KNOWLEDGE AND ATTITUDES OF BACCALAUREATE NURSING STUDENTS TOWARD PERINATAL DRUG AND ALCOHOL ABUSE

By

KIMBERLY M. LIGON

A thesis submitted in partial fulfillment of
The requirements for the degree of

Master of Nursing

WASHINGTON STATE UNIVERSITY
College of Nursing

AUGUST 2009
To the faculty of Washington State University:

The members of the Committee appointed to examine the thesis of Kimberly Mitchell Ligon find it satisfactory and recommend that it be accepted.

__________________________
Merry Armstrong, Ph.D., Chair

__________________________
Janet Katz, Ph.D.

__________________________
Cecile Proctor, MSN
ACKNOWLEDGMENTS

This thesis is dedicated to my family. They have encouraged me, supported me, and made it possible for me to succeed in this endeavor. The love they have given me has been inspiring, and I thank all of them deeply.

This thesis is also dedicated to Merry Armstrong, my thesis advisor and mentor. Thank you, Merry, for your wisdom and kindness. Your contribution to and knowledge of the discipline of addictions in nursing are awe-inspiring.

I would also like to thank the other members of my thesis committee, Cecile Proctor and Janet Katz, for their unconditional support and belief in my abilities.

Last, I want to thank my sister, Heather Jefferson, for her love, support, and expert editorial help with this endeavor! She kept my eyes on the prize.
KNOWLEDGE AND ATTITUDES OF BACCALAUREATE
NURSING STUDENTS TOWARD PERINATAL
DRUG AND ALCOHOL ADDICTION

Abstract

By Kimberly Mitchell Ligon
Washington State University
August 2009

Chair: Merry Armstrong

The societal problem of perinatal drug and alcohol abuse continues to exist at troubling rates in the United States, at all socioeconomic levels. There continues to be significant morbidity and mortality for mothers and their babies caused by alcohol and drugs abused during pregnancy. Baccalaureate nursing students are in a position to make significant contributions to the awareness, identification, and caring treatment of pregnant women with substance-abuse issues. However, a lack of knowledge about addiction and a moralistic and punitive belief system about perinatal addiction in particular may prevent students from caring for these women in a professional and ethical manner. Evidence suggests that professional education can influence the development of constructive attitudes and actions reflective of current knowledge about substance-abuse problems in pregnant women. However, there is a paucity of curriculum content regarding substance abuse in contemporary nursing programs. The purpose of this study was to identify the knowledge and attitudes of senior nursing students regarding perinatal
substance abuse through a questionnaire, followed by a lecture titled “The Lived Experience of the Pregnant Addict.” Two weeks later, the influence that this educational intervention had on the students was evaluated with a repeat survey. The pre- and posttests allowed for an analysis of the students’ potential change in knowledge of and resultant attitudes toward women who abuse drugs while pregnant due to an educational intervention based on the theory of narrative pedagogy.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>iii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>iv–v</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>vi–vii</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>viii–xiv</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>xv</td>
</tr>
<tr>
<td>CHAPTERS</td>
<td></td>
</tr>
<tr>
<td>1. INTRODUCTION AND BACKGROUND</td>
<td>1</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>1</td>
</tr>
<tr>
<td>Statement of the Purpose</td>
<td>2</td>
</tr>
<tr>
<td>Literature Review</td>
<td>3</td>
</tr>
<tr>
<td>Conceptual Framework</td>
<td>16</td>
</tr>
<tr>
<td>Research Questions</td>
<td>20</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>20</td>
</tr>
<tr>
<td>Significance to Nursing</td>
<td>24</td>
</tr>
<tr>
<td>2. RESEARCH DESIGN AND METHODOLOGY</td>
<td>24</td>
</tr>
<tr>
<td>Introduction</td>
<td>24</td>
</tr>
<tr>
<td>Type of Design</td>
<td>25</td>
</tr>
<tr>
<td>Setting for Study</td>
<td>26</td>
</tr>
<tr>
<td>Population and Sample</td>
<td>26</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>26</td>
</tr>
<tr>
<td>Data-Collection Procedure</td>
<td>28</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>29</td>
</tr>
<tr>
<td>3. FINDINGS</td>
<td>30</td>
</tr>
<tr>
<td>Introduction</td>
<td>30</td>
</tr>
<tr>
<td>Research Question Findings</td>
<td>30</td>
</tr>
<tr>
<td>4. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS</td>
<td>33</td>
</tr>
<tr>
<td>Introduction</td>
<td>33</td>
</tr>
<tr>
<td>Discussion</td>
<td>34</td>
</tr>
<tr>
<td>Limitations</td>
<td>38</td>
</tr>
<tr>
<td>Implications</td>
<td>39</td>
</tr>
<tr>
<td>Recommendations for Further Research</td>
<td>43</td>
</tr>
<tr>
<td>Conclusions</td>
<td>45</td>
</tr>
<tr>
<td>References</td>
<td>47</td>
</tr>
<tr>
<td>Appendix 1 IRB Form</td>
<td>58</td>
</tr>
<tr>
<td>Appendix 2 Survey</td>
<td>60</td>
</tr>
<tr>
<td>Appendix 3 List of Figures</td>
<td>66</td>
</tr>
<tr>
<td>Figure 1 Raw Knowledge Scale at Pretest</td>
<td>66</td>
</tr>
<tr>
<td>Figure 2 Raw Knowledge Scale at Posttest</td>
<td>67</td>
</tr>
<tr>
<td>Figure 3 Attitudes at Pretest</td>
<td>68</td>
</tr>
<tr>
<td>Figure 4 Attitudes at Posttest</td>
<td>69</td>
</tr>
<tr>
<td>Figure 5 Advocating for Drug Exposed Infants</td>
<td>70</td>
</tr>
<tr>
<td>vii</td>
<td></td>
</tr>
</tbody>
</table>
Dedication

This master’s thesis is dedicated to my husband Sam, my daughter Jane, and my son Paul, who have supported me unconditionally on this meaningful academic journey.
Chapter 1
INTRODUCTION AND BACKGROUND

Statement of the Problem

In the year 2007, approximately 22.6 million individuals in the United States reported having substance-abuse problems; this figure is nearly 9.2% of the population ages 12 and above. Among these people, 3.4 million were dependent on both alcohol and drugs, 3.6 million were dependent on drugs but not alcohol, and 15.8 million were dependent on alcohol but not drugs. Recent statistics regarding pregnant women who abuse drugs and alcohol are just as troubling. In the same year, for instance, 16% of pregnant women drank alcohol, and prenatal drug use (including marijuana, crack, cocaine, heroin, vicodin, oxycontin, ecstasy, LSD, and methamphetamine) had a total abuse rate of 4%, according to the Substance Abuse and Mental Health Services Administration (2007).

Current professional nursing literature contains reports that nursing students generally have the same moralistic and punitive attitudes as the general population does toward drug and alcohol addiction (Howard & Chung, 2000; Murphy, 1989; Selleck & Redding, 1998). Nursing students receive minimal content in their curricula regarding substance abuse, even though this prevalent societal problem continues to increase (Gerace, Hughes, & Spunt, 1995; Howard & Chung, 2000; Naegle & D’Avanzo, 2001). According to a national survey administered by Hoffman and Heinemann (1987) and repeated by Howard, Walker, Walker, and Suchinsky (1997), baccalaureate nursing programs offer only 1 to 5 hours of alcohol and drug abuse content throughout their 4-year curriculum. In addition, only 2% of the nursing programs examined include substance-abuse content in
the Maternal-Child portion of the undergraduate nursing curricula (Hoffman & Heinemann, 1987).

Women who abuse drugs and alcohol in pregnancy are particularly vulnerable to being stigmatized and marginalized by the general population, as well as health care professionals and students in medicine and nursing. Nursing students must acquire the knowledge they need to effectively care for these patients or else they will lack the knowledge and skills to care for individuals with addictions. They also may have feelings such as frustration or burnout or can be easily manipulated by substance-abusing clients, which can cause frustration and alienation (Allen, 1993). Negative attitudes are caused by a lack of knowledge and confidence and can lead to poor or inadequate therapeutic communication and potentially poor nursing care, and often the substance-abusing mother may terminate the relationship, resulting in no care at all (Carter, 2002). These compelling problems and statistics provide a clear mandate to schools of nursing education to increase the competencies of the new generation of nurses to meet these nursing practice challenges.

**Statement of the Purpose**

The purpose of this study was to examine the knowledge and attitudes of senior nursing students, prior to and after an educational intervention, in a baccalaureate nursing program in Washington State toward women who abuse drugs and alcohol in pregnancy. The students were senior undergraduates, starting their Maternal-Child clinical rotation, and it was the author’s observation that they had varying levels of inherent knowledge about addiction and either punitive or empathetic attitudes toward women who use drugs in pregnancy.
During the third week of the semester, a knowledge and attitudes survey was administered to those students who consented to participate in the IRB-approved study. This survey was followed by a lecture titled “The Lived Experience of the Pregnant Addict,” which encompassed the Addiction as Disease model. Using this model, the instructor described the common social determinants of women who abuse drugs in pregnancy and used narrative stories to convey the lived experiences of multiple substance-abusing women. Following this educational intervention, the same questionnaire was given to the students 2 weeks later to allow them to process the information provided in the lecture and apply it in their clinical settings. This second survey was given to assess whether education contributed to their knowledge of perinatal addiction and/or raised their level of caring and empathy for this population of women.

**Literature Review**

The purpose of this literature review was to (a) examine past scholarly research related to the issues and social determinants of perinatal substance abuse, (b) review research studies dedicated to examining knowledge and attitudes of nursing students and nurses toward substance abuse, (c) survey substance-abuse education in nursing curricula, and (d) review the efficacy of past educational interventions in terms of increasing knowledge and improving attitudes toward substance-abusing clients. Although much literature exists on the subject of knowledge and attitudes of health care providers toward general substance abuse, there is a lack of specific information addressing knowledge and attitudes toward perinatal addiction.
In the United States, alcohol and drug abuse are major health and social problems that negatively affect the lives of millions of people and their families. Addiction is responsible for many social problems, such as economic disparities, ill health, dysfunctional family life, violence, and crime. Whether nurses work directly in chemical-dependency treatment centers, on various hospital units, or in long-term care, most of the nation’s 2.5 million nurses (U.S. Bureau of Labor Statistics, 2008) interact regularly with substance abusers and have the opportunity to make a positive difference in their lives if they are trained to do so. However, it has been shown (Howard et al., 1997) that most nursing students and nurses hold punitive and judgmental attitudes toward patients with drug and alcohol problems due to a lack of knowledge, both regarding addiction as well as the contextual realities of many women with substance-abuse issues. As Murphy and Rosenbaum (1999) clearly stated, “By understanding the context of a pregnant woman’s drug use, we can gain insight into the world of this marginalized population” (p. 79).

The Social Determinants and Health Disparities Associated With Perinatal Substance Abuse

Women who abuse substances in pregnancy most often have experienced lives characterized by poverty; being members of ethnic minorities; family instability; childhood sexual, physical, and emotional abuse; parental substance abuse; crime; drug dealing; and early onset of addiction (Bailey & McCloskey, 2005; Boyd, 1999; Hall, 2000; Murphy & Rosenbaum, 1999; Smith, 2008). Numerous research studies have shown a relationship between childhood and adult sexual and physical abuse and the later onset of substance abuse, with rates of abuse ranging from 40% to 90% in the reviewed studies (Chermack, Stoltenberg, Fuller, & Blow, 2000; Hall, 2000; Hiebert-Murphy & Woytkiw, 2000; Hirsch,

For example, Jarvis and Copeland (1998) found that as they repeated the same questions about abuse over several months of interviewing, only 20% of the women admitted to childhood sexual abuse in the beginning; by the end of the interviewing process, 77% of the same women admitted to abuse occurring in their childhoods. In Murphy and Rosenbaum’s (1999) long-term Pregnancy and Drugs (PAD) study, the authors found that 70% of women admitted to victimization of some kind in their childhoods, usually perpetrated by their male relatives or their friends. Last, in a 2001 study, it was found that of 80 women who presented to an outpatient treatment center, 51% reported severe forms of childhood sexual abuse, such as oral, anal, and vaginal penetration, and more than two thirds had been exposed to “…extremely distressing emotional and physical abuse” (Berry & Sellman, 2001, p. 361).

Victims of sexual abuse reported having lifelong feelings of deep loss of love, support, self-esteem, and protection, and they have begun and continued the use of substances to “cope with the psychological and physical pain associated with abuse” (Smith, 2008, p. 2). Because the abuse these women suffered often began in childhood, they turned to drugs and alcohol at an early age to escape from their violent realities. The women studied by Hall (2000) began using substances between the ages of 11 and 14, with several initiated into use by their parent or primary caregiver. These women described diverse reasons for using drugs: for “courage,” to not feel, to relieve disgust associated with the need to prostitute their bodies in order to support their habit, because of anger, to feel powerful, to escape, to suppress violent urges, to overcome
depression, and to have energy to get up every day and function. The women in the PAD study began using as early as age 9, and all were regular users and addicted by 17 years of age. It is clear from these statistics that most often these girls became addicted to substances years before they became pregnant, at an age where risk-taking is common. As Murphy and Rosenbaum (1999) so eloquently wrote, “These women lived painful lives characterized by truncated childhoods, drug abuse, violence, poverty, racism, classism, and demeaning work…. The women did not have control over basic things such as who touched their bodies…within this context of social stigma, and personal chaos, they discovered their pregnancies” (p. 48).

Illicit drug users are eight times less likely to obtain prenatal care than are other pregnant women (Carter, 2002a). For the general public, the reasons cited for lack of prenatal care are financial barriers; access problems due to distance, lack of child care, or a language barrier; or the denial of pregnancy (York, Williams, & Munro, 1993). For drug- or alcohol-addicted women, these barriers apply, but they have further obstacles that are unique. They may have a lack of awareness of the pregnancy in the early months because signs of pregnancy can be imitated by drug use, such as vomiting or lethargy, or they may have amenorrhea due to heavy drug use, so they do not question several missed periods (Murphy & Rosenbaum, 1999). A realistic fear of drug testing at their prenatal visits, imprisonment due to drug use, or loss of custody of the new baby or their other children are cited most often as reasons to avoid prenatal care (Haight, Carter-Black, & Sheridan, 2009; Rowland, 2004). Drug-addicted pregnant women are at high risk of being stigmatized and, thus, poorly treated by health care workers in both prenatal care and labor and delivery/neonatal intensive care settings. A paucity of nursing research on this topic exists.
Women need to be given a voice to describe their perspective of the health care system (Armstrong, 1992; Haight et al., 2009; Irwin, 1995).

**Knowledge and Attitudes of Nursing Students and Nurses Toward General and Perinatal Substance Abuse**

Nurses’ knowledge and attitudes related to drug and alcohol abuse are formed long before the process of nursing education begins, and these beliefs continue to exert a profound influence as the nurse pursues his or her nursing education and then goes on to work as a graduate nurse (McCaffery & Pasero, 2001; Norman, 2001). Attitudes are developed over a lifetime and are heavily influenced by family, past experiences, knowledge about that experience, the quality of education about a subject, and cultural or religious beliefs. The attempt to change another’s viewpoint is a significant challenge because attitudes are a reflection of an individual’s personal values, belief system, worldview, and identity (Wood, 1998).

When nurses enter the clinical setting with counterproductive and moralistic attitudes, a lack of knowledge, and poor clinical skills related to addiction screening and recognition, their ability to effectively intervene with potential substance misusers is blocked (Gerace et al., 1995). In addition, nurses’ stereotyped perceptions and social prejudice have been shown to lead to marginalization as well as resultant health disparities, such as poor clinical practice and a reluctance to engage in management and treatment of substance abusers (Howard & Chung, 2000; Rassool, 2007; Richmond & Foster, 2003; Selleck & Redding, 1998; Williams, 1999). Due to these negative attitudes, nurses and other health care professionals may not respond therapeutically or professionally to individuals with substance-abuse issues. Evidence suggests that people with substance-
abuse problems are reluctant to use health services for drug issues or other health problems for fear of reprisal by nurses (Carter, 2002; McLoughlin, McKenna, & Leslie, 2000).

Feigenbaum (1995) conducted a study to identify the perceptions of 176 senior baccalaureate nursing students of substance-abusing individuals. She surveyed these students at the beginning and end of the semester in which they were studying addictions to determine whether their perceptions of addiction changed over time and through education. Feigenbaum found that the majority of the students initially perceived people with problems related to addictions as morally weak individuals who had made the choice to cope by abusing alcohol or drugs. Only 17% of the students whom she surveyed felt empathetic toward these patients. These punitive perceptions often resulted in students reacting negatively or distantly to individuals with these problems, and these reactions limited their ability to create a therapeutic environment or reach their plan of care goals.

By the end of the semester, however, more than half of the students felt empathy toward individuals with addiction issues and perceived these individuals as having “health problems” due to the disease of chemical dependency. Further, the students saw the patients’ addiction as something for which they had acquired the knowledge and competency to aid in helping to bring them to wellness. Acting on these perceptions, the students were theoretically more likely to therapeutically communicate with the patients, feel confidence in these interactions, and move toward a plan of care. Feigenbaum’s (1995) findings mirror those of previous studies showing that academic coursework to increase knowledge can help nursing students develop more positive and empathetic attitudes toward individuals with addictions (Jack, 1989; Long, 1990; Murphy, 1991).
Only three articles exist in the literature that address nurses’ or nurse-midwives’ knowledge of and attitudes toward drug and alcohol abuse in pregnant women. No articles exist examining nursing students’ knowledge and attitudes regarding this same population—a gap in the literature that this research study hopes to fill. Currently, 4% of pregnant women use drugs in pregnancy and 16% abuse alcohol (Substance Abuse and Mental Health Services Administration, 2007). Thus, labor and delivery, mother–baby, neonatal intensive care, and maternal–child public health nurses are confronted with the challenge of perinatal addiction, and they may be inadequately trained to deal with the complex psychosocial and medical issues that can occur in these women and their babies. Because there is a fetus or infant involved, the stigma and marginalization of these women is even greater than the general population of individuals with drug and alcohol issues (Carter, 2002b).

The drug- or alcohol-dependent pregnant woman is described in the literature as having a certain psychosocial profile: low self-esteem and self-confidence; multiple social, familial, and interpersonal problems; poor coping skills; and evidence of depression and anxiety often related to a history of physical and/or sexual abuse. They often have poor general health and nutrition, seek little or no prenatal care, and are at high risk of contracting HIV and hepatitis (Chasnoff, 1988). Often unresolved feelings of guilt and shame are associated with substance abuse in pregnancy, in particular with the maternal role (Murphy & Rosenbaum, 1999). It is crucial for caregivers of this population to understand this information so they can approach their caring in a more empathetic manner. To effectively care for substance-abusing pregnant women, nurses and nursing students must face their own values and how these may affect their behaviors. In addition,
knowledge of chemical dependency is essential to form therapeutic and understanding relationships with these women.

Corse, McHugh, and Gordon (1995) led a qualitative research study on the practice of providing nurse-midwives with the skills they need for their expanded role in providing care to addicted pregnant women. Education about substance abuse and treatment had a positive impact on the nurse-midwives’ attitudes and behaviors toward their patients, as well as reducing their previous anxiety due to feeling poorly prepared to manage patients with the condition of perinatal addiction. Selleck and Redding (1998) later conducted a research study looking at the knowledge and attitudes of 392 registered nurses providing care on a birthing unit. Although 72% of the nurses reported receiving information in nursing school about general substance abuse, only 48% reported specific information on perinatal substance abuse. Overall, the nurses had limited knowledge about perinatal substance abuse and held punitive and negative, rather than positive and supportive, attitudes toward their patients.

**Past and Current Substance Abuse Content in Nursing School Curricula**

For the last 30 years, there has been little research addressing the amount of substance-abuse education offered to undergraduate nursing students in U.S. programs. In an early study on the topic, Johnson (1965) found that nurses felt uncomfortable and pessimistic toward working with addicted individuals, and they identified a lack of training as the reason for this discomfort. Burkhalter (1975) then reported that a significant number of nurses who graduated between 1941 and 1971 stated that they had received little to no instruction about substance abuse in their nursing school. In the same year, Holmes (1975)
found that a poor understanding of substance abuse has been a source of frustration for nurses attempting to work with an addicted population.

More than a decade later, Hoffman and Heinemann (1987) led a research study involving 1,035 schools of nursing, and they reported that undergraduate curricula typically offered 1 to 5 hours of required addiction instruction over the entire 4-year degree. Furthermore, the course content consisted primarily of definitions and descriptions of diagnoses rather than any preparation in assessment and intervention skills. Given the relatively common prevalence of substance-abuse problems in modern society and the negative social and health consequences of addiction, Hoffman and Heinemann’s findings indicate that nursing programs do not adequately focus on chemical-dependency training, nor do they prepare the graduate nurse to work with this complex and challenging population. In 1991, a group of researchers again concluded that minimal hours were provided for classroom and clinical activities related to alcohol and drugs in undergraduate nursing education, and they noted that “…there had been no appreciable improvements in professional education related to alcohol/drug abuse since the early work of Burkhalter, in 1975” (Long, Gelfand, & McGill, 1991, p. 12).

In 1988, a federally funded project was begun to develop curriculum models in order to address the shortcomings in undergraduate nursing education with regard to substance-abuse information. The National Institute on Alcohol Abuse and Alcoholism (NIAAA), the National Institute on Drug Abuse (NIDA), and the Center for Substance Abuse Prevention jointly funded three programs to develop and evaluate model alcohol and other substance curricula for undergraduate- and master’s-level nursing programs. Each of three trial curricula addressed the needs of individuals, families, and groups in relation to
alcohol and drug abuse at each stage of human growth and development, from fetal life to the elderly (Naegle & D’Avanzo, 2001).

Following this project, a group of international nursing professionals from the Association of Nurses in Substance Abuse (ANSA–UK) and the National Nurses Society on Addictions (NNSA–USA) met for a conference in 1998. Their goal was to discuss and develop collaborative activities focused on the global issues of substance abuse. They developed the concept of the International Network of Nurses, whose primary thematic goal was: “Education of substance misuse and addictions is absent or insufficient in nursing school curricula, and resolutions for improvement are needed from ICN (International Council of Nurses), WHO, and the UN” (Murphy-Parker, Boyjoonauth, Coyne, & Clancy, 1999).

Since these models were developed and tested, they have simply not been adopted by the vast majority of U.S. nursing schools. Furthermore, a review of more recent drug and alcohol content of U.S. nursing courses shows that only 3 to 5 hours were included in the entire undergraduate nursing education programs, a small increase from previously noted studies (Happell & Taylor, 2001; Howard et al., 1997). Cambell-Heider (2009) examined the amount of addiction education found in advanced practice graduate programs in New York State and found that these students received “little specific education about addictions in their graduate programs, yet 61% perceived addiction education to be moderately or very valuable to their practice” p. 11).

Much of the nursing and behavioral science literature in the area of addictions appears outdated. Furthermore, curriculum content has not kept up with the amount of new knowledge available in relation to substance abuse. Research and clinical advances in the
last decade include addiction as disease, the neurobiology of addiction, and, specifically, the role of neurotransmitters in the formation of substance abuse. This new research indicates that more is known about the treatment, care, and recovery of people with mental illnesses and addictions than ever before, yet nursing schools have not taken advantage of this current and significant research. Other factors that appear to contribute to the lack of substance-abuse content in nursing curricula include limited interest among nursing scholars, the overabundance of material that nursing students already must learn, and the lack of funding for chemical-dependency clinical placements (Howard et al., 1997; Murphy, 1989).

The Effect of Education on Nurses’ Knowledge of and Attitudes Toward Individuals with Substance-Abuse Disorders

From the breadth of scholarly literature, it is clear that nurses and nursing students experience discomfort when they are assigned to a patient with a substance-abuse disorder. Numerous studies indicate that the most significant cause of this discomfort and resultant negative attitude toward the patient is a lack of knowledge regarding substance abuse. It has been found, however, that providing education to nurses and nursing students increases their knowledge and confidence and decreases their punitive treatment of this population. Because addiction content in undergraduate nursing curricula appears to be suboptimal at best, several studies have been conducted to assess the usefulness of continued education for nurses once in practice. Several researchers (Carroll, 1995; Corse et al., 1995; Gerace et al., 1995; Hagemaster, Handley, Plumlee, Sulliavan, & Stanley, 1993; Hayes, 2002; Vadlamudi, Adams, Hogan, Wu, & Wahid, 2008) found that clinical in-services enhance the development of more positive attitudes toward clients with substance-abuse issues.
In the Gerace et al. (1995) study, an educational program for nurses ($N = 32$) was developed to improve recognition of and response to substance abuse. They offered pre- and posttest surveys, and their findings revealed an improvement in knowledge after the educational intervention. These nurses also reported a greater level of confidence and were more likely to feel comfortable discussing substance-abuse issues with their clients. Vadlamudi et al. (2008) found that after only a 4-hour training session about brief interventions for alcohol and drug abuse, nurses had a significant increase in knowledge and the confidence to care for patients requiring this intervention.

A paucity of literature has focused on the effect of educational interventions in a nursing school setting. The studies that do exist have illustrated that undergraduate curricula that incorporate a more comprehensive drug and alcohol component improved the knowledge and attitudes of nursing students toward the population (Arthur, 2001; Martinez & Murphy-Parker, 2003; Rassool & Rawaf, 2008). In their study with undergraduate nursing students ($N = 110$), Rassool and Rawaf (2008) introduced a 10-hour educational module on substance-misuse prevention, screening, brief intervention, and referral. They administered pre- and posttest surveys and found that 38% of students felt confident caring for addicted clients before the module, and 61% felt confident after the module. Arthur (2001) conducted a study ($N = 212$) that examined nursing students’ knowledge of and attitudes toward patients with substance-abuse disorders. This study showed a significant improvement in knowledge, attitudes, and confidence for these students after the educational intervention. The studies cited previously all call for further research to examine the effectiveness of educational interventions in working with substance abusers because this disorder is found in every area of nursing practice. In addition, they all agreed
that a focus on addiction content in undergraduate nursing curricula is important in preparing nursing students to care for the substance-abusing population.

Summary of the Literature Review

Drug and alcohol abuse is a major public health issue in the United States, one that requires effective screening and interventions by health care professionals if the client is to be cared for effectively. However, the nursing literature clearly indicates that nurses are inadequately prepared in nursing schools to care for this physically and emotionally complex disease due to the small amount of content included in curricula. Ultimately, this lack of addiction content leads nurses to enter the workforce with minimal knowledge and moralistic attitudes toward individuals with substance-abuse disorders. Research also shows that if nurses are provided educational interventions about addiction, such as in-service education, their knowledge increases and their attitudes become more therapeutic. Few studies have been conducted on substance-abuse education in undergraduate programs, especially geared toward a vulnerable population such as pregnant women. The purpose of this study is to address this research gap by looking at how an educational intervention impacts the knowledge and attitudes of nursing students toward pregnant women with drug and alcohol addictions.

Conceptual Framework

Few nursing studies have focused on the therapeutic relationship between nurses and clients with substance-abuse issues (Carter, 2002; Eliason & Gerken, 1999; Happell & Taylor, 2001). In fact, studies indicated to a great extent that nursing students, faculty, and
nurses in general are stereotypic, moralistic, and pessimistic regarding patients who have drug- and alcohol-dependency problems; in fact, these health care providers often view these patients as constitutionally weak (Howard & Chung, 2000; Rassool & Oyefeso, 1993). Pregnant women who abuse substances are one of the most marginalized and stigmatized groups in society. Nurses who care for them have been found to judge them harshly, often due to the fact that they are carrying a fetus that has no power over its own life (Happell & Taylor, 1999; Raeside, 2003; Rassool, 1993; Selleck & Redding, 1998). The primary reasons for nurses’ negative attitudes toward women suffering from perinatal addiction are inadequate knowledge of addiction, a poor understanding of the social determinants that characterize perinatal addiction, and professional insecurities that nurses feel when attempting to work with this population (Happell & Taylor, 2001; Murphy, 1989).

Nursing students are exposed to individuals with substance-abuse disorders in multiple settings where they practice and will continue to care for addicted populations when they enter the workforce. Because of the stigma attached to addiction, especially addiction in pregnancy, nursing educators are faced with the challenge of teaching students how to interact effectively with this and all vulnerable groups. As Benner (1984) asked, “How can nursing education prepare competent, independent decision-makers who are caring, creative critical thinkers?” (p. 314). According to Diekelmann (2001), this requires a paradigm shift in nursing education, moving from
primarily conventional passive, teacher-dominated lecturing to active and engaged learning through alternative forms of pedagogy.

*Narrative pedagogy* is a theoretical framework developed and researched by Diekelmann in the early 2000s in response to the National League for Nursing’s (2003) call for pedagogical reform in nursing education to keep up with growing client diversity and the increase in vulnerable patient populations. It is a form of teaching and learning that uses traditional and factual content coupled with reflective thinking, and it is a merging of phenomenological, transformative, feminist, and critical social theories (Diekelmann, 2001). Narrative pedagogy focuses on analyzing concepts, ideas, and situations, and the teacher and students publicly share and interpret lived experiences of caring for patients. In creating a caring and transformative classroom setting, these ideals are modeled for the student by the teacher, and they in turn learn to apply critical and caring thinking to complex and unique health care situations. Common outcomes of a caring educational environment based on the concepts of narrative pedagogy are increased student self-esteem, increased motivation to study, and autonomous nursing practices (Ironside, 2003).
Evans and Bendel (2004) found that autonomy is the most desirable characteristic in a nursing student because it allows him or her to make independent decisions, respond more readily to societal needs, and implement ethical and mature nursing care. The primary goal of autonomy is to help students reach a higher level of cognitive and ethical maturity so they can become more independent and caring practitioners. As opposed to a student who thinks narrowly, basing all decision making on facts and rules, the student who has been taught through narrative pedagogy is able to make independent, holistic, and empathetic decisions in the ethically ambiguous world of clinical practice (Dieckelmann, 2001; Evans & Bendel, 2004; Ironside, 2001, 2003). Evidence indicates that creating an environment that emphasizes questioning, being open, and listening is central to preparing students to think critically as well as interpretively. When students apply this type of thinking in the clinical practice arena, they may then be able to overcome biases or morally questionable responses to complex social situations due to becoming consciously aware of social realities that they may not have been conscious of previously (Dieckelmann, 2001, 2004; Ironside, 2003, 2004, 2005). Transformative thinking can be especially helpful for
nurses when working with substance-abusing pregnant women because they can begin to see them, more humanistically, as people rather than statistics.

Storytelling is one example of narrative pedagogy and was used in this study as the educational intervention. Stories are a captivating way to convey information and “…bring facts to life by putting them in personal scenarios” (Davidhizar & Lonser, 2003, p. 218). Sandelowski (1991) described storytelling as “…a means to discover knowledge, uncover the knowledge imbedded in practice, and recover the art of nursing” (p. 162) because it allows the student to vicariously benefit from the teacher’s experience. This method of teaching and learning has been used since the 1980s in nursing education, with the intention of promoting individualization of patient care (Chan, 2002; Sorrell, 2001). When teachers share personal narratives with their students, the potential for maturing their ethical perspectives as well as an understanding of caring for diverse subcultures in American society is enhanced (Severtsen, 2004).

Storytelling increases the level of intimacy in the classroom, revealing deep meaning while modeling caring, and ultimately creates a connection between students and teachers. Bergman (1999) found that stories convey a
clearer sense of values, exerting a stronger influence on the learning process, as well as fostering an empathetic response to hearing about the *lived experience* of illness in an individual's life. For instance, to care for a pregnant woman who has the disease of addiction, a nursing student must understand more than the biomedical explanation of her illness. The student must also be aware of the individual social and psychological context of that women's life to comprehend her true life experience. “Stories are medicine…. They have such power; they do not require that we do, be, act anything…. We need only listen” (Estes, 1997, p. 14) and then thinking can be transformed.

Narrative pedagogy helps students to think through and interpret the experiences they encounter in their clinical practice. Teachers and students have the opportunity to explore together how their own backgrounds, values, experiences, and assumptions about human beings can impact their nursing practice and hopefully inform their practice in a powerful way. The conceptual framework of narrative pedagogy was used to design the educational intervention used in this study in the attempt to elicit more humanistic and critical thinking responses in nursing students toward women experiencing perinatal addiction.
Research Questions

The research questions for this study include:

1. What were the levels of knowledge and attitudes about perinatal addiction in a group of senior baccalaureate nursing students with presumed limited classroom education about drug and alcohol abuse?
2. What were the levels of knowledge and attitudes toward perinatal addiction among the same students following an educational intervention?
3. How did the participants rate their level of comfort working with a substance-abusing population both before and after the educational intervention?

Definition of Terms

Substance Abuse

*Substance abuse* is defined as a maladaptive pattern of chemical use characterized by continual and considerable harmful consequences related to the repetitive use of the substance. Substance abuse is said to occur when the following are present within the same 12-month time frame (American Psychiatric Association, 2000):

1. Recurring use of the chemical results in the failure to perform obligatory role functions.
2. Use of the substance results in the client or others being placed at risk for physical harm.
3. Legal issues have arisen as a result of use of the chemical.
4. Use of the substance continues despite persistent or recurrent social and interpersonal problems caused or exacerbated by the use of the chemical substance.

Nursing Student

The term nursing student is defined in this study as an individual enrolled in nursing courses in an undergraduate program at Washington State’s Intercollegiate College of Nursing. Following completion of a 4-year course of study, the nursing student is eligible to sit for the N-CLEX nursing exam; if the student passes the exam, he or she is then considered a “Licensed Registered Nurse.”

Nurse

A nurse is defined as an individual who has completed a course of study that has allowed him or her to successfully pass the N-CLEX exam and hold the title of Registered Nurse in any state in the United States. This may include those prepared at the associate’s- and baccalaureate-degree levels, those holding advanced certification in a specialty area such as critical care, and those educated in a foreign country who pass the N-CLEX exam in the United States.

Knowledge

Knowledge is defined as all the information, facts, truths, and principles learned throughout time (Simpson & Weiner, 1989).

Attitudes
Attitudes are defined as a group of beliefs, either conscious or unconscious, that cause an individual to describe the object of belief as true or false, incorrect or correct, good or bad, and desirable or undesirable and predispose the individual to engage in a particular behavior (Simpson & Weiner, 1989).

Pedagogy

Pedagogy is the art, science, or profession of teaching (Simpson & Weiner, 1989). In this thesis, narrative pedagogy is critical, described as “…teaching, interpreting, critically thinking, and analyzing concepts, ideas, and situations…the ability to know and connect with students becomes the focus of the learning environment…so that the teacher and the student can publicly share and interpret experiences” (Brown, Kirkpatrick, Mangum, & Avery, 2008, p. 283). Paulo Friere (1972) described it as a political act. This researcher views pedagogy as an interaction between a teacher and her students, with the goal being to create thoughtful dialogue about life and people, which can be political and full of struggle.

Oppression

Oppression is the act of using power to empower and/or privilege a group at the expense of disempowering, marginalizing, silencing, and subordinating another group (Simpson & Weiner, 1989). Paulo Freire (1972) described oppression as “…in which ‘A’ objectively exploits ‘B’ or hinders his pursuit of self-affirmation as a responsible person” (p. 56).
Marginalization

_Marginalization_ is the social process of becoming or being made marginal, to relegate or confine to a lower social class (Simpson & Weiner, 1989). In the arena of health care, this can lead to decreased or no access to needed care.

Critical Thinking

_Critical thinking_ is a process that challenges an individual to use reflective, reasonable, and rational thinking to gather, interpret, and evaluate information to derive a judgment (Simpson & Weiner, 1989).

Significance to Nursing

Nursing is and always has been a caring profession. Caring involves both a connection with and empathy for people and the contexts in which they live. The art and science of professional nursing, then, requires a special educational development of knowledge, cognitive maturity, critical thinking, and an ethic of caring in nursing students. When these students enter the world of nursing, in whatever capacity they choose, they will then have the knowledge and understanding that all patients need their presence, committed moment, and unconditional understanding for their “lived experience.” This level of sensitivity is necessary no matter what the patient brings to the setting, whether it is anger, grief, distance, openness, pain, or even drug abuse in pregnancy. We can develop this type
of nursing practice in a curriculum based on narrative pedagogy, which facilitates the
empowerment and autonomy of the nursing student and helps to develop a mode of caring
based on holistic and humanistic maturity.
Chapter 2

RESEARCH DESIGN AND METHODOLOGY

Introduction

The purpose of this study was to explore the learned knowledge and attitudes of senior baccalaureate nursing students and assess the impact of an educational intervention. A descriptive, quantitative method was chosen to examine the results and analyze the target concepts of knowledge and attitudes. According to Kumar (1999), quantitative data are effective in testing the outcomes of a pilot study.

Type of Design

This quasi-experimental descriptive study included a repeated measures design to assess the influence of one lecture on perinatal addiction. A pretest survey was administered to a convenience sample of senior baccalaureate nursing students, the educational intervention was implemented, and a posttest survey was re-administered 2 weeks later, giving the students 2 clinical days to process and possibly apply to their setting some of the knowledge they had learned in the lecture. Such a design is useful in determining the outcomes and impact of an intervention and whether it has brought about a desired change in a group: “…a before and after design can be described as two sets of cross-sectional observation on the same population to find out the change in the phenomenon or variable(s) between two points in time” (Kumar, 1999, p. 83).
Setting for Study

The location of this study was a public nursing college in Spokane, Washington. The study was conducted during the Bachelor in Science Nursing program senior-level 3-hour didactic portion of the maternal–child course. Approximately 140 senior nursing students attended the class.

Population and Sample

Convenience sampling was used to recruit volunteers. Overall, 140 senior nursing students who were enrolled in the maternal–child theory and clinical course at the college were recruited, and they all had the opportunity to participate in this study. The majority of these students were Washington State residents, White, female, and between the ages of 20 and 25 years. Nine men participated in the study.

Instrumentation

Coles (see Coles, Good, & Strickland, 1992), the researcher who developed the Attitudes About Drug Abuse in Pregnancy (AADAP) questionnaire, provided written permission to adapt her survey for use in this research study. The original author had not run any psychometric assessments on this survey. The thesis advisor for this project, an expert in the field of addiction, reviewed the adapted 52-item instrument to ensure content validity before it was administered to any participants. IRB approval from Washington State University was obtained. The reliability of the adapted instrument was assessed with
the help of a biostatistician using the Cronbach’s alpha for the knowledge and attitude scales. The Knowledge Scale included 31 items, and the Cronbach’s Alpha Coefficient was .81, indicating strong internal consistency for this scale. An additional internal consistency reliability analysis applied the Spearman-Brown Split Half Coefficient for unequal lengths of halves, with a resulting correlation coefficient of .69. Taken together, these coefficients indicate that the Knowledge Scale has strong internal consistency and can be considered reliable. The Attitude Scale included 17 items, and the Cronbach Alpha Coefficient was .90, again indicating strong internal consistency for this scale.

The 52-item quantitative survey was designed with a 5-point Likert-type scale (strongly agree to strongly disagree) to determine the levels of knowledge and attitudes toward perinatal drug and alcohol abuse. Thirty-one of the statements were based on students’ previous knowledge of physiology and social determinants of perinatal addiction, and 17 statements elicted either punitive or empathetic attitudes toward substance abuse in pregnancy. The remaining four statements asked the students to assess their overall confidence in caring for patients facing addiction issues, to assess the impact that spiritual beliefs have on attitudes toward substance abuse, and, finally, to assess the level to which the student feels ethically bound to care for either a pregnant woman with drug addiction or her affected baby.

The survey required adaptation because several statements on the original survey focused on the effects of drug and alcohol use on the fetus, and this area of curricula education is provided by this college of nursing. Because it was assumed that the students would have knowledge and resultant beliefs on this area of addiction, it could skew both
the overall knowledge of and attitudes toward women with substance-abuse issues in pregnancy.

This survey was followed by a lecture titled “The Lived Experience of the Pregnant Addict,” which presented the Addiction as Disease model as well as common social and health determinants that characterize perinatal substance abuse. The researcher told narrative stories of her 20 years of labor and delivery experiences in inner-city Detroit and New York, working with women who abused drugs and alcohol in pregnancy. She told these stories to describe the social and social-psychological processes that are associated with substance use during pregnancy, such as violence, poverty, racism, and sexual exploitation, in order to humanize perinatal addiction for the students in the study.

Following this educational intervention, the same questionnaire was given to the students 2 weeks later to allow them to process the information provided in the lecture and apply it in their clinical settings. This second survey was given to assess whether education contributed to their knowledge of perinatal addiction and/or raised their level of caring and empathy for this population of women.

Data-Collection Procedure

On the first day, the researcher described the study to the students, explaining the purpose of the research study and that participation was purely voluntary. The consents and surveys were then distributed to all the students; those who chose not to participate were asked to simply turn over the questionnaire and quietly read a book or their notes. Those who wished to participate were then given 20 to 30 minutes to complete the survey. One hundred and six students chose to fill out the first questionnaire. Two weeks later, 82 of
the same students chose to continue participation in the study and completed the same survey for a second time.

**Data Analysis**

The data analysis was done with the help of a biostatistician using statistical package for the social sciences (SPSS) with level of significance of \( p = 0.05 \). Because pre- and posttest identifiers were not used, and thus the pre- and posttest surveys could not be matched up by individual, simple descriptive statistics are used in the following discussion of results. Frequencies for each item on the survey were calculated, and an increase in knowledge was found. Correct answers on the Knowledge Scale were higher at posttest than at pretest, with medians of 19 and 25 for pre- and posttest, respectively. This increase in knowledge was statistically significant (\( p > .7 \)). Attitudes were described as either punitive or empathetic. Scores of empathy rose from pretest to posttest, and scores of punitive responses decreased from pretest to posttest, with a Chi-square analysis of 41.41 (\( p < .05 \)). For example, at pretest 50% of students had more than six punitive responses, whereas at posttest only 5% had more than six punitive responses. In contrast, at pretest 50% of students had more than 7 empathetic responses, whereas at posttest 50% had more than 13 empathetic responses.
FINDINGS

Introduction

The nursing students involved in this study had an increase in their knowledge about perinatal addiction after the educational intervention, and their responses to statements meant to elicit attitudes moved from primarily punitive to primarily empathetic. These findings support those of past researchers interested in assessing the effectiveness of education on levels of knowledge and quality of attitudes regarding substance abuse.

Research Question Findings

1. What was the knowledge level of and general attitudes toward perinatal addiction in a group of senior baccalaureate nursing students?

   The senior nursing students in this study answered a median of 19/31 statements correctly at pretest. They held punitive, negative attitudes about perinatal substance abuse rather than empathetic, supportive attitudes. This result reflects the attitude of the general public, who are typically moralistic and views addiction as a weakness and due to a lack of willpower.

2. What were the knowledge levels of and attitudes toward perinatal addiction after an educational intervention?
After the pretest, the students received an educational intervention, which was
designed to impart facts about substance abuse as well as inform the students that often
social determinants, such as poverty and childhood sexual abuse, play a role in
perinatal addiction. The lecture was based on storytelling, a technique used in narrative
pedagogy that has been shown to “… foster a sense of community for teaching and
learning…and the stories can create a sense of empathy in the learner as they reflect
upon the individuals and their lives” (Dieckelmann, 2001, p. 56). This was the case in
this study. After experiencing the lecture on “The Lived Experience of the Pregnant
Addict,” correct answers on the Knowledge Scale were higher at posttest than at
pretest, with medians of 19 and 25 for pre- and posttest, respectively. Attitudes toward
perinatal addiction also improved, moving from a greater percentage of punitive
responses to a greater percentage of empathetic responses. Overall, the educational
intervention was influential in knowledge acquisition and attitude changes.

3. How did the participants rate their level of comfort working with a substance-
abusing population both before and after the educational intervention?

A vast majority (68%) of the students felt they would be uncomfortable
working with a substance-abusing population before being given the educational
intervention, whereas only 16% said they would be comfortable working in this setting.
After the lecture, 45% still felt they would be uncomfortable caring for individuals with
addiction disorders, and the number who would feel more comfortable rose to 48%,
which is a significant improvement. This improvement in confidence level mirrors the
results from many other studies discussed in the literature review and speaks to the
usefulness of offering addiction education in the undergraduate nursing curriculum. Findings also suggest that, although a short intervention can help to improve confidence in caring for patients with addiction issues, much more needs to be included in an undergraduate nursing curriculum to effectively prepare nursing students to care for individuals with substance-abuse issues whom they will encounter across the lifespan.

Chapter 4
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

33
Introduction

The findings of this research study are similar to those of many other nursing studies on educational interventions for substance-abuse knowledge and attitudes. On the whole, studies show that the education of practicing nurses as well as nursing students increases knowledge acquisition and improves attitudes toward addiction. This study design included a 2-hour lecture, and the improvements in knowledge, attitudes, and confidence were significant. Many nurse researchers have taken steps to address the lack of addiction education in undergraduate nursing education, which may be related to nurses’ punitive attitudes (Campbell-Heider et al., 2009).

Naegle (2007) helped create a model baccalaureate addiction curriculum funded by the NIAAA and the NIDA. Her curriculum has been used in many programs across the country, such as the University of Texas–Houston Health Sciences Center School of Nursing. In 1990, this school was 1 among 33 to receive faculty development grants from the NIAAA and the Center for Substance Abuse Prevention. This substance-abuse prevention and treatment curriculum is responsive to the realistic needs of a society that is experiencing a troubling rise in substance abuse throughout the lifespan, and it is the opinion of the researcher that general undergraduate nursing education needs to incorporate a solid thread of addiction content into its curriculum.

Its goals would be to teach nursing students to (a) recognize and acknowledge their own attitudes and values regarding substance abuse, (b) engage in prevention activities, (c) learn to screen and assess clients across the lifespan, and (d) refer clients with addiction disorders. Professionally, they would learn about a condition that would challenge their
core nursing values, apply research findings to their practice, and identify ethical and legal issues regarding substance abuse. The findings of this study warrant consideration of this type of curricular change at the undergraduate level of nursing education.

Discussion

Although the health and illness implications of general substance abuse are well understood, nurses and nursing students receive minimal content on substance abuse in their education to become health care professionals (Carroll, 1995; Cooper, 1994; Happell & Taylor, 2001; Hoffman & Heinemann, 1987; Howard, Walker, Walker, & Suchinsky, 1997; Sullivan & Handley, 1993). Because U.S. nursing curricula do not include adequate information on addiction, past studies have shown that nursing students and nurses have limited knowledge of, and thus punitive attitudes toward, individuals who abuse drugs and alcohol (Gerace, Hughes, & Spunt, 1995; Howard & Chung, 2000; Rassool, 2007; Richmond & Foster, 2003; Williams, 1999). Further, the few studies that do exist regarding perinatal addiction (Corse, McHugh, & Gordon, 1995; Raeside, 2003; Selleck & Redding, 1998) have suggested that nurses may hold even more punitive and negative attitudes toward women who abuse drugs and alcohol in pregnancy. The intensity of the nurses’ responses may be due to the fact that pregnant women are responsible for another life, which conflicts with the maternal role women are expected to embrace (Carter, 2002b). There has never been a study conducted about the knowledge and attitudes of nursing students toward perinatal addiction. This descriptive pilot study was designed to begin to fill that gap in the nursing literature.
Nursing students in the current study had limited knowledge about perinatal substance abuse. For example, in Statement 5, “Most pregnant women who abuse substances were sexually or physically abused in childhood,” which is a true statement, only 28% of the students got this correct in the pretest. After the lecture, “The Lived Experience of the Pregnant Addict,” which revealed the social determinants of perinatal addiction, 86% of the students were correct on this statement in the posttest. Another clear example of increased knowledge can be seen in the analysis of Statement 15, “It is difficult for women to get gender-sensitive treatment for substance abuse,” which is true. In the pretest, 39% of students chose the correct response, whereas after the lecture, which included a significant discussion about the limited gender-sensitive treatment options available to women, the correct responses rose to 87%.

Of interest was the rise in correct responses for Statement 38, “Drugs and alcohol stimulate the same pleasure centers in the brain as other survival instincts, such as eating,” which is true and indicates the strong and basic drive that characterizes addiction. At pretest, only 39% of students got this correct, whereas after the intervention 96% were correct in their responses. Clearly, offering a short educational intervention makes a significant impact on the knowledge associated with substance abuse, and that these senior nursing students came into the study lacking this important knowledge.

Because knowledge affects attitudes, it is important to examine and discuss how education can impact student attitudes. Ultimately, attitudes toward general addiction or perinatal addiction specifically will guide how nursing students will think about and care for individuals with substance-abuse histories. For instance, in Statement 8, “Women who abuse drugs and alcohol are more concerned with their needs than their babies,” which is a
highly punitive belief, at pretest, 63% of students either agreed or strongly agreed with this statement. After the lecture, which discussed in their own words how addicted women feel about their babies, only 11% of students still agreed or strongly agreed with this statement, a significant change from a punitive to an empathetic attitude. Another interesting perspective is revealed in Statement 10, “Prenatal drug and alcohol abuse should be considered a form of child abuse,” which examines the student’s belief that perinatal addiction is a criminal act and thus should be treated as such, reflecting a highly punitive response to perinatal addiction. At pretest, 78% of students responded that they either agreed or strongly agreed with this idea. During the lecture, information about the reproductive rights of women was discussed, as well as the history of how crack abuse in the 1990s led to the incarceration of many women who used this in their pregnancies. After the intervention, only 33% of students still agreed with this punitive attitude. It is interesting to note, however, that although many students did feel that it is child abuse, when asked in Statement 16, “Women who use drugs during their pregnancies should be punished by being put in jail,” at pretest only 34% agreed with this extremely punitive intervention, whereas at posttest 11% still agreed.

Statement 30, “When I hear about the effects of alcohol and drugs on newborn infants, I feel angry towards their mother,” is interesting to examine because it is a self-assessment of their own emotional response to perinatal addiction. At pretest, 78% of students responded that they either agreed or strongly agreed that they feel angry, but after learning about the “Lived Experience” of these marginalized women, this percentage dropped to 45%, a significant increase in empathy, especially in the context of how they
feel about the mom when examining immediate physical and often long-term effects on her baby.

Finally, the concept is fully realized in Statement 43, “In all honesty, I would be more judgmental than empathetic towards a pregnant drug addict.” This statement is powerful because it clearly identifies the attitude of the student as being either judgmental or empathetic. At pretest, 43% of students admitted that they would be judgmental toward a patient who presents with that diagnosis. But again, after learning about the lives of these women and the fact that sexual abuse, poverty, and violence often characterizes their lives, only 19% still maintained that they would be judgmental toward a woman in this situation. This significant increase in empathy mirrors the importance of teaching nursing students in a narrative fashion, the “Lived Experience,” about one of the most vulnerable patient populations in society.

**Limitations**

This descriptive study had several limitations. The sample consisted of nursing students from an undergraduate nursing curriculum chosen for accessibility and convenience. The participants were a homogenous sample, with the majority in their early 20s, female, White, and from Washington State. The data collection occurred during formal attendance in a required course. The personality and professional influence of the researcher may have played a role in the responses of the students, who personally knew the researcher.

The influence of a 2-hour lecture using narrative pedagogy on the knowledge and attitudes of the nursing students was statistically significant. However, research should be
done to examine the effects on caring and ethical maturity throughout an entire nursing curriculum. In addition, the study only used one aspect of narrative pedagogy, storytelling, which limits the applicability and analysis of the usefulness of this pedagogy. Instead, a whole course over a semester could be taught using all components of narrative pedagogy to more fully evaluate its usefulness. Further study could be done to evaluate the impact that narrative pedagogy has on emerging and working nurses when interacting with perinatal addiction in their patients.

A limitation of a pre- and posttest design is the inability to assess whether the differences exist due to the educational intervention or extraneous variables. It also can potentially be influenced by events that may take place between pre- and posttest taking, as well as the learning effect on the posttest of having taken the pretest. Many of these questions could have been ruled out with the inclusion of a control group in the study. Last, because 106 students took the pretest and only 82 students chose to retest, the relationship between the two surveys is not directly correlated and simply must be examined with a descriptive analysis.

**Implications**

After the analysis of the research and continued exploration in the nursing and social science literature, it became clear to the researcher that the theory underlying narrative pedagogy, which is specifically critical social theory, could have been explored more fully when discussing the conceptual framework. The two core concepts that underlie critical social theory are oppression and marginalization, both of which are phenomena that perpetuate the creation of vulnerable populations, or groups who have an
increased risk of adverse health problems. These underserved groups are continually denied access to equitable and dignified health care, as well as compassionate nursing and medical care.

Through narrative pedagogy and storytelling, the students in this research study learned about the social determinants and health care experiences of the population of women who abuse drugs and alcohol in pregnancy. This teaching may have led these students to realize that, although women who abuse substances in pregnancy may appear morally weak or constitutionally selfish, their stories go much deeper. The experience hopefully led this small group of students to want to treat all marginalized and stigmatized patients with respect and dignity, to talk with them and learn about their lives instead of depending on stereotypes, and, through either small interactions or social activism, to change the reality of the lives of any oppressed people whom they encounter in their future profession of nursing, whether they be drug addicts, homeless people, clients with HIV, minorities, or refugees.

The nursing profession has a historic commitment to social activism as an expression of caring. Lillian Wald and Margaret Sanger, two early 20th century public health nurses, represented this value in their political approach to public health practice, with the poor, disenfranchised, and powerless. Although public health nursing is still based on this concept of activism, all nursing practice should be focused on social justice because it is one of the five core values that the American Association of the Colleges of Nursing (AACN) has described as the cornerstone of nursing, in addition to altruism, autonomy, integrity, and human dignity. In their 1999 position statement, the AACN articulated that “the entry level nurse must be able to respond to the needs of culturally diverse groups and
underserved populations in all settings” (p. 1). Canales and Bowers (2001) reiterated this notion, stating that “nurses need to be caring not only at the bedside, but beyond, with a commitment towards changing existing social, health, and economic structures that are exclusionary” (p. 106). The five core values in nursing are only significant if the values are assigned meaning through purposeful nursing practice, and these value-based behaviors become a guide for a nurse’s interaction with their patients, colleagues, and the public, and they are a framework for a commitment to client welfare. Nursing education programs provide this foundation for preparing today’s nurses, and teachers are obligated to instill these nursing values in their students.

These core nursing values can be embodied within educational efforts based on the teachings of Paulo Freire, a Brazilian educator in the late 20th century, who wrote of critical pedagogy, which was born out of critical social theory. This theory maintains that inherent differences in power lead to inequities in social systems. For the purposes of this research, the American health care system is examined in terms of how power imbalances affect the quality of care received by impoverished or marginalized patients, specifically pregnant women who have substance-abuse disorders. Freire’s critical pedagogy is based on the premise that “education is politics” (Shor & Freire, 1987, p. 46) and becomes an empowering educational experience by creating “a democratic and transformative relationship between students and teacher, students and learning, and students and society” (Shor, 1993, p. 27). Critical education inspires students to question the social system within which they live and work and to have a dialogue with their teacher and each other about the kind of future they want health care to offer all classes of people.
The aim of critical pedagogy, then, is to learn to help emancipate people from social and economic repression. It is intellectual work that leads to social action to make the world a more just place. Just as in Dieckelmann’s (2001) narrative pedagogy, Freire’s work speaks to the transformation of students and their belief in their own power. The piece that was lacking in the original conceptual framework, however, was the importance of this transformation in creating empathy in students as they learn about the inequalities and injustices in society and health care. Freire’s critical pedagogy adds this piece because his theory is an examination of these inequities and the power structure in American society. One cannot teach a student to care simply by talking about the importance of caring in nursing; one has a greater potential to impact thinking and thus empathy through the actual teaching of critical social theory.

To Freire, the empowerment of others is a moral obligation. Although his work was first used in the emancipation of class oppression, it has grown to include the empowerment of women (Chinn, 2001; hooks, 1994), nurses (Hedin, 1986; Roberts, 2000), students (Hedin, 1986), and disenfranchised individuals at risk for ill health (Fahlberg, Poulin, Girdano, & Dusek, 1991; Labonte, 1994). Freire (1972) emphasized the “…dialogue between teacher and student…a dialogue which examines the effectiveness of people working together for a common cause” (p. 78). His second core concept is “praxis,” which is defined as “action that is informed, and linked to the values of equality and freedom” (Freire, 1972, p. 33). The next concept is “conscientization” or developing a consciousness that leads a group toward feeling it has the power to transform reality, and through this it becomes a pedagogy of hope. He also believed in teaching the “lived experience,” both of the students and the groups that they hope to emancipate. This study is
a clear example of an exercise in testing how understanding the lived experience of an oppressed group can lead to increased empathy. Freire’s pedagogical philosophy has not only been examined by educators but also by ethicists, philosophers, sociologists, political studies scholars, anthropologists, literary theorists, theologians, counselors, social workers, nurses, prison rehabilitation workers, and peace activists (Shor, 1993). He has clearly entered and affected change for a community of activists and thinkers, whose goal is to affect change in the lives of so many marginalized groups.

**Recommendations for Further Research**

I am honored to come and open this meeting...because there is a sadness which everyone in this room shares. The sadness is that all of you are working in substance misuse, which has such a crippling effect on human life. It is something which, sadly, unites us all around the globe. No one has cracked this, no one has the solution, a lot of people are working extremely hard to see if we can find the right approach to this major debilitating problem that we have as the common agenda (Murphy-Parker et al., 1999).

Continued research on the ways in which narrative pedagogy and critical social/feminist theory can be employed to transform nursing education is seemingly endless. Instead of simply teaching about power issues and disenfranchisement of whole populations of human beings through storytelling, educators and researchers can include the students in the learning process. A class can be designed, based on *Feminist Group Process*, which incorporates these principles:

1. Engage the group members in a caring and an egalitarian manner.
2. Model class assumptions to demonstrate feminist thinking.
3. Encourage open dialogue regarding the unfolding of group process to promote its understanding.

4. Teach the applicability of feminist group process to the “real world.”

5. Trust the process and believe in what emerges (Dieckelmann, 2001).

Another idea for further research would be to study about the use of Chinn’s (2001) *Peace and Power: Building Communities for the Future* in the creation of the classes. The acronym PEACE stands for Praxis, Empowerment, Awareness, Consensus, and Evolving, and using this as a philosophical basis for a course taught using feminist/critical pedagogy allows the students to become part of the process. Each person’s voice is heard and respected, and the students each take a turn being the leader. They bring their own ideas, experiences, and voice to the learning environment, and through this they are empowered and feel how this is liberating; they then want to extend this power into the philosophy of their nursing careers (Mendyka, 2000). They can see how feminist principles can be applied to real-world health care situations, ultimately creating change agents in the next generation of nursing students.

Finally, the voices of women who experience perinatal addiction need to be heard in scholarly literature. Armstrong responded to what was a larger gap in this literature in 1992 by writing a phenomenological doctoral dissertation, asking 11 women in treatment for substance abuse in pregnancy the following question: “What is the nature of the experience of concurrent pregnancy and drug use?” (p. 7). She explored their experience and perception of the intersection of lifestyle, pregnancy, and substance abuse. Then, in 1999, Murphy and Rosenbaum conducted the “Pregnancy and Drugs” study, another phenomenological inquiry into
the experience of being a pregnant addict, the decision-making processes
regarding discovery and termination/continuation of the pregnancy, drug-use
patterns (including routes of administration), the seeking/not seeking of prenatal
drug treatment, and the role of relationships with significant others. (p. 14)

Both of these studies touched on the experience of a substance-abusing pregnant woman
navigating the health care system, but it would be beneficial to conduct further and more
extensive research on this topic. Studying women’s perceptions of the care they received in
the prenatal, labor and delivery, postpartum, and neonatal intensive care settings is
applicable. Hearing the voices of these stigmatized women as they describe the treatment
they received throughout their pregnancies would illuminate how limited knowledge and
punitive attitudes affect the care of this marginalized group, highlighting the need for
increased addiction education in our schools of nursing.

Conclusions

Core nursing values essential to baccalaureate education include human dignity,
integrity, autonomy, altruism, and social justice. As nursing educators, our moral
imperative is to assist students in developing these values and to be able to knowledgeably
and therapeutically care for vulnerable populations, such as substance-abusing pregnant
women. A nursing student can demonstrate the preservation of human dignity by offering
caring and compassionate understanding to these women and by empowering them with
choices about their treatment and care. Integrity is revealed in nursing students through
their accountability, confidentiality, and professionalism when working with these patients.
The nursing value of autonomy is two dimensional because it can be expressed in both patient and nurse autonomy. Patient autonomy focuses on the patient’s right to make decisions about her own care, which is facilitated by nurses, and nursing student autonomy reflects a moral obligation in the student to provide competent and kind care to these vulnerable clients, as well as to protect clients from unsafe nursing or medical practices. Altruism, the fourth core value, is “a concern for the welfare and well being of others” (American Association of Colleges of Nursing, 1999). The caring behaviors associated with altruism are the reason that many students choose the nursing profession. Providing unconditional care to women who do drugs in pregnancy is a true form of altruism.

Last, social justice is the core nursing value most reflected in the teachings of Paulo Freire. He taught that “conscientisation,” or the awakening of an individual to the injustices of the world, has the power to transform nursing students into change agents for ending health disparities, creating equality in the health care system, and walking to the bedside of a drug-addicted pregnant woman, smiling at her, and making her feel cared for and safe.

Nursing educators have the power to potentially instill these values in some of their students, as has been shown with this study. Narrative pedagogy, which is based on critical social theory, offers storytelling as a transformative way to impact the consciousness of students as they learn about disempowerment of marginalized groups and resultant inequalities in health care. The hope is that they will take what they have learned and want to make a difference in their patients’ lives. Nursing educators have a responsibility not only to the nursing profession but to everyone in society whose voice cannot be heard.


differences in the development of substance-related problems: The impact of family
history of alcoholism, family history of violence, and childhood abuse. *Journal of
Studies on Alcohol, 61*, 845–852.

York: Jones and Bartlett.

Coles, C. D., Good, L., & Strickland, K. (1992). *Knowledge and attitudes of public,
addicts in treatment and health care professionals about substance abuse in
pregnancy*. Unpublished manuscript, Georgia Mental Health Institute, Emory
University School of Medicine, Atlanta, GA.


in treating pregnant women with addictions. *Journal of Substance Abuse
Treatment, 12*(1), 3–12.


*Nurse Educator, 28*, 217–221.

analyses of lived experiences of students, teachers, and clinicians. *Advanced

compelling experiences using the new pedagogies. *Journal of Nursing


Appendices

Appendix 1

IRB Form

[SUBJECT]: Certification of Exemption, IRB Number 10518-001

[BODY]:
MEMORANDUM

TO: MERRY ARMSTRONG, Janet Katz and Kimberly Ligon,

FROM: Patrick Conner (for) Kris Miller, Chair, WSU Institutional Review Board (3005)

DATE: 9/4/2008

SUBJECT: Certification of Exemption, IRB Number 10518-001
Based on the Exemption Determination Application submitted for the study titled Knowledge and Attitudes of Baccalaureate Nursing Students Toward Perinatal Substance Abuse, and assigned IRB # 10518, the WSU Institutional Review Board has determined that the study satisfies the criteria for Exempt Research contained in 45CFR 46.

Exempt certification does not relieve the investigator from the responsibility of providing continuing attention to protection of human subjects participating in the study and adherence to ethical standards for research involving human participants.

This certification is valid only for the study protocol as it was submitted to the IRB. Studies certified as Exempt are not subject to annual review. If any changes are made to the study protocol, you must submit the changes to the IRB for determination that the study remains Exempt before implementing the changes. Request for Amendment forms are available online at http://www.irb.wsu.edu/forms.asp.

In accordance with federal regulations, this Certification of Exemption and a copy of the study protocol identified by this certification must be kept by the principal investigator for THREE years following completion of the project.

It is important to note that certification of exemption is NOT approval by the IRB. The study materials should not include the statement that the WSU IRB has reviewed and approved the study for human subject participation. Please remove all statements of IRB Approval and contact information from study materials that will be disseminated to participants.

Washington State University is covered under Human Subjects Assurance Number FWA00002946 which is on file with the Office for Human Research Protections.

If you have questions, please contact the Institutional Review Board at (509) 335-3668. Any revised materials can be mailed to the Office of Research Assurances (Campus Zip 3005), faxed to (509) 335-6410, or in some cases by electronic mail, to irb@mail.wsu.edu.

Review Type: New Protocol
Review Category: Exempt
Date Received: 8/22/2008
Exemption Category: 45 CFR 46.101 (b)(1)
OGRD No.: N/A
Funding Agency: N/A
Appendix 2

Knowledge and Attitudes About
Drug and Alcohol Abuse in Pregnancy

I would like your opinions about the consequences of substance abuse in pregnancy.  
All the information that you give me will remain confidential.  
Thank you for your time in advance!

Age   _______
Sex    _______

Where did you get your knowledge about drug and/or alcohol abuse in pregnancy,  
addiction in general, and the effects of prenatal exposure on a fetus?  
Answer all that apply.

Television   _________    Newspapers   _________
Friends      _________    Internet      _________
Below are 52 statements about the effects of addiction in general and specifically the effects of drug/alcohol abuse in pregnancy. Please indicate how much you agree or disagree with each statement by circling the number which corresponds to your choice.

<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The best thing to do with a drug or alcohol exposed baby is to place it in foster care.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>The part of the brain that is most affected by addiction is the frontal lobe.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Addiction is a disease.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>In general, illegal drugs do more damage to a fetus than legal medications.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Most pregnant women who abuse substances were sexually or physically abused in their childhood.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Methamphetamine and cocaine can cause preterm labor and preterm babies.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Substance abusers usually use a single drug rather than using multiple substances.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Women who abuse drugs and alcohol are more concerned with their needs than their babies.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Alcoholics and drug abusing women often have family members who are drug abusers.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
10. Prenatal drug and alcohol abuse should be considered a form of child abuse.  

11. Getting off drugs is mostly a matter of will power.  

12. Child abuse and neglect are often reported in homes where drug and alcohol abuse exist.  

13. Making a woman feel guilty about her substance abuse is an effective way to stop her use.  

14. Black women are more likely to use drugs and alcohol than white women.  

15. It is difficult for women to get gender-sensitive treatment for substance abuse.  

16. Women who use drugs during their pregnancy should be punished by being put in jail.  

17. All pregnant women should be screened for substance abuse during prenatal care.  

18. All pregnant women should be given regular urine drug and alcohol tests during their pregnancies.  

19. Women who abuse drugs and/or alcohol usually associate with men who also abuse.  

20. Among alcoholic women, the risk of fetal alcohol syndrome increases with each pregnancy.
21. Taking care of infants who are born addicted as a result of their mother’s substance abuse places an unfair burden on society.  

22. Nicotine abuse (cigarettes) causes more deaths per year in the US than any other abused substance.  

23. Drug addicts do not care and forget about their babies when they leave the hospital.  

24. Due to the addiction process, many substance abusers cannot stop using even though they know it may hurt their unborn child.  

25. Recent research indicates that 20% of pregnant women use illegal drugs.  

26. Among pregnant women, drug abuse is a bigger problem than alcoholism.  

27. Abusing drugs makes people manipulative and unreliable.  

28. Substance abusing women should have their tubes tied after they deliver.  

29. Alcoholics Anonymous is an effective treatment for many women with drug and alcohol problems.  

30. When I hear about the effects of alcohol and drugs on newborn
infants, I feel angry towards their mother.

31. There should be more drug and alcohol treatment centers for pregnant and parenting women.  

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

32. Drug and alcohol abuse by pregnant women should be handled by the legal system.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

33. Social and economic factors are the main causes of drug abuse in the United States.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

34. To prevent further damage to their fetus, pregnant women should be imprisoned until they deliver.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

35. Even if a woman successfully completes a treatment program, she should not have access to her baby in case of relapse.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

36. Becoming addicted to drugs and/or alcohol are personal weaknesses.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

37. You cannot become addicted to prescription medications as long as they are prescribed by a healthcare provider.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

38. Drugs and alcohol stimulate the same pleasure centers in the brain as other survival instincts, such as eating.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

39. The neurotransmitter involved in the frontal lobe pleasure center is dopamine.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

40. I currently feel that I would be
uncomfortable working in the field of addiction because I do not feel prepared academically. 5 4 3 2 1

41. My reactions to drug and alcohol abuse are faith-based. 5 4 3 2 1

42. If a pregnant woman abuses substances in her pregnancy, she does not deserve help from society, such as medical or social services. 5 4 3 2 1

43. In all honesty, I would be more judgmental than empathetic towards a pregnant drug addict. 5 4 3 2 1

44. Denial is a part of the addiction process. 5 4 3 2 1

45. The diagnosis of substance dependence is the need for increased amounts of a substance to achieve the desired effect. 5 4 3 2 1

46. An addicted person can control their use if they tried harder. 5 4 3 2 1

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>47. Over time, an addicted person’s brain becomes so damaged that they can no longer make rational decisions.</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48. An alcoholic/addict should not be held accountable for the things they do when drunk or high.</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49. Recovery from alcoholism and drug addiction is a life-long process.</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50. Addicts and alcoholics are capable of drinking or using</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
51. It is my responsibility as a nurse to serve as an advocate for drug exposed infants.

52. It is my responsibility as a nurse to serve as an advocate for pregnant drug or alcohol abusers.

Appendix 3

LIST OF FIGURES
For questions revealing correct knowledge about the subject of addiction, the mean for the group was 19 correct answers out of 31 statements, which is approximately 61% correct responses.
After the educational intervention, the mean rose from 19 to 25 questions correct out of 31 statements on the survey, which is 80% correct responses. This increase in knowledge is statistically significant ($p > .7$).
In the pretest, empathetic and punitive responses from the students were equally distributed.
It is clear that the educational intervention led to an increase in empathy and a decrease in punitive responses: more than 75% of the students had more than 50% empathetic responses and only 25% of the students responded punitively.
Almost 100% of the students agreed in the pretest and posttest that they are ethically bound to advocate and care for drug-exposed infants.
This graph is far more interesting in its outcome. At pretest, 50% of students either disagreed or were not sure that they were ethically bound to be patient advocates in this population. However, after the educational intervention, almost 100% of students felt that they needed to be patient advocates.
The percentage of students in the pretest who felt they would be comfortable taking care of individuals with substance-abuse disorders was only 16%. Due to a short educational intervention, this number rose to 48%. However, 52% still remained uncomfortable with the idea of working with this group. This is a strong indication that ongoing addiction education is needed to fully prepare all students for caring for this population.
## Appendix 4

### LIST OF TABLES

Table 1 Pre- and Posttest Correct Answers for Knowledge Statements

<table>
<thead>
<tr>
<th>Statement</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td># 5: Most pregnant women who abuse substances were sexually or physically abused in childhood (true)</td>
<td>28% Correct</td>
<td>86% Correct</td>
</tr>
<tr>
<td>#15: It is difficult for women to get gender-sensitive treatment for substance abuse (true)</td>
<td>39% Correct</td>
<td>87% Correct</td>
</tr>
<tr>
<td>#38: Drugs and alcohol stimulate the same pleasure centers in the brain as other survival instincts, such as eating (true)</td>
<td>39% Correct</td>
<td>96% Correct</td>
</tr>
</tbody>
</table>

Table 2 Pre- and Posttest Punitive Responses for Attitude Statements

<table>
<thead>
<tr>
<th>Statement</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td># 8: Pregnant women who abuse drugs and alcohol are more concerned with their needs than their babies (punitive attitude)</td>
<td>63% Agreed</td>
<td>11% Agreed</td>
</tr>
<tr>
<td># 10: Prenatal drug and alcohol abuse should be considered a form of child abuse (punitive attitude)</td>
<td>78% Agreed</td>
<td>33% Agreed</td>
</tr>
<tr>
<td># 16: Women who use drugs during their pregnancies should be punished by being put in jail (punitive attitude)</td>
<td>34% Agreed</td>
<td>11% Agreed</td>
</tr>
<tr>
<td>#43: In all honesty, I would be more judgmental than empathetic towards a pregnant drug addict (punitive attitude)</td>
<td>43% Agreed</td>
<td>19% Agreed</td>
</tr>
</tbody>
</table>

THE END