with no patients	24	40.0
2. with some patients	15	25.0
3. with about half	9	15.0
4. with more than half	3	5.0
5. with all or almost all	9	15.0



Total	60	100.0
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Table 4f: Nursing Practice: “*The 5As – Arrange follow-up counselling session for patients you assist with quitting?*”

	Frequency	Valid Percent
1. with no patients	48	80.0
2. with some patients	5	8.3
3. with about half	3	5.0
4. with more than half	2	3.3
5. with all or almost all	2	3.3
Total	60	100.0

Table 4g: Nursing Practice: “*The 5As – Refer patients to a smoking cessation counsellor/program or Quit Line?(Arrange)*”

	Frequency	Valid Percent
1. with no patients	49	81.7
2. with some patients	6	10.0
3. with about half	4	6.7
4. with more than half	1	1.7
5. with all or almost all	2	3.3
Total	60	100.0

In addition, when “with more than half but not all patients” and “with all or almost all patients” responses were combined, 58.4 % of nurses reported that they “record smoking status on the admission database”. However, only 25.0% of nurses reported that they “record NRT on admission or in the nursing/progress notes”. Finally, only 6.6% of nurses reported that they “refer to the NRT algorithm”.

#### *Perceived Overall Ability*

Nurses’ perceived overall ability to assist patients to address their tobacco use was measured using one item on a 5 point Likert scale ranging from 1 “poor” to 5 “excellent”. The mean of the sample was 3.06,  $SD \pm 0.96$  and Range 1.00-5.00. The majority of nurses (67.8%) perceived their ability as good to excellent.

### *Interest*

Interest in learning more about how to counsel patients to address their tobacco use and about pharmacological approaches involved two questions, each rated on a 5-point Likert scale with 1 “not at all interested” to 5 “extremely interested”, with the mean of this sample 6.8,  $SD_{\pm}1.75$  and Range 2.00-10.00. The majority of nurses (80%) were “moderately to extremely interested” in learning more about how to counsel patients and 90% were “moderately to extremely interested” in increasing their pharmacological knowledge.

### *Smoking Status*

There were no statistically significant differences among categories of smoker, i.e. “current”, “former” and “never smokers” on the variables of knowledge, confidence, attitudes, training, practice, perceived overall ability and interest. However, it is interesting to note that “never smokers” had the lowest mean “practice” score and “perceived overall ability” score in comparison to the other categories of smokers. See Table 5.

TABLE 5: Descriptive Statistics: Current, Former and Never Smoker

Variable/Maximum Potential Score	Current Smoker		Former Smoker		Never Smoker	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Knowledge/8	5.0000 (n=11)	1.1832	5.6800 (n=25)	1.5737	4.6316 (n=19)	1.8016
Confidence/75	45.2000 (n=10)	6.8443	44.4000 (n=25)	5.9020	41.1053 (n=19)	8.3260
Attitude/60	31.1000 (n=10)	4.7481	30.333 (n=24)	5.3215	30.4737 (n=19)	5.6703
Training/12	3.4545 (n=11)	4.4555	3.2917 (n=24)	1.8292	3.2222 (n=18)	1.8960
Practice/50	23.4545 (n=11)	10.0435	23.8333 (n=24)	8.7659	21.8947 (n=19)	7.9155

Perceived Overall Ability/5	3.3636 (n=11)	1.1201	3.1250 (n=24)	0.8999	2.8421 (n=19)	.89834
Interest/10	6.9091 (n=11)	1.3751	6.8750 (n=24)	1.7012	7.0000 (n=18)	1.7823

### Inferential Statistics

One of the aims of this study was to examine the interrelationships among the variables of knowledge, confidence, attitudes, training, nursing practice, perceived overall ability, interest and demographics. The following section will present results related to correlation and hypothesis testing. Non-parametric tests were used because data were at the nominal and ordinal level, distributions were non-normal and the sample size was small (Polit & Beck, 2008).

The hypotheses for the thesis study were as follows:

1. Nurses who are knowledgeable about tobacco use are more likely to intervene (practice) with patients.
2. There is a relationship between the age of the nurse and her attitude toward addressing tobacco use in patients with mental illness.
3. There is a relationship between age and addressing tobacco use (practice) in patients with mental illness.
4. Smokers (current smokers and former smokers) are less likely to intervene with patients (practice) than non-smokers (never smokers).

### *Correlation testing*

The following statistically significant correlations were found. Confidence was positively correlated with training ( $\rho=.373$ ,  $p=.005$ ), practice ( $\rho=.423$ ,  $p=.001$ ) and perceived overall ability ( $\rho=.698$ ,  $p=.000$ ). These results suggest that the level of

confidence as nurse has with respect to assisting patients to address tobacco use is related to the adequacy of tobacco-related training. The level of confidence is also associated with the degree to which nurses intervene (practice) with patients who smoke and how they perceive their ability in this area. Attitude was negatively correlated with interest ( $\rho = -.401$ ,  $p = .002$ ). Not surprisingly, the more negative the attitude of the nurse regarding tobacco use, the less interest she had in addressing it. Training was positively correlated with practice ( $\rho = .368$ ,  $p = .005$ ) and perceived overall ability ( $\rho = .396$ ,  $p = .002$ ). This suggests that there is a relationship between the adequacy of training and the degree to which a nurse intervenes with patients, i.e. practice. Practice was positively correlated with perceived overall ability ( $\rho = .328$ ,  $p = 0.12$ ). This result suggests that the level of intervention by a nurse with respect to tobacco use in patients is influenced by how capable she or he feels about their abilities in the area of tobacco use. See Table 6. Hypotheses #1, #2 and #3 were not supported by correlation testing (See Chapter 5: Discussion).

Table 6: Correlations

	Knowledge	Confidence	Attitude	Training	Practice	Overall Ability	Interest
Knowledge	1.00 a 0 b 60 c	.177 .187 .57	-.132 .327 .57	.064 .631 .58	.048 .718 .59	.171 .197 .59	-.064 .631 .58
Confidence		1.00 57	-.203 .138 .55	.373** .005 .55	.423** .001 .56	.698** .000 .56	.080 .560 .55
Attitude			1.00 57	-.020 .885 .55	-.164 .227 .56	-.263 .050 .56	- .401** .002 .55
Training				1.00 58	.368** .005 .57	.396** .002 .57	-.006 .96 .56
Practice					1.00	.328** .012	.231 .084

					59	58	57
Perceived Overall Ability						1.00	.051
Interest						59	.703
							58
							58

\*\* Correlation is significant at the 0.01 level (2-tailed)

\*Correlation is significant at the 0.05 level (2-tailed)

#### Legend

- a) Spearman's rho
- b) Probability
- c) N

#### *Hypothesis Testing*

The Mann-Whitney U test was used to test differences between smokers and non-smokers on all variables. No significant differences were found between these two groups of smokers. Smokers included “current smokers” and “non-smokers”, whereas “non- smokers” included “never smokers”. “Current smokers” and “formers smokers” were collapsed together to allow for more powerful analyses given the small sample size. Hypothesis 4 was also not supported. See Table 7.

Table 7: Mann-Whitney Test: Smoker Versus Non-Smoker

		<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>
Practice	Smoker	11	27.86	306.50
	Non-Smoker	43	27.41	1178.50
	Total	54		

#### Test Statistics <sup>a</sup>

	Practice
Mann-Whitney U	232.500
Asymp. Sig. (2 tailed)	.931

<sup>a</sup> Grouping Variable: nonsmoker versus smoker

### Open-ended Questions

Ten open-ended questions and a comments page were also included with the survey. Results are reported below. The short answer questions related to availability of NRT on the unit, impact of smoke-free policies on views and practice toward tobacco use, the availability of resource materials and staff knowledge about resources. The majority of responses were from “former smokers” when compared to the number of responses from “current smokers” or “never smokers.

The majority of respondents regardless of smoking status reported “no” to the question, “*Are there standing orders on your unit for NRT?*” However, it is interesting to note that this was not unanimous. See Table 8.

As well, the majority of respondents (72.7%) replied “no” to the question, “*Has the introduction of smoke-free policies changed your views on tobacco use/dependence toward patients?*” See Table 9. Sixteen respondents replied “yes” when asked about the impact of this policy on their views with ten respondents taking the opportunity to share their comments:

- “*Has encouraged me to assist patients’ readiness to quit and offer help*”.  
(Current Smoker)
- “*thought they would show great restraint*”(Current Smoker)
- “*Made the smokers seem more marginalized. I feel sorry for them that they smoke*”. (Former Smoker)
- “*Patients ability to adapt when no tobacco is available*”. (Former Smoker)
- “*Became more aware of how much a pt (patient) smokes where didn’t really check if smoking increased or decreased with hospitalization.*”

*See more “smokers” become agitated with now being able to smoke if one c/o’ (close observations) etc.” (Smoking Status Unknown)*

- *“Smoke-free policy affects their physical/emotional health therefore same has to be dealt with.”(Non-Smoker)*
- *“My views toward a healthy lifestyle”. (Non-smoker)*
- *“Made me more aware of pts (patients) needing to stop smoking and the resources (meds) needed to stop it.” (Never Smoker)*
- *See the benefits for pts/staff on unit, improved/healthier living/working environment for all, more focus on \$ (money)that would be available for pt (patient) if become non-smoker” (Former Smoker)*
- *“I believe our mental health patients are adults who have endured many losses due to chronic illness. If an individual wishes help I will give it. Intolerance and disregard contributed to an already stigmatized and isolated population”. (Former Smoker)*
- *“I find to some it interferes with cooperation or to feel at ease coming into hospital. Increases anxiety more”. (Current Smoker)*
- *“Initially I was very sceptical about the success of the ban. I do think it has reduced use, however more tools could”. (Former Smoker)*
- *“Somewhat”. (Non-Smoker)*
- *“Pts (patients) used to be able to smoke on the unit. When we started having pts’ (patients) smoke off the unit we thought we would encounter a lot of difficulty esp. from pts who are restricted to the unit. I have found pts*

*(patients) handle the smoking restrictions very well with only a few exceptions”.* (Former Smoker)

Table 8: Nicotine Replacement Therapy (NRT) Orders

	<b>Current Smoker (n=11) Percentage (Frequency)</b>	<b>Former Smoker (n=24) Percentage (Frequency)</b>	<b>Never Smoker (n=19) Percentage (Frequency)</b>
<i>Q18. Are there standing orders on your unit for NRT?</i>	No = 63.6% (7) Yes = 36.4% (4)	No = 52% (13) Yes = 44% (11)	No = 68.4% (13) Yes = 31.6% (6)

Table 9: Smoke-Free Policies and Views

	<b>Current Smoker (n=11) Percentage (Frequency)</b>	<b>Former Smoker (n=24) Percentage (Frequency)</b>	<b>Never Smoker (n=19) Percentage (Frequency)</b>
<i>Q19. Has the introduction of smoke-free policies changed your views on tobacco use/dependence toward patients?</i>	Yes = 27.3% (3) No = 72.7% (8)	Yes = 32% (8) No = 64.0 % (16)	Yes = 10.5 % (2) No = 89.5% (17)

The majority of respondents (81.8%) replied “yes” to the question, “*Has the introduction of smoke-free policies changed how you intervene with patients?*” “Current smokers” had the highest percentage of “yes” responses compared to “former smokers” and “never smokers”. See Table 10. Respondents commented on the need to assess how patients will cope with decreased smoking, to more awareness in obtaining orders for NRT, or giving patients smoke breaks if the patient was physically unwell. One “former smoker” commented, “*I have had to adopt an increased measure of dictatorship which changes the dynamics of care.*” A minority of respondents mentioned having to deal with increased conflict, agitation, anxiety and anger in patients. One respondent



commented on the “*ethical issues*” of using smoking passes as a “*reward in a behavioural approach*”.

Table 10: Smoke-Free Policies and Interventions

	<b>Current Smoker (n = 11) Percentage (Frequency)</b>	<b>Former Smoker (n= 23) Percentage (Frequency)</b>	<b>Never Smoker (n = 8) Percentage (Frequency)</b>
<i>Q20. Has the introduction of smoke-free policies changed how you intervene with patients who use or are dependent on tobacco?</i>	Yes = 81.8% (9) No = 18.2% (2)	Yes = 48% (12) No = 44.0% (11)	Yes = 42.1% (8) No = 57.9% (11)

The majority of respondents replied “no” to the question, “*Does your unit have material for staff to assist patients in addressing tobacco use/dependence?*” (41.7%, n=59). The “I don’t know” option was selected by 30.0% (n=18) respondents and “yes” by 26.7% (n=16). “Current smokers” were the most likely to be aware of the fact that their unit had material, when compared to “former smokers” and “never smokers”. See Table 11.

Table 11: Unit Materials

	<b>Current Smoker (n=11) Percentage (Frequency)</b>	<b>Former Smoker (n=24) Percentage (Frequency)</b>	<b>Never Smoker (n=19) Percentage (Frequency)</b>
<i>Q21. Does the unit have material for staff to assist patients in addressing tobacco use/dependence?</i>	Yes = 36.4% (4) No = 36.4% (4) I don’t know = 27.3% (3)	Yes = 28.0% (7) No = 44.0% (11) I don’t know = 24.0% (6)	Yes = 21.1% (4) No = 47.4% (9) I don’t know = 31.6% (6)

More respondents replied “no” to the question, “*Do you request earlier passes for patients who smoke?*” (45.0%, n=27) when compared to respondents who selected the “yes” option (23.3%, n=14) or the “sometimes” option (26.7%, n=16). When responses were examined according to smoking status, “Current smokers” were the most likely to request earlier passes in comparison to “former smokers” and “never smokers”. In fact, if the “yes” option and “sometimes” option were combined for “current smokers”, then 72% of “current smokers” requested earlier passes for patients who smoke. See Table 12.

All categories of smoker mentioned behaviour management issues. Passes were equated with privileges and privileges were seen as a bargaining tool. “*I do for you*”. “*You do for me*”. Passes were seen as a way to decrease “*irritability*”, “*anxiety*”, “*agitation*”, “*anger*”, “*violent outbursts*” and a way to increase compliance with treatment. One respondent commented that passes were given earlier “*because withdrawal symptoms interfere with treatment*”, i.e. giving passes was a way to relieve withdrawal because the person could go out, smoke and relieve the withdrawal them self. A couple of respondents commented that passes were given to patients in response to being constantly asked for walks to smoke cigarettes. ‘*Because they are constantly asking for cigarettes and “walks” because they are used to going out when they want!*’

Table 12: Early Passes

	<b>Current Smoker (n=11) Percentage (Frequency)</b>	<b>Former Smoker (n=23) Percentage (Frequency)</b>	<b>Never Smoker (n = 18) Percentage (Frequency)</b>
<i>Q22. Do you request earlier passes from patients who smoke?</i>	Yes = 36.4% (4)  No = 27.3% (3)  Sometimes = 36.4% (4)	Yes = 24.0% (6)  No = 52% (13)  Sometimes = 16% (4)	Yes = 15.8% (3)  No = 42.1% (8)  Sometimes = 36.8% (7)

The majority of respondents (86.7%, n=52) replied “no” versus “yes” (6.7%, n=4) to the question, “*Are smokers discharged earlier than non-smokers?*” These results seem at odds with the previous question that showed respondents are requesting earlier passes for smoking patients. “Current smokers” were the most likely to suggest early discharge compared to “former smokers” and “never smokers”. See Table 13. Only one respondent commented on the rights issues as a reason for early discharge, “*the patient may feel their rights have been infringed upon and their anxiety may increase*”.

Table 13: Early Discharge

	<b>Current Smoker (n=10 ) Percentage (Frequency)</b>	<b>Former Smoker (n=23) Percentage (Frequency)</b>	<b>Never Smoker (n=18) Percentage (Frequency)</b>
<i>Q23. Are smokers discharged earlier than non-smokers?</i>	Yes = 18.2% (2)  No = 72.7% (8)	Yes = 4.0% (1)  No = 88% (22)	No = 94.7% (18)

The majority of respondents (86.7%, n=52) replied “no” to the question, “*Do you buy cigarettes for patients*”. “Former smokers” were proportionately more likely to

select the “yes” response on this question compared to the other categories of smoker.

See Table 14.

It is interesting to note that most cigarettes are stored behind the nursing station (n=57). Only one respondent mentioned the issue of lighters and two comments mentioned the issue of privileges in connection with where cigarettes might be kept, i.e., with the patient. (A search of the regional health authority intranet found no policy on storage of and access to cigarettes).

Table 14: Buying Cigarettes

	Current Smoker (n=11) Percentage (Frequency)	Former Smoker (n=24) Percentage (Frequency)	Never Smoker (n=19) Percentage (Frequency)
<i>Q24. Do you buy cigarettes for patients?</i>	Yes = 0% (0)  No = 100% (11)	Yes = 16.0% (4)  No = 80% (20)	Yes = 10.5% (2)  No = 89.5% (17)

The lack of funding for NRT for outpatients was not reported to affect how the majority of nurses (81.7%, n=56) intervened with inpatients regarding tobacco use. However, those respondents that chose to comment did mention that NRT was “*too expensive to recommend for quitting*” and that “*availability was an issue*”.

Finally, the majority of respondents (85.0%, n=57) did not report that “*addressing patients tobacco use posed an ethical dilemma*”. One respondent reported, “*I am a smoker, I can to some extent relate to dilemmas*”. Another respondent reported, “*Several reasons. It takes away a choice – unhealthy as it may be. Use of prn (as needed) meds for agitation directly r/t (related to) not being allowed to smoke, increased stigma that smokers’ are dirty, disgusting people who gather on the street!! Addressing the use and providing info and support is good and not a*

*dilemma but forcing mental health patients to quit is not a fair and balanced treatment.*

The final question of the survey was a page asking for additional comments on tobacco use and dependence. Fifteen respondents chose to share their comments. Some respondents wanted to share their own struggles with quitting and how that made them more empathic and knowledgeable about the quitting process.

*I don't have any issues regarding discussing patient tobacco use with them, maybe because I am a smoker. I understand the signs/symptoms of withdrawal better because I have experienced them myself. I can better understand the need/desire for a cigarette and at times are more lenient than perhaps, a non-smoking caregiver.*

Smoke-free policies as a “rights issue” was raised, and that the policies took away a choice for patients. “*Why do you think patients entering the hospital want to quit smoking? After all, it is called personal choice.*” One respondent, a “current smoker” was quite sceptical about the role of psychiatry in treating tobacco use.

*“Well, I guess I have not yet come to terms with treating a tobacco addiction through psychiatry!! Although I can see the impact that any addiction (health or not) has on mental health, I am not yet sure that it is in itself a “disease or disorder” that is treated in psychiatry.”*

Some respondents mentioned the use of NRT, “*Many patients use nicotine gum as a supplement when they are out of smokes. Most have no intention of quitting*”. One respondent, a “non-smoker”, commented about the negative consequences of smoking on patients.

*It causes me distress to recognize the much compromised life-style/housing/nutrition, clothing etc. our patients have to experience when their illnesses disallow their ability to make a satisfactory income. When I hear the amounts of their already way-too-small finances are being spent on cigarettes, or when I observe their feeling compelled to use partially smoked cigarettes discarded by others whose possible contagious illness are a real risk, I am distraught. I am angry that none of the profits from tobacco companies is directed to our patients. It further reinforces my feelings of how unfair life is for our patients.*

## CHAPTER 5: DISCUSSION

The purpose of this descriptive cross-sectional survey study was threefold. First, to describe the knowledge, confidence, attitudes, tobacco-related training, nursing practice, perceived overall ability, interest and demographics of nurses working in psychiatry/mental health units with regard to tobacco use among adult inpatients treated for mental illness. Second, to examine the relationships among the above variables and test four hypotheses:

Hypothesis #1: Nurses who are knowledgeable about tobacco use are more likely to intervene with patients (practice).

Hypothesis #2: There is a relationship between the age of the nurse and her attitude toward addressing tobacco use in patients with mental illness.

Hypothesis #3: There is a relationship between age and addressing tobacco use (practice) in patients with mental illness.

Hypothesis #4: Smokers (current, former) are less likely to intervene with patients (practice) than non-smokers (never smokers).

Third, to provide nurses the opportunity to express their views on the introduction of smoke-free policies, the ward environment and general comments as they pertain to tobacco use and cessation among their patients using open-ended questions.

### Discussion of Descriptive Statistics

#### *Demographics*

Previous studies on the tobacco-related practice of nurses reported respondents to be predominately female (see literature review), with some of the demographic results (i.e. age, smoking status) from this thesis study being similar to a recent study of smoking among psychiatric nurses in the United States conducted by Sarna et al. (2009).

Therefore, although the response rate of this thesis study was low, the sample does not

appear to be skewed. The respondents in this thesis study appear to be representative of psychiatric/mental health nurses and not an unusual group.

### *Knowledge*

On the surface, examining knowledge questions as a whole, i.e. all eight questions together, leads one to conclude that psychiatric/mental health nurses were knowledgeable about tobacco use and smoking cessation. Interestingly, the majority of respondents in this thesis study were knowledgeable about tobacco use in comparison to what was reported in the literature (Chan et al., 2007; Hughes & Rissel, 1999; Knopf Elfind, 1980; Nagle et al., 1999; Sarna, Brown, Lillington, Rose et al., 2000; Schultz, Johnson et al., 2006; Tremblay et al., 2005; Whyte et al., 2006).

However, analyzing each knowledge question individually was illuminating (See Table 3: Knowledge Questions – Three Notable Exceptions to Total Knowledge Score in Chapter 4: Results). Psychiatric/mental health nurses were not knowledgeable about the increased incidence of cardiovascular and respiratory disease among individuals with mental illness compared to the general population. They were also unaware of the “5As”, a commonly cited and used tobacco intervention framework (Fiore, et al., 2008). Psychiatric/mental health nurses did not realize the “5As” was a “brief intervention”, requiring a minimal amount of nursing time to deliver (Cataldo, 2001; Fiore et al., 2008; Prochaska et al., 2000). This is a particularly salient point because nursing interventions have been identified as having a significant impact on the prevalence of tobacco use among hospital patients (Rice & Stead, 2007). As well, “*adequate time*” has been cited in the literature as a barrier to addressing tobacco use by nurses (Sarna, Brown, Lillington, Rose et al., 2000).



The descriptive findings of the thesis study regarding psychiatric/mental health nurses' knowledge about tobacco use were in keeping with the research literature. Several studies identified knowledge deficits regarding the effects of tobacco on health as one factor contributing to less than optimal practice in addressing tobacco use (Hughes & Rissel, 1999; Knopf Elkind, 1980; Nagle et al., 1999; Prochaska et al., 2005). It was encouraging to find that the majority of psychiatric/mental health nurses in this thesis study selected the correct response in terms of the impact of tobacco use on individuals with mental illness, i.e. they realized it impacts patients physically, mentally, and financially and was socially stigmatizing.

### *Confidence*

Psychiatric/mental health nurses in this thesis study were “moderately confident” about various aspects of addressing tobacco use. This finding was at odds with the research literature which reported that nurses in general have confidence levels that are suboptimal with respect to tobacco-related health risks, smoking cessation strategies and treatments (Chan et al., 2007; Sarna, Brown, Lillington, Rose et al., 2000; Whyte et al., 2006). Areas in the thesis study where psychiatric/mental health nurses' confidence scores tended to be lower were around knowledge of certain types of NRT medications and medications for smoking cessation, i.e., the nicotine inhaler, nicotine lozenge and Varenicline (Champix). The prescribing practices of psychiatrists may explain this finding in that they are not using these medications to treat patients with mental illness. This situation may be due to concerns about the adverse effects of Varenicline (Champix) with the psychiatric population reported in a few case study reports (Health Canada, 2009). In addition, Varenicline has not been deemed a front line treatment for Nicotine

Dependence for individuals with mental illness (Hitsman, Moss, Montoya, & George, 2009).

The finding that the majority of psychiatric/mental health nurses were confident with the various aspects of recognizing and treating NW was in sharp contrast to the research literature, where it was reported psychiatric/mental health nurses did not recognize NW or confused it with signs of psychiatric decompensation (Lawn & Pols, 2003; Lawn & Condon, 2006).

Finally, over a third of psychiatric/mental health nurses were not familiar with where to refer patients for assistance with smoking cessation which was in keeping with the literature (Chan et al., 2007; Sarna, Brown, Lillington, Rose, et al. 2000; Whyte et al., 2006). In part, this finding was not surprising because there were very limited referral options for these sites, particularly for individuals living with mental illness. However, a provincial “Smokers Help Line” was in operation. It would appear psychiatric/mental health nurses had limited awareness of this resource, despite the availability of pamphlets being observed at one of the sites and advertisements regularly noted in the city newspaper. Or it could be that they have not found it a particularly helpful resource to refer patients. In fact, a recent article concluded that telephone help lines were in need of some revamping as they may not always be of benefit to those living with mental illness (Morris et al., 2009).

#### *Attitudes*

Overall, the attitudes reported by psychiatric/mental health nurses in the thesis study toward tobacco use in their patients contrasted with expectations formed from the researcher’s own clinical experiences and previously published studies. Most

psychiatric/mental health nurses did not feel that “*Assisting patients with tobacco use meant that they had to get them to quit*”. If psychiatric/mental health nurses do not feel that they have to get patients to quit, they may be more open to addressing patients’ tobacco use without concern about the time it may take on their already overburdened schedules. The message from Tobacco Control advocates that “*Smoking is a chronic relapsing disease that requires on going repeated intervention*” (Fiore et al., 2008) and that “*Quitting smoking is a process and not an event*” (Els & Kunyk, 2008) may be more palatable to psychiatric/mental health nurses if they do not feel pressured to “*make patients quit*” (*Italics mine*).

It was encouraging to find that slightly more than half (54%) of the of psychiatric/mental health nurses in this thesis study disagreed with some long held beliefs that have been reported in the literature about patients who smoke (Aguinaga Bialous & Sarna, 2004) including patients with mental illness (Dalton et al., 1991; Lawn & Condon, 2006). This result seems to suggest that psychiatric/mental health nurses did not equate assisting patients with addressing their tobacco use as “*taking away an enjoyable and rewarding activity*”. Such a result bodes well for future attempts at increasing the level of nursing intervention with patients in the area of tobacco use. It might suggest that the implementation of smoke-free policies approximately four years ago in this region may have had some impact in shifting some long held attitudes about tobacco use among individuals with mental illness, i.e. that smoking went along with having a mental illness and did not need to be addressed.

The majority of psychiatric/mental health nurses (65%) disagreed with the statement, “*Attempts to quit smoking are likely to make my patients current drug or*

*alcohol use worse or make them relapse*". This result may reflect that fact that a "Co-occurring Disorders Initiative (CODI)" (Manitoba Health, 2009) had been introduced into the region a few years prior to the smoke-free policy. Although this initiative did not include tobacco use, it may have shifted nursing attitudes generally because it encouraged a more compassionate attitude by mental health professionals toward patients with both substance use issues and mental illness. In sum, the attitudes held by the majority of psychiatric/mental health nurses toward tobacco use in this study appears to have shifted since I first became interested in this issue.

### *Training*

The research literature reported most nurses received minimal tobacco-related training during their entry level into nursing practice or once on the job (Chan et al., 2007; Gritz & Kanim, 1986; Houghton et al., 2008; Nagle et al., 1999; Prochaska et al., 2005; Sarna, Brown, Lillington, Rose, et al., 2000; Schultz, 2003; Tremblay et al., 2005). The findings from this thesis study were in keeping with what has been reported in the literature. The majority of psychiatric/mental health nurses reported "none" to "inadequate" training addressing tobacco use in their patients as nursing students or on the job, once they were employed as nurses.

### *Practice*

Studies from the literature with nurses from all specialties reported they were slow to integrate tobacco-related interventions into their practice and rarely intervened beyond "*ask*" and "*advise*" when it came to the "5As" (Buchanan et al., 1994; Chan et al., 2007; McCarty et al., 2001; Morris et al., 2009; Nagle et al. 1999; Sarna, Brown, Lillington, Rose, et al., 2000; Sarna et al. 2009; Schultz, Johnson, et al., 2006; Whyte et

al., 2006). The results on the “*practice*” measure in this thesis study were lower than results reported in the literature. The majority of nurses in this thesis study “*Asked*” patients about their tobacco use. However, after “*Ask*”, enquiry about the remaining “*5As*”, i.e., “*Advise*”, “*Assess*”, “*Assist*” and “*Arrange*” was performed by a minority of nurses.

Although, the result was not statistically significant, it was surprising to note that “never smokers” had the lowest “*practice*” score. Is it possible, they do not have the same level of empathy as “current smokers” or “former smokers” or they lack experiential knowledge as previously discussed because they have never smoked?

#### *Perceived Overall Ability, Interest, & Smoking Status*

Although, there were no studies located in the literature on nurses generally that measured “perceived overall ability” and “interest”, these two measures were included in the thesis study based on the work by Prochaska and colleagues (2005). These researchers identified these variables as having an influence on the tobacco-related practice of medical psychiatry residents. They reported 76% of residents rated their “overall ability” to help patients quit using tobacco as “fair” or “poor”. “Greater perceived overall ability” was significantly associated with engagement in the “*5As*”.

Results from the thesis study, were different to what was reported by Prochaska et al. (2005). The psychiatric/mental health nurses in the thesis study reported a higher “perceived overall ability”. They rated their “perceived ability” as “good” to “excellent”. However, although not statistically significant, “never smokers” had the lowest scores on the “perceived overall ability” measure compared to “current smokers” and “former smokers”. Intuitively, this makes sense in light of “practice” scores, where “never

smokers” also had the lowest “practice” scores in comparison to “current” and “former smokers”. In terms of “interest”, psychiatric/mental health nurses scores were similar to what was found by Prochaska et al. (2005) with psychiatry medical residents.

Psychiatric/mental health nurses were “moderately to extremely” interested in both learning more about counselling and pharmacological approaches to addressing tobacco use, although the latter was slightly higher.

As a psychiatric/mental health nurse, I initially found this result curious, i.e. that interest in counselling rated slightly less than interest in pharmacological approaches. However, nurses in this specialty may have felt that “counselling” was an area of strength and were more interested in pharmacological approaches to treating smoking. Clinically, I can attest to the fact that pharmacological options to treat tobacco use have certainly expanded since I first graduated and entered this specialty. As a clinician, I had to learn about pharmacological treatments since they were not discussed in my basic nursing education (as the “training” measure revealed).

## Discussion of Hypotheses

### *Correlations and Group Comparisons*

Hypotheses #1, #2 and #3 were not supported by correlation testing, i.e. no relationship was found between “knowledge” and “practice”, “age” and “attitude” or “age” and “practice”, as I originally postulated prior to the start of this thesis study. The literature reported that nurses were not knowledgeable about tobacco use. Therefore, Hypothesis #1 stated that this may be related to practice. However, this was not borne out and may be due to systemic factors (that were not part of the thesis study), whereby nurses did not have support within their institution that allowed them to intervene

(practice) with patients. The literature also reported a relationship between age and attitude (Hypothesis #2) and age and practice (Hypothesis #3) and smokers (current smokers and former smokers) were less likely to intervene with patients (practice) than non-smokers (never smokers). It is possible a significant relationship was not found with Hypotheses #2, #3 due to a small sample size and limited power.

The fact that “training” was found to be positively correlated with “confidence”, “practice”, and “ability” was not included in the original hypotheses. However, the literature consistently reported a lack of tobacco-related training in most entry level into practice nursing programs (Chan et al., 2007; Houghton et al., 2008; Nagle et al., 1999; Sarna, Brown, Lillington, Rose et al., 2000; Schultz, 2003; Tremblay et al., 2005). Literature reports of a lack of tobacco-related training during entry level into nursing practice suggests there are systemic factors in addition to individuals factors when it comes to the issue of nurses tobacco-related practice. The omission of a hypothesis about “training” in hindsight was an oversight given what was reported in the literature and the results of this study (i.e. positive correlations between “training” and “confidence”, “practice” and “ability”).

In terms of group comparisons, there were no “statistically significant” results when “smokers” (current and former) were compared to “non-smokers” (never smokers). However, the literature has reported mixed results about the influence of this variable on knowledge, attitudes and practice (Bolman et al., 2002; Chan et al., 2007; Hall et al., 2005; Houghton et al., 2008; Hughes & Rissel, 1999; Knopf Elkind, 1980; McCarty et al., 2001; Nagle et al., 1999; Sarna, Brown, Lillington, Rose et al., 2000; Schultz,

Johnson, et al., 2006). Again the lack of a significant result may be related to a small sample size and limited power.

#### Discussion of Open-ended Questions

It was apparent from some of the comments that tobacco use among individuals with mental illness was still an emotionally laden topic. Smoke-free policies for some nurses, still appeared to mean “*making patients quit*” and easily became part of a “rights/choice” discussion. In my experience as a clinician, this type of “rights/choice” discussion does not occur when patients are admitted with alcohol or drug use. Many patients come into hospital having used alcohol or drugs. Sometimes the patient decides to address the drug or alcohol use while in hospital, sometimes they do not. My clinical experience as an inpatient nurse was that staff provided the necessary information and resources during hospitalization for drug and alcohol use. However, they do not feel obligated to “make patients quit drinking” or “quit doing drugs”. The patient may return to using drugs and alcohol, or they may not. However, at the end of the day, staff fulfilled their professional responsibility by addressing the medical condition, i. e. treatment of substance use while admitted to a health care facility.

The thesis results indicated that there was still a ways to go in terms of psychiatric/mental health nurses’ views regarding tobacco use in their patients and the impact their own smoking status may have on their tobacco-related practice. Some of the most emotional comments from the open-ended part of the survey were from “current smokers”. Comments from this part of the survey also confirmed that cigarettes were still used as a tool to intervene with patients in terms of behaviour management issues, particularly around the granting of passes. Although, the results of this study did not



identify NW as an issue, one has to wonder in light of some of the responses to the open-ended questions included in the survey. Unfortunately, over forty percent of the staff reported that their unit did not have materials such as pamphlets for the Smokers' Help Line or Canadian Cancer Society booklets on quitting smoking and another thirty percent did not know if these material were on the unit. If units lack materials for staff to assist patients to address their tobacco use (and withdrawal from forced abstinence), then they may resort to the default position of sending patients out on pass to smoke as a way to alleviate their nicotine withdrawal.

The majority of respondents said "no" to the question, "*Has the introduction of smoke-free policies changed your **views** on tobacco use*". However, some the responses by staff suggested that they had shifted their attitude in a more positive direction when it came to addressing patients' tobacco use. These responses are supported by the mean attitude scores that were at the more positive end of the attitude scale. One might speculate that the introduction of the smoke-free policy in 2005 (Winnipeg Regional Health Authority) had some impact on improving attitudes towards tobacco use because the issue became more prominent as exemptions were no longer made for psychiatric/mental health units. Intuitively, I would expect more negative attitude scores regarding the treatment of tobacco use if the smoke-free policies had no impact. The majority of psychiatric/mental health nurses replied "yes", when asked "*Has the introduction of smoke-free policies changed how you **intervene** with patients who use or are dependent on tobacco?*" It may be that psychiatric/mental health nurses changed their practice with the introduction of smoke-free policies in 2005. Finally, the majority of nurses in the thesis study reported that they did not purchase cigarettes for patients. It

appears that the introduction of smoke-free policies may be shifting psychiatric culture since at one time; it was quite common for staff/mental health facilities to purchase cigarettes for psychiatric/mental health patients (Kunyk, Els, Predy, & Haase, 2007).

#### Psychiatric/Mental Health Nurses and Patients' Tobacco Use

In sum, most psychiatric/mental health nurses in this thesis study reported feeling knowledgeable and confident. There were three areas of knowledge that were decreased, one of which was in the area of intervention and was a clinically significant finding. The majority of nurses did not know about "*The 5As*" of smoking cessation, a commonly used tobacco intervention framework (Fiore et al., 2008). Slightly more than fifty percent held relatively positive attitudes about assisting patients to address tobacco use.

However, nearly half of nurses still did not perceive smoking cessation as a clinical priority for psychiatry/mental health, with the majority reporting a less than optimal tobacco-related nursing practice. Most psychiatric/mental health nurses reported minimal tobacco-related training (in their professional nursing programs or on the job training), although most nurses felt able to address patients' tobacco use and were interested in learning more about counselling and pharmacological approaches.

Interestingly, psychiatric/mental health nurses may have assumed they are doing all that needs to be done to address tobacco use in their patients because they have not been involved in any type of training that would tell them otherwise. No statistically significant differences were found between smokers and non-smokers. However, mean scores on knowledge, confidence and practice were higher for "current" and "former" smokers in comparison than "never smokers", although not statistically significant.

### Methodological Consideration and Study Limitations

Examining tobacco use and cessation was a relatively new issue to psychiatry/mental health in Winnipeg and, as the literature review demonstrated, a complex and controversial topic. Certain aspects of the survey method may have lowered the response rate (Dillman, 2007). Some respondents may have considered the survey as too lengthy, since it was more than one page and took about fifteen to twenty minutes to complete. Or perhaps the cover letter could have been written more skilfully to attract a better response rate. The timing of data collection may have been problematic at a couple of sites in that it occurred during the month of December and early January when staff may have been on holidays due to the Christmas season. At one site the researcher did not have the opportunity to hold an information meeting with inpatient nursing staff prior to the start of the study that could have lowered the response rate. Limited accessibility to staff at two of the sites prevented multiple follow-ups about the study to increase the response rate. It was also later discovered that the surveys were not distributed to staff mailboxes as previously arranged but left on a table for staff to access at their discretion. Not surprisingly, this site had the lowest response rate in comparison to the other four sites. Finally, other than a pizza lottery, there was no individual financial incentive for completing the survey.

#### *Effect Size*

A power analysis was performed prior to the start of the study and an N of 70-90 was recommended. Unfortunately, the required N was not obtained. Results related to hypothesis testing analysis (i.e. correlations) was not found to be statistically significant (i.e. Hypothesis #1, #2 and #3) but might have been the result of a Type II error (i.e.

accepting a false null hypothesis) due to a reduced sample size. As well, group comparisons produced no statistically significant differences between smokers (current and former smokers) and non-smokers (never smokers) (i.e. hypothesis #4).

According to Polit and Beck (2008), a response rate of 65% is sufficient for most studies, although lower response rates are the norm. A recent survey study of 800 Canadian nurses on recruitment incentives supported by a grant from the Social Sciences and Humanities Research Council was only able to secure a 41% response rate (Mantler, Armstrong-Stassen, Horsburg, & Cameron, 2006). The estimated response rate of 39% was fairly typical of nursing studies. Overall, study results were also consistent with the research literature and therefore were probably representative of psychiatric/mental health nurses. An adequate sample size may not have been achieved because clinicians have many demands on their time, resulting in a poor response rate.

#### *Social Desirability Bias*

The use of a self-report survey design raises concern with the validity and accuracy of participants' responses. The researcher assumed that respondents were frank and honest in their response to survey items. However, I have worked in psychiatry/mental health for twenty years and knew staff at three of the five study sites. Every effort was made during information sessions to convey to staff that the survey was voluntary, confidential and anonymous and that there was no right or wrong answers to the survey. Yet, respondents might have felt pressure to convey themselves in a more positive light due to a social desirability response bias, i.e., "*the tendency of some individuals to misrepresent their responses consistently by giving answers that are*

*congruent with prevailing social values or professional expectations”* (Polit & Beck, 2008, p. 432).

#### *Sensitivity of the Measure*

The survey was previously used in the United States by Prochaska et al. (2005). However, it was adapted for a Canadian context and it is possible it did not measure key concepts accurately adding to the inadequate testing of the hypotheses. *“Psychosocial measures often contain some error and lack precision. When measuring tools are imprecise and susceptible to error, larger samples are needed to test hypotheses adequately”* (Polit & Beck, 2008, p. 351).

#### Clinical Implications

Results suggest clinical implications are related to the individual and systemic level. It would be important to meet with staff and administrators in the Adult Mental Health Program to discuss the results of this study, in particular the result that slightly more than half of psychiatric/mental health nurses have positive attitudes about addressing tobacco use among psychiatric inpatients. This result can be used as a foundation to build upon areas where knowledge of tobacco use and tobacco-related practice is suboptimal.

“Knowledge” results need to be shared with administration and staff. The majority of psychiatric/mental health nurses were not aware that the rate of tobacco-related disease is higher in the psychiatric population compared to the general population. It would be important to educate inpatient psychiatric/mental health nurses that smoking contributes to an increased incidence of cardiovascular and respiratory disease among the mentally ill compared to the general population. This fact is especially important since

the psychiatric population is also being impacted by the existence of Metabolic Syndrome. Compounding this situation is the reality that many individuals living with mental illness do so in poverty; further impacting their already compromised physical health. Annual staff education days and/or facility newsletters are one low cost method of disseminating this knowledge. Furthermore, one of the most clinically significant results of this thesis study was that the majority of nurses in psychiatry/mental health lack knowledge of the “5As”, a commonly cited intervention framework for treating tobacco dependence (Fiore et al., 2008). This gap may be one reason for low levels of tobacco-related nursing intervention. The “training” results of this thesis study and what has been reported in the literature (Prochaska, Fromont, Suchanek Hudmon & Cataldo, 2009) could be used to argue for the importance of having some type of “training” in the “5As” (or another intervention framework) for nurses in psychiatry/mental health to improve their tobacco-related practice. The results of this thesis study suggest that future interventions should be aimed at increasing nurses’ knowledge about “*the 5As*” intervention framework, “Ask”, “Advise”, “Assess”, “Assist”, and “Arrange”, in order to provide psychiatric/mental health nurses with a systematic way to increase intervention levels with respect to patients’ tobacco use. The question is how?

Previous research (See Literature review) and the results of this thesis study demonstrate that knowledge and practice are not strongly related to practice. As well, perceived adequacy of training was not strongly related to practice. Results suggest that training is needed but trying to impart knowledge at the level of the individual nurse is only part of the solution in addressing sub-optimal tobacco-related nursing practice levels for psychiatric/mental health nurses. If the problem was only at the individual level, then

the literature would not be repeatedly finding sub-optimal nursing intervention levels regardless of specialty for the last thirty years.

The finding that psychiatric/mental health nurses lack a tobacco-related/smoking cessation intervention framework points to the need to address larger systemic issues if we hope to see nursing intervention levels increase and the smoking prevalence rate among the psychiatric population decrease. Interventions need to be delivered at the institutional/systemic level in order to change nursing practice with respect to patients' tobacco use. This means that faculties of nursing need to incorporate tobacco use and smoking cessation into their nursing curriculum as has been suggested by Farchaus Stein (2009) in a recent issue of the Journal of the American Psychiatric Nurses Association. In an editorial, she lamented the lack of recognition by nurses on the seriousness of tobacco use in psychiatric patients. She suggested an action plan "*must include the immediate addition of core content in our undergraduate and graduate curriculums and the inclusion of this content on our basic licensing and advanced practice certification examinations*" (Farchaus Stein, 2009b, p. 19).

The corollary to offering tobacco-related content in nursing curricula is that hospitals need to develop hospital wide systems (Barr Taylor, Houston Miller, Cameron, Wien Fagans & Das, 2005) that support nurses on inpatient units to have the knowledge, training and time to address tobacco use in their patients. For example, in the regions where this thesis study was conducted, inpatient nurses could perform the first three "As" (*Ask, Advise and Assess*) and then refer the patient to a smoking cessation specialist within the outpatient department who would perform the fourth and fifth "As" (*Assist, Arrange/Advocate*). However, such an arrangement would require support and

endorsement by administration that such work was a formal part of the inpatient and outpatient nursing role.

Finally, repositioning tobacco use as a health issue, i.e. Nicotine Dependence that requires ‘detox’ may begin to shift this issue into less emotionally laden territory for nurses who still struggle with whether or not tobacco use is a suitable issue to treat in psychiatry/mental health. Inviting individuals from the tobacco control community to events hosted by the Adult Mental Health Program such as mental health fairs or education days may be one way to change the existing lexicon around tobacco use and create better links between the two communities to enhance knowledge exchange around this chronic disease that is tobacco use.

#### Recommendations for Further Study

There are four recommendations that can be made in the area of tobacco use with respect to psychiatric/mental health nurses based on the results of this thesis study. First, future studies may want to examine the knowledge of psychiatric/mental health nurses in with respect to “5As” given the results of this thesis study. A corollary to such a study would be to examine if “tobacco related training”, specifically geared toward a tobacco-related intervention framework, i.e. an intervention study improves intervention levels with patients.

Second, a statistically significant difference was not found in this thesis study with respect to an association between different categories of smokers and the variables of knowledge, confidence, attitudes, training, nursing practice, perceived overall ability and interest due to the small sample size. As well, no significant differences were found comparing categories of smokers (i.e., current, former and never smokers). Future



research could try to re-test the hypotheses of this thesis study with a larger sample to determine if a Type II error occurred.

Third, the findings around nurses' confidence in recognizing symptoms of NW and distinguishing it from symptoms of psychiatric decompensation need further study given the research literature and the results from the open-ended questions around the use of early passes as a behaviour management tool. More focused studies that examine the issue of NW, NRT and behaviour management issues in psychiatry/mental health would be useful as it appears few have been done to date (Lawn & Pols, 2003).

Fourth, more research is necessary at the systemic level on the tobacco use issue in psychiatry/mental health. Studies are required to determine if incorporating tobacco-related knowledge into the nursing curriculum and having hospital administration formally incorporate assisting psychiatric patients with tobacco use and smoking cessation into the role of psychiatric/mental health nurses improves their tobacco-related practice.

#### Dissemination Strategies

The outcome of this study will be presented to the program director of the Adult Mental Health program and the managers of the units at all sites that participated in this thesis study. Newsletters at each hospital will be used to inform all psychiatric/mental health nurses of study results. Participants were asked on the survey if they would like a brief report mailed to them upon study completion and several responded positively. Publications in tobacco control journals and mental health journals will be targeted, for example, *Journal of Psychosocial & Mental Health Nursing*, *Issues in Mental Health Nursing* and *Tobacco Control*. A summary of the study and its findings will be sent to

the self-help groups in Winnipeg (i.e. the Canadian Mental Health Association, The Schizophrenia Society, The Mood Disorders Association of Manitoba and The Anxiety Disorders Association of Manitoba). Finally, a research abstract and poster may be submitted to the annual call by the National Conference on Tobacco or Health.

### Conclusion

Sixty nurses from five inpatient psychiatry/mental health units from an urban area were surveyed. For the most part, they were knowledgeable about tobacco use, except when it came to the impact of tobacco use on cardiovascular and respiratory status. One of the most clinically significant findings of this thesis study was that the majority of psychiatric/mental health nurses were unaware of the “5As”, a commonly cited tobacco intervention framework. Therefore, they did not have an intervention framework with which to address tobacco use among their patients who were admitted for treatment of a mental illness; possibly contributing to the low level of tobacco-related interventions with smoking patients. However, it is encouraging that some psychiatric/mental health nurses in this study hold positive attitudes with respect to the treatment of tobacco use than has been traditionally experienced clinically by the researcher and reported in the literature. It would appear that the “tobacco culture” within psychiatry is shifting with the implementation of smoke-free policies in 2005 in this previously exempted specialty.

This study was a non-experimental descriptive correlational cross-sectional survey design. It was the best design for a research problem at the Masters level that involves complex concepts that are not easily amenable to experimentation, where the body of literature does not have a theoretical framework, and is critical to the development of effective interventions (Polit & Beck, 2008). It contributes to the limited

literature on psychiatric/mental health nurses in general. It is one of the more recent studies to describe the knowledge, confidence, attitudes, training, nursing practice, perceived overall ability, interest and demographics of psychiatric/mental health nurses regarding tobacco use among inpatients being treated for mental illness. Results did not support the study hypotheses; however this may have been due to the small sample size and a Type II error as previously discussed. The findings of this thesis study have to be interpreted with caution given its size (n=60) and its exploratory nature. These findings are limited to psychiatric/mental health nurses employed in acute care psychiatry in Winnipeg, Canada.

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## **Tobacco Use Among Individuals With Mental Illness: Nurse Attitudes, Knowledge & Behaviours**

The purpose of this study is to examine the attitudes, knowledge, behaviours, confidence and education of Manitoba nurses working in psychiatry/mental health regarding tobacco use and nicotine dependence among inpatients being treated for mental illness. Tobacco use and dependence is a significant problem for individuals living with mental illness. However, it is important to understand the perspective of nurses regarding this complex issue before interventions for patients are developed and implemented. We appreciate you taking the time to complete this 20 minute survey.

Please do not put your name on this survey so that we can ensure that you cannot be identified with your response. All responses to all surveys will be grouped and categorized so that no one individuals' response can be identified. The information you provide will be kept confidential. Only the study's researchers and the research assistant will have access to the completed surveys and study record. All data will be stored in a locked filing cabinet for 5 years in a locked research office in the Faculty of Nursing and then confidentially shredded. Results of this study will be used in partial fulfillment of the requirements for the Degree of Master of Nursing. Findings from this project including direct quotations from the survey may be presented at meetings, conferences and published in written reports and scientific journals. In all instances, your identity will be kept confidential and will be reported in a group form so as not to identify individual participants.

Please fill in, circle or tick off your answers. Once you have completed the survey, place it in the confidential, self-addressed, stamped envelope and mail it. If you do not wish to complete this survey, please shred it or dispose of it in a paper recycling bin.

You have the opportunity to participate in a lottery for pizza (if you so desire) as a form of thank you. Pizza will be provided by Boston Pizza (corporate sponsor for The Heart and Stroke Foundation) for one meal for staff and patients to the unit on which the winner is employed. Information on how to enter the draw can be found at the back of the survey.

For many of the questions there is no right or wrong answers. Your honest opinions are appreciated, whether they are positive or negative. Please understand that your

.... /2

participation is voluntary; you are under no obligation to answer all or any of the questions and employment at your facility will not be affected in any way if you do not respond.

By submitting a completed questionnaire, it will be assumed you have given consent to participate in this study.

This study has been approved by the University of Manitoba Nursing Research Ethics Board. If you have any questions about this survey or your rights as a research participant, you can contact Ms. Margaret Green, graduate student, Faculty of Nursing, University of Manitoba via email at [umgree36@cc.umanitoba.ca](mailto:umgree36@cc.umanitoba.ca), Dr. Diana Clarke, Associate Professor at 474-7107 or the Human Ethics Secretariat at 474-7122, or email [margaret\\_bowman@umanitoba.ca](mailto:margaret_bowman@umanitoba.ca). Please retain this information form to keep for your records and reference.

We thank you for your assistance.



## **Tobacco Use Among Individuals With Mental Illness: Nurse Attitudes, Knowledge & Behaviours**

*Please fill out the slip below with your survey if you would like a summary of the results of the study. It will be separated from the survey when the envelope is opened, and will not be associated with the survey responses.*

I would like a summary report of the findings? \_\_\_Yes \_\_\_No

Please mail a summary of the report findings to:

Name \_\_\_\_\_

Address \_\_\_\_\_

Postal Code \_\_\_\_\_



UNIVERSITY  
OF MANITOBA

## Faculty of Nursing

Helen Glass Centre for Nursing  
Winnipeg, Manitoba Canada R3T 2N2  
Telephone: (204) 474-7452  
Fax: (204) 474-7682

### **Tobacco Use Among Individuals With Mental Illness: Nurse Attitudes, Knowledge & Behaviours**

This survey includes 36 questions on knowledge of tobacco use and dependence among individuals with mental illness in acute psychiatric care. Attitudes, behaviours, confidence, training, current nursing practice and practitioner smoking status will be queried.

Each section begins with an introduction and directions.

For many of the questions there are no right or wrong answers.

### **Responses are anonymous and confidential.**

The survey will take about 20 minutes to complete. A self-addressed stamped envelope has been provided for you to mail in within 2 weeks of receipt of this survey.

### **We are having a lottery to thank-you for your participation!**

Information about the lottery and instructions for returning the completed survey can be found on the last page of the survey.

**SURVEY OF NURSING PRACTICES IN PSYCHIATRY/MENTAL HEALTH  
REGARDING PATIENTS TOBACCO USE**

Date: \_\_\_\_\_(month/day/year)

**Please circle your answers or make a checkmark in the space provided.**

The following questions assess your knowledge regarding tobacco use and dependence.

1. Compared to the general population, individuals with mental illness smoke
  - A. More
  - B. Less
  - C. About the same
  - D. Don't know
  
2. Compared to the general population, the rate of cardiovascular and respiratory diseases among individuals with mental illness who smoke is
  - A. More
  - B. Less
  - C. About the same
  - D. Don't know
  
3. Smoking can impact psychiatric treatment because:
  - A. The hydrocarbons within tobacco smoke increase the metabolism of liver enzymes requiring patients who smoke to require more medication
  - B. Dispensing cigarettes takes away valuable time from other nursing interventions
  - C. A and B
  - D. It has no impact

4. Symptoms of Nicotine Withdrawal are:
  - A. Dysphoric or depressed mood, insomnia, irritability, frustration or anger
  - B. Anxiety, difficulty concentrating, restlessness, changes in heart rate and weight, nicotine craving
  - C. A and B
  - D. Don't occur in patients with mental illness
5. Assuming there are no medical contradictions pharmacological aids for treating tobacco use can be offered:
  - A. To patients who have failed at least one attempt to quit on their own.
  - B. Only to patients who request it, provided they have not failed an attempt to quit on their own.
  - C. To all patients, even if they have failed prior quit attempts using those agents.
  - D. To all patients, provided they have not failed one of those agents previously.
6. Tobacco use and dependence impacts individuals with mental illness:
  - A. Physically, mentally and financially
  - B. Socially i.e. it stigmatizes them
  - C. A and B
  - D. It has no impact
7. Assisting patients to address their tobacco use impacts their lives in ways that go beyond physical health yet affects their overall health by:
  - A. Increasing available money for basic needs like food, clothing and housing
  - B. Diminishing social isolation because of increasing available money for transportation and recreation
  - C. A and B
  - D. None of the above

8. The 5As of smoking cessation are:
- A. Ask, Advise, Assess, Assist, Arrange
  - B. Designed to be brief, requiring 3 minutes or less of clinician time
  - C. A and B
  - D. Don't know
9. The following questions assess how confident you feel when assisting patients to address their tobacco use.

*PLEASE CIRCLE ONE NUMBER FOR EACH ITEM, USING THE RESPONSE OPTIONS SHOWN BELOW.*

1 = not at all confident; 2 = not very confident; 3 = moderately confident; 4 = very confident; 5 = extremely confident

10. How confident are you that you:	Not at All confident			Extremely Confident	
a. Can adequately assess patients' tobacco use.....	1	2	3	4	5
b. Can sensitively suggest tobacco cessation to patients who use tobacco?	1	2	3	4	5
b. Can provide motivation to patients who are trying to quit?.....	1	2	3	4	5
c. Have sufficient knowledge of nicotine gum? .....	1	2	3	4	5
d. Have sufficient knowledge of nicotine patch? .....	1	2	3	4	5
e. Have sufficient knowledge of nicotine inhaler? .....	1	2	3	4	5
f. Have sufficient knowledge of nicotine lozenges .....	1	2	3	4	5
g. Have sufficient knowledge of Varenicline (Champix)? .....	1	2	3	4	5
h. Are able to recognize the signs of nicotine withdrawal.....	1	2	3	4	5
i. Have sufficient skills to monitor and assist patients through their nicotine withdrawal upon admission to a smoke-free unit?.....	1	2	3	4	5
j. Have sufficient skills to monitor and assist patients if they want to quit smoking upon admission to a smoke-free unit?.....	1	2	3	4	5

1 = not at all confident; 2 = not very confident; 3 = moderately confident; 4 = very confident; 5 = extremely confident

- |  | Not at<br>All confident |   |   | Extremely<br>Confident |
|--|-------------------------|---|---|------------------------|
| k. Can you distinguish symptoms of nicotine withdrawal from<br>psychiatric symptoms?.....  | 1                       | 2 | 3 | 4 5                    |
| l. Can help recent quitters learn how to cope with situations or triggers<br>that might lead them to relapse back to smoking?..... | 1                       | 2 | 3 | 4 5                    |
| m. Are able to provide adequate assistance when other priorities are<br>competing for your time on the unit? .....                 | 1                       | 2 | 3 | 4 5                    |
| n. Are familiar with where to refer patients for assistance with smoking<br>cessation?.....  | 1                       | 2 | 3 | 4 5                    |
11. For the following questions,

***PLEASE CIRCLE ONE NUMBER FOR EACH ITEM, USING THE RESPONSE OPTIONS SHOWN BELOW.***

1 =strongly disagree; 2 = somewhat disagree; 3 = neutral; 4 =somewhat agree; 5 = strongly agree

- | How strongly do you agree with the following statements :  | Strongly<br>disagree |   |   |   | Strongly<br>agree |
|--|----------------------|---|---|---|-------------------|
| a. Assisting patients with tobacco use and dependence<br>means I have to get them to quit smoking..... | 1                    | 2 | 3 | 4 | 5                 |
| b. Asking my patients about their smoking may make them<br>angry or defensive.....                     | 1                    | 2 | 3 | 4 | 5                 |
| c. I don't want to take away an enjoyable and rewarding<br>activity from my patients.....              | 1                    | 2 | 3 | 4 | 5                 |
| d. I don't ask about their smoking because I don't think<br>they'd be able to quit.....                | 1                    | 2 | 3 | 4 | 5                 |
| e. If my patients want help with quitting smoking, they<br>will ask for it.....                        | 1                    | 2 | 3 | 4 | 5                 |

1 =strongly disagree;    2 = somewhat disagree;    3 = neutral;    4 =somewhat agree;    5 = strongly agree

	Strongly disagree				Strongly agree
f. My patients should wait until their psychiatric issues are resolved before trying to quit smoking.....	1	2	3	4	5
g. Attempts to quit smoking are likely to make my patients' current drug or alcohol use worse or make them relapse	1	2	3	4	5
h. A focus on smoking cessation would detract from management of psychiatric symptoms.....	1	2	3	4	5
i. My patients smoke to manage their symptoms (e.g. anxiety, depression).....	1	2	3	4	5
j. Smoking cessation should preferably be handled by a non-psychiatric provider.....	1	2	3	4	5
k. Smoking cessation is not a priority for psychiatry.....	1	2	3	4	5
l. I could assist patients to address their tobacco use without trying to get them to quit.....	1	2	3	4	5

For the following two questions,

“*Adequate*” would mean you “received enough training that you know how to help patients quit”.

“*Inadequate*” means the “topic was mentioned in my training but I was not given adequate skills training.”

12. Rate the training you received in school and on the job related to counselling smokers:

*Please circle one number for each item.*

	None	Inadequate	Adequate
Basic nursing education	0	1	2
On the job training or continuing training	0	1	2
Other:_____	0	1	2

13. Rate the training you received in school or on the job related to psychopharmacological treatments for smoking. *Please circle one number for each item.*

	None	Inadequate	Adequate
Basic nursing education	0	1	2
On the job training or continuing training	0	1	2
Other:_____	0	1	2

14. Considering the patients you've seen in the last 30 days (including new admissions and patients still on the unit), how often did you:

	With no pts	With some pts, but less than half patients	With about half of pts	With more than half but not all pts	With all or almost all pts
a. Ask your patients if they use tobacco?	1	2	3	4	5
b. Advise patients who use tobacco to quit?	1	2	3	4	5
c. Assess patients' readiness to quit using tobacco?.....	1	2	3	4	5
d. Provide medication to patients who want to quit smoking? .....	1	2	3	4	5
e. Provide counselling to patients who want to quit smoking?.....	1	2	3	4	5
f. Arrange a follow-up counselling session for patients you assist with quitting?.....	1	2	3	4	5
g. Refer patients to a smoking cessation counsellor or program or Quit Line?.....	1	2	3	4	5
h. Record their smoking status on the admission database?.....	1	2	3	4	5
i. Record Nicotine Replacement Therapy (NRT) on admission in the nursing/progress notes...	1	2	3	4	5
j. Refer to the NRT algorithm.....	1	2	3	4	5



15. How would you rate your overall ability to assist patients to address their tobacco use?  
*Circle one.*

1	2	3	4	5
Poor	Fair	Good	Very Good	Excellent

16. How interested are you in learning more about how to counsel patients to address their tobacco use/dependence?  
*Circle one.*

1	2	3	4	5
Not at all Interested	Not very Interested	Moderately Interested	Very Interested	Extremely Interested

17. How interested are you in learning more about pharmacological approaches to address patients' tobacco use/dependence?  
*Circle one.*

1	2	3	4	5
Not at all Interested	Not very Interested	Moderately Interested	Very Interested	Extremely Interested

18. Are there standing orders on your unit for NRT? Yes\_\_\_ No\_\_\_

19. Has the introduction of smoke-free policies changed your views on tobacco use/dependence toward your patients? Yes\_\_\_ No\_\_\_

**If yes, please describe how your views have changed:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

20. Has the introduction of smoke-free policies changed how you intervene with patients who use or are dependent on tobacco? Yes\_\_\_ No\_\_\_

**If yes, please describe how you intervene with patients' differently:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

21. Does your unit have material available for staff who wish to assist patients in addressing their tobacco use? i.e. is there a Nicotine Replacement Therapy (NRT) algorithm on the unit, pamphlets for the Smokers' Help Line, Canadian Cancer Society booklets, etc.)

Yes\_\_\_\_ No\_\_\_ I don't know\_\_\_

22. Do you request earlier passes for patients who smoke? Yes\_\_\_ No\_\_\_ Sometimes\_\_\_

**If yes or sometimes, why:**

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---

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23. Are smokers discharged earlier than non-smokers? Yes\_\_\_ No\_\_\_

**If yes, why:**

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24. Do you buy cigarettes for patients? Yes\_\_\_ No\_\_\_

25. Where are patients cigarettes stored while they are in hospital?

---

26. Does the lack of funding for nicotine replacement therapy for outpatients affect how you intervene with inpatients regarding their tobacco use? Yes\_\_\_ No\_\_\_

**If yes, why:**

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27. Does addressing patients' tobacco use pose an ethical dilemma for you? Yes\_\_\_ No\_\_\_

**If yes, why:**\_\_\_\_\_

---

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## Respondent Characteristics

28. What is your age? \_\_\_\_\_
29. What is your gender?                      Male\_\_\_\_                      Female\_\_\_\_
30. What degree/qualification have you received? (*Please indicate all options that apply to you*):
- |                                    |                               |
|------------------------------------|-------------------------------|
| Diploma of Nursing _____           | Masters of Nursing Degree____ |
| Diploma of Psychiatric Nursing____ | Other Masters Degree* _____   |
| Bachelor's of Nursing____          | Other Education* _____        |
| Other Bachelor's Degree* _____     | (* <i>Please specify</i> )    |
31. Years since receiving your diploma/degree:    0-5\_\_    6-10\_\_    11-20\_\_    21+\_\_
32. # of years employed in psychiatry?                      0-5\_\_    6-10\_\_    11-20\_\_    21+\_\_
33. What is your current employment status:                      Full/time: \_\_\_\_P/T: \_\_\_\_ Student: \_\_\_\_
34. Have you smoked 100 or more cigarettes in your lifetime?    Yes \_\_\_\_    No\_\_
35. Which of the following best describes your current tobacco use (cigarettes, cigars, pipes, snuff, or chew)?
- Use tobacco once or more a day\_\_\_\_
- Use tobacco less than once a day\_\_\_\_
- Used to use tobacco but quit\_\_\_\_in what year did you quit? \_\_\_\_\_
- Experimented with tobacco a few times in the past\_\_\_\_
- Never tried tobacco\_\_\_\_

36. Please use the remaining space for additional comments on tobacco use and dependence.

Adapted with permission from: Prochaska, J. J., Fromont, S. C. & Hall, S. M. (2005). How prepared are psychiatry residents for treating nicotine dependence? *Academic Psychiatry, 29*, 256-261).

**PLEASE READ THIS PAGE CAREFULLY FOR DIRECTIONS TO ENTER THE  
LOTTERY AND TO RETURN THE COMPLETED SURVEY**

The following instructions address how to return the completed survey and how to participate in an optional pizza lottery draw available to you.

**Lottery and Returning the Survey Package**

You will notice in the survey package that there is a card and a small envelope. If you so choose, you can put your name and phone number on the card, place the card in the smaller envelope and seal this smaller envelope. Then place this sealed small envelope in the larger envelope with your completed survey and return the sealed larger package by using the self addressed stamped envelope.

You will notice that the larger envelope is addressed to:

Ms. Margaret Green, c/o Dr. Diana Clarke

Helen Glass Centre for Nursing, University of Manitoba, Winnipeg, Manitoba R3T 2N2

Once the researcher/research assistant opens the larger envelope she will take the sealed card and place it in a collection box with the other small envelopes. Once all the surveys have been collected, a draw for pizza for one meal for all staff and patients on the unit where the winner is employed will be provided at a mutually arranged time.

**The draw date will occur after data collection from all sites occurs, tentatively winter 2009.**

The name of the winner and the unit will be announced in the hospital/regional newsletter.

After the draw all remaining enveloped cards will be destroyed.

***THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY!***

Ms. Margaret A. Green, BA (Hons), RN & Dr. Diana Clarke, RN, PhD

Faculty of Nursing, University of Manitoba

## APPENDIX B – SURVEY PERMISSION

Subject: **RE: Request for Self-Report Survey**

Date: Wed, 7 Nov 2007 12:30:22 -0800

From: "[Prochaska, Jodi](#)" **Block Address**

To: "[Margaret Green](#)" <[umgree36@cc.umanitoba.ca](mailto:umgree36@cc.umanitoba.ca)>

 [Reply](#)  [Reply All](#)  [Forward](#)  [Print](#)  [Delete](#)

Hi Margaret,

Thank you for your interest in our work.

I ask that you just cite our paper if you decide to use or adapt our measure.

Good luck with your studies!

Jodi

---

From: Margaret Green [<mailto:umgree36@cc.umanitoba.ca>]

Sent: Tue 11/6/2007 11:36 AM

To: Prochaska, Jodi

Subject: Request for Self-Report Survey

Dear Dr. Prochaska:

I am writing to request a copy of the survey you used for the study you published:

Prochaska, J. J., Fromont, S. C., & Hall, S. M. (2005). How prepared are psychiatry residents for treating nicotine dependence. *Academic Psychiatry*, 29, 256-261 for possible use in a thesis study.

Thank you for considering my request.

Sincerely,

Margaret Green, BA (Hons), RN  
Faculty of Nursing  
University of Manitoba, Canada  
email: [umgree36@cc.umanitoba.ca](mailto:umgree36@cc.umanitoba.ca)

Phone: (204) 254-0787

