December 2022

Factors That Influence School Nurses's Intent To Report Child Maltreatment

Catherine M. Jordan

FACTORS THAT INFLUENCE SCHOOL NURSES' INTENT TO REPORT CHILD MALTREATMENT

by

Catherine Marjorie Jordan
Bachelor of Science, Keuka College, 1980
Master of Science in Nursing, University of Phoenix, 2013

A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Grand Forks, North Dakota
December 2022

Name: Catherine Jordan

Degree: Doctor of Philosophy

This document, submitted in partial fulfillment of the requirements for the degree from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

DocuSigned by:
Tracy Evanson
E900454894CA4FE...
Tracy Evanson

DocuSigned by:
Glenda Lindseth
4C1F47CE1A49439...
Glenda Lindseth

DocuSigned by:
Thomasine Heitkamp
4C810DDCD6144D2...
Thomasine Heitkamp

DocuSigned by:
Robert Stupnisky
342598C86A59406...
Robert Stupnisky

This document is being submitted by the appointed advisory committee as having met all the requirements of the School of Graduate Studies at the University of North Dakota and is hereby approved.

DocuSigned by:
Chris Nelson
2E0AF088C733403...
Chris Nelson
Dean of the School of Graduate Studies

12/2/2022
Date

PERMISSION

Title Factors that influence school nurses' intent to report child maltreatment

Department Nursing

Degree Doctor of Philosophy

In presenting this dissertation in partial fulfillment of the requirements for a graduate degree from the University of North Dakota, I agree that the library of this University shall make it freely available for inspection. I further agree that permission for extensive copying for scholarly purposes may be granted by the professor who supervised my dissertation work or, in her absence, by the Chairperson of the department or the dean of the School of Graduate Studies. It is understood that any copying or publication or other use of this dissertation or part thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the University of North Dakota in any scholarly use which may be made of any material in my dissertation.

Catherine Jordan

2022

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACKNOWLEDGMENTS

I want to express my sincere thanks and appreciation to those who supported me throughout my dissertation process. Without each of you, this would not have been possible. First, to my husband, Michael, thank you for your love, support, and continuous encouragement to allow me to reach this goal. Words cannot express how fortunate I am to have you on my side, and the success of this dissertation is a credit to you. Thank you to my children, who supported and encouraged me to complete this dissertation. Thank you to my friends, fellow Ph.D. program students, and academic colleagues for your active support and positive energy throughout my journey.

To my primary advisor and dissertation chair, Dr. Tracy Evanson, thank you for your patience, understanding, guidance, and insight throughout my Ph.D. program and dissertation. Your constant mentoring has allowed me to achieve this level of nurse scientist and writer. I also extend my sincere gratitude to the members of my committee, Dr. Glenda Lindseth, Thomasine Heitkamp, and Dr. Robert Stupnisky, for sharing their expertise and guidance in the completion of this dissertation. Finally, to Dr. Stephanie Weigel, thank you for your assistance in guiding and helping me understand the statistical analysis for this dissertation study.

My sincere thanks to the National Association of School Nurses for allowing me the opportunity to send my survey to their membership. Finally, although they are anonymous, I would like to thank the school nurses' who took the time to complete the survey.

Abstract

Introduction: Child maltreatment is a global problem that causes harm to the well-being of a child that extends to adulthood. In the United States alone, there are 158,900 child victims in 2019 and 1,779 child fatalities. Despite national attention and the availability of child abuse education, the victimization statistics have remained essentially unchanged in the last 11 years. Nurses are mandated reporters of child maltreatment. School nurses are frequent observers in a child's life, thus leaving them uniquely qualified for real-time assessment. The purpose of this study is to determine what factors correlate with the school nurse's intent to report child maltreatment.

Specific Aim 1: To determine demographic (age, level of education, years of experience as a school nurse, location) frequencies of school nurses who work with child maltreatment. In addition, school nurses' knowledge scores and attitudes toward reporting child maltreatment will be measured.

Specific Aim 2: To determine significant differences in rural vs. non-rural school nurses' knowledge scores, attitudes, subjective norms, and perceived behavioral control toward the intent to report child maltreatment.

Specific Aim 3: To determine the relationships among school nurses' demographics, knowledge, attitudes, subjective norms, and perceived behavioral control toward the intent to report child maltreatment.

Hypothesis: Subjective Norms and Perceived Behavioral Control factors will significantly predict school nurses' intent to report child maltreatment.

Methods: This study uses the *Child Abuse Report Intention Scale* (CARIS) (Feng & Wu, 2008) based on the Theory of Planned Behavior (Ajzen, 1991) to determine the school nurses' intent to report child maltreatment. Four independent variables (predictors): knowledge, attitude, subjective norms, and perceived behavioral control are evaluated for correlation to the dependent variable, the intent to report child maltreatment through the survey tool. The participants were recruited from a randomized email sent to the National Association of School Nurses membership list. Data collection was achieved by developing a survey link through UND Qualtrics; this link was provided to the participants through email. The completed survey was analyzed using SPSS descriptive and correlational statistics to determine the outcomes related to the specific aims.

Results: This survey indicated that school nurses have Knowledge of Child Abuse and have appropriate Attitudes about Child Abuse and reporting. School nurses identified barriers to reporting as mainly time to report, the difficulty of the reporting process, lack of administrative report, fear of repercussions for the child and themselves, and lack of response or action by child protective services. Additionally, school nurses identified the need for additional education on the signs and symptoms of child maltreatment to be confident in reporting maltreatment that does not exhibit overt physical signs.

Chapter 1: Introduction to Study

This chapter serves as an introduction to the research study, by describing the problem, identifying the purpose and specific aims of the study, introduction the design and conceptual framework, providing key definitions used throughout the study, and explicating potential limitations anticipated at the outset of the study.

Problem Statement

Child maltreatment (CM) is a global problem that cuts across all races, culture, religion, socioeconomic status, or education levels. Child maltreatment is defined as "any recent act or failure to act on the part of a parent or caretaker which results in death, serious, physical or emotional harm, sexual abuse or exploitation or an act or failure to act which presents an imminent risk of serious harm" (Child Welfare Information Gateway, 2019). Childhood should be a time for development, mastering skills, and growth. Developmental trauma can lead to unfocused responses to stress leading to increased medical, social, and mental health issues (Van der Kolk, 2005). The seminal Adverse Childhood Experiences (ACEs) study demonstrated that childhood trauma, in the form of child maltreatment and family dysfunction, is linked to leading causes of adult morbidity and mortality (Brown et al., 2019, McCrae et al., 2019, Ross et al., 2020), including increased rates of mental illness, high- risk behaviors, drug abuse, and criminal behavior (Blakey et al., 2019; Chanlongbutra et al., 2018; Elarousy & Abed, 2019).

The World Health Organization (2020) estimates that over one billion children are maltreated each year. In the United States, the incidence of Child Maltreatment is staggering. The National Child Abuse and Neglect Data System (NCANDS) estimates that in 2020 there were 618,000 victims (8.4 victims per 1000 children) and 1,750 fatalities (2.38 children per

100,000) (Children's Bureau, U.S. Department of Health and Human Services, 2020). In 2019 there is a 3.25% decrease in the number of maltreatment victims, yet a 3.95% increase in child fatalities due to child maltreatment. This is a disturbing trend. The Child Abuse Protection & Treatment Act was passed in 1974; however, the mandated reporting portion did not occur until 1990. Data collection which includes child fatalities resulting from child maltreatment initiated with the 1997 reports.

Nurses are the largest group of healthcare professionals and are mandated reporters of suspected or known child maltreatment. As such, nurses can dramatically impact a child's life if they report child maltreatment early (Ho et al., 2017; McTavish et al., 2020). School nurses, have a major role to play in reporting suspected child maltreatment, since they are exposed to and provide services to up to hundreds of children each day. The National Child Abuse and Neglect Data System (NCANDS) does not explicitly divide the different disciplines which contribute to the health professionals reporting, but historically physicians have been the largest group to report (H. Larrabee, personal communication, March 6, 2020).

Table 1 provides data on the rate of child maltreatment and child fatalities in the U.S., an estimate of the number of child victims and child fatalities, as well as the percent of child maltreatment reports which were made by medical personnel, from 1990 to 2020 (U.S. Department of Health & Human Services, 2021). The NCANDS data collection system combines all medical personal (nurses, & doctors) into one statistic. The rate of child maltreatment, at 13.4 per 1,000 children in 1990, increased to a peak of 15.3 per 1,000 children in 1993, and then showed a steady decline until 2009, when it was 9.3 per 1,000 children. Since that time, the rate of child maltreatment has essentially not changed. It is important to note that while overall child maltreatment has decreased, the rate of child maltreatment related fatalities

has increased over this same period, with a rate of 1.72 deaths per 1,000 children in 1997 to a peak of 2.39 deaths per 1,000 children in 2017. It is equally important to note that the percent of child maltreatment reports that have been made by medical personnel have changed very little over that time, with 9.1% in 1997 and 11.6% in 2020. The review of these statistics has prompted a new initiative in Healthy People 2030: two new objectives were added to 1) reduce child abuse and neglect deaths, and 2) reduce nonfatal child abuse and neglect by 20% (U.S Department of Health and Human Services, 2021).

Table 1

Child Victimization Rates as Reported by NCANDS

YEAR	RATE PER 1,000 CHILDREN	NATIONAL ESTIMATE / ROUNDED NUMBER OF VICTIMS	NATIONAL CHILD POPULATION	Percentage change of child population	NATIONAL ESTIMATE OF CHILD FATALITIES	CHILD FATALITIE S PER 100,000	Percent of Child Maltreatment Reports by Medical Personnel
2020	8.4	618,000	73,368,194	(1.32)	1750	2.38	11.6
2019	8.9	656,000	74,350,047	.48	1840	2.50	11.0
2018	9.2	678,000	73,993,353	(.32)	1770	2.39	10.5
2017	9.1	674,000	74,234,537	.79	1710	2.31	9.6
2016	9.1	677,000	73,649,701	(.94)	1730	2.33	9.5
2015	9.2	683,000	74,351,670	.02	1660	2.23	9.1
2014	9.1	675,000	74,333,785	(.01)	1590	2.14	9.2
2013	8.8	656,000	74,339,940	(.9)	1550	2.09	9.0
2012	9.2	686,000	75,016,501	.33	1630	2.17	8.5
2011	9.2	688,000	74,771,549	(.33)	1570	2.10	8.4
2010	9.3	698,000	75,016,501	(.66)	1580	2.11	8.2
2009	9.3	702,000	75,512,062	2.68	1740	2.30	8.2
2008	9.5	716,000	73,583,538	3.54	1720	2.34	8.2
2007	10.6	794,000	71,065,917	(2.97)	1720	2.42	8.4
2006	12.1	904,000	73,244,985	.29	1530	2.09	8.6
2005	12.1	900,000	73,034,973	2.00	1460	2.00	8.1
2004	12.0	891,000	71,601,442	(1.97)	1510	2.11	7.9
2003	12.2	904,000	73,043,506	.27	1430	1.96	8.2
2002	12.3	897.000	72,846,774	.34	1470	2.02	7.8
2001	12.4	903,089	72,603,552	.36	1300	1.80	7.8
2000	12.2	881,000	72,342,618	3.05	1200	1.66	8.3
1999	11.8	829,000	70,199,435	.47	1100	1.57	8.4
1998	12.6	904,000	69,872,059	.50	1100	1.57	8.6
1997	13.8	957,000	69,527,944	.73	1196	1.72	9.1
1996	14.7	1,012,000	69,022,127	.85			
1995	14.7	1,006,000	68,437,378	.94			
1994	15.2	1,032,000	67,803,294	1.26			
1993	15.3	1,026,000	66,961,573	1.34			
1992	15.1	995,000	66,073,841	1.54			
1991	14.0	912,000	65,069,307	1.41			
1990	13.4	861,000	64,163,192				

Children living in rural areas suffer disproportionate rates of child maltreatment. In one study (Getto & Pollack, 2015), rural counties were found to have twice the rate of overall maltreatment as the general population, and the incidence of overall maltreatment in rural counties was 1.7 times the rate in major urban counties (10.8 versus 6.4 children per 1,000) (Getto & Pollack, 2015). Additionally, the rate of sexual abuse in rural counties (2.8 per 1,000 children) has been found to be twice the rate in major urban counties (1.4 children per 1,000) (Child Welfare Information Gateway, 2018; Getto & Pollack, 2015; U.S. Department of Health and Human Services, Administration for Children and Families, 2010). Rural areas often experience more inequities related to the social determinants of health, when compared to non-rural areas. Risky behaviors and at-risk behaviors by caregivers (substance abuse, alcohol abuse, risky sexual behavior, difficulties with emotional regulation) are higher in rural communities leading to a higher likelihood of child maltreatment (Child Welfare and Substance Use, 2018; Espeleta et al., 2018). In general, families in rural communities experience more vulnerability factors that can lead to an increased risk child maltreatment (Crouch et al., 2020; U.S. Department of Health and Human Services, Administration for Children and Families, 2010). Vulnerability factors of significance for rural communities are identified as higher rates of poverty & child poverty, education disparities, lower employment levels, fewer individual resources, decreased transportation accessibility, social isolation, lack of public transportation, and fewer services (Belanger & Stone, 2008; Child Welfare Information Gateway, 2018; Coulton et al., 2007; Maquire-Jack, 2020; Maguire-Jack & Kim, 2021; U.S. Department of Health and Human Services, Administration for Children and Families, 2010).

The U.S. Department of Health and Human Services estimates that 65% of child maltreatment victims are of school age (Hines & Brown, 2012). School nurses are frequent

observers in a child's life, thus leaving them uniquely qualified for real-time assessment, prevention, and interaction. Early identification and action by school nurses could change a child's life and prevent adverse outcomes. Further, in rural communities, the rural school nurse often "provides access to healthcare for students who may not otherwise receive care" as a result of the inequities of social determinants of health ("Rural Health Information Hub: child abuse", 2020). Therefore, it is important to understand that factors that influence school nurses' child maltreatment reporting behavior. Evaluating the barriers and facilitators of individual school nurse's reporting behavior could inform future efforts to facilitate mandated reporting by school nurses, thus intervening in child maltreatment more effectively.

Therefore, the purpose of this study is to determine what factors correlate with school nurses' intent to report child maltreatment.

Specific aims:

The outcomes for this descriptive, correlational study will be achieved by examining the following specific aims:

> **Specific Aim 1**: To determine demographic (age, level of education, years of experience as a school nurse, location) frequencies of school nurses who work with child maltreatment. In addition, school nurses' knowledge scores and attitudes toward reporting of child maltreatment will be measured.
>
> **Specific Aim 2**: To determine significant differences in rural vs. non-rural school nurses' knowledge scores, attitudes, subjective norms, and perceived behavioral control toward the intent to report child maltreatment.

Specific Aim 3: To determine the relationships among school nurses' demographics, knowledge, attitudes, subjective norms, and perceived behavioral control toward the intent to report child maltreatment.

Hypothesis H1: Subjective Norms and Perceived Behavioral Control factors will significantly predict school nurses' intent to report child maltreatment.

Study Design and Theoretical Framework

A descriptive, correlational study design, using survey methods, was used to explore the factors which are perceived as barriers and facilitators to school nurses in relation to reporting child maltreatment. This approach will allow a deeper understanding of the school nurses' perceptions and experiences that motivate or discourage their intent to report child maltreatment. This data will be gathered by employing a modified Child Abuse Reporting Intention Survey (Feng & Levine, 2005) with a sample of school nurses which will be obtained through the National Association of School Nurses research department.

The Theory of Planned Behavior provides the theoretical framework for this descriptive study. The Theory of Planned Behavior as developed by Ajzen (1991,2001) asserts that the determinant of an individual engaging in the behavior is directly correlated with the strength of their intention to perform the behavior. Thus, this framework provides an excellent fit with the variables of interest for this study. Further details about this theoretical framework and the application to school nurses' reporting of child maltreatment will be provided in Chapter Three.

Impact Statement

The study will identify the barriers found in, knowledge, attitudes, perceptions, with school nurses' intended reporting practices related to child maltreatment and any demographic differences that influence a school nurses' decision to report child maltreatment. Identifying

barriers and facilitators that influence the school nurse's decision to report child maltreatment will then provide opportunities for future interventions to change or eliminate the obstacles. Ultimately, increased reporting of child maltreatment and actions to prevent maltreatment will have the potential to impact the outcome of each vulnerable child's well-being and future quality of life.

Significance

The overt manifestations of maltreatment are easily diagnosed, but often the hidden trauma is not addressed until the situation becomes dire. Children are admitted to emergency rooms and intensive care units with devastating trauma, which can lead to chronic disabilities or fatalities. Reporting suspected or confirmed child maltreatment by school nurses regularly encounter children can be the difference in prevention and early intervention of child maltreatment, thus, potentially changing the course of a child's life. School nurses encounter these children frequently, and often over years of development. School nurses can be the key to early detection, reporting, and intervention that could prevent a child from immediate and long-term effects, or fatalities of child maltreatment. This study will help determine baseline knowledge related to the school nurses' perceptions, beliefs, and their level of knowledge of child maltreatment and determine if these factors, along with various demographic factors which correlate with their intention to report child maltreatment. The results of this study could lead to changes in the areas in the challenge and barriers that prevent the school nurse from reporting child maltreatment and could help strengthen those areas that facilitate their reporting. Future research from these results can impact supportive policy changes, and educational needs that will change the school nurses' practice and encourage early reporting.

This study is very timely, given the recent and ongoing COVID-19 pandemic. During this time, many children have been isolated in their homes with their abusers due to quarantine and

shut- down protocols. Household stress is a significant predictor of abuse; thus, professionals expect cases of child maltreatment to rise during the pandemic (Rothstein & Olympia, 2020). Newspaper reports from around the United States estimate a drop in calls to ChildLine (state abuse hotline) by 40-50% (McTavish et al., 2020). Since 73% of maltreated children will not report their maltreatment, and 92% of children know their abuser, it falls on adult advocates to speak up (Dallas Children's Advocacy Center, 2020). Additionally, it is suspected that the incidence of intimate partner violence is escalating, and quarantine tensions and frustrations rise (Moreira & Pinto de Costa, 2020; Sweedo et al., 2020). The stress placed on parents while quarantined with their child may result in children becoming unintended victims. Teachers and child advocates (including school nurses) who no longer have interactions with children during the pandemic decreases this avenue of exposure. Child maltreatment's full impact can only be assumed until children return to schools and social activities as the pandemic social isolation protocols are lifted. As children return to school, the role of the school nurse in reporting suspected child maltreatment will become even greater, since it has largely gone undetected during the pandemic. Thus, understanding school nurses' knowledge, beliefs, attitudes, and practices regarding child maltreatment and how these correlates with their intent to report are of great importance as the pandemic resolves and children return to school.

Definition of Terms

The following terms and definitions will be used throughout this study:

Attitude toward child maltreatment: the perception of the professional nursing responsibility to intervene and report child abuse (Feng & Wu, 2008). This will be operationally defined in a Likert scale in the data collection tool.

Child Maltreatment is “any act, intentional or not, that results in harm, the potential for harm, or the treat of harm to a child. The failure to provide for a child’s needs or to protect a child from harm or potential harm” (“Child Maltreatment, 2020).

Emotional maltreatment is "injury to the psychological capacity or emotional stability of the child as evidenced by an observable or substantial change in behavior, emotional response, or cognition" and injury as evidenced by "anxiety, depression, withdrawal, or aggressive behavior" ("Definitions of Child Abuse and Neglect in Federal Law", 2019).

Experience: experiences of suspected child abuse and experiences in intervening in child maltreatment (Feng & Wu, 2008). This will be operationally defined in a Likert scale in the data collection tool.

Extrafamilial Offenders: Extrafamilial or non-familial offenders are classified as those who violate children who are not related biologically or by marriage. Extrafamilial abuse is primarily perpetrated by acquaintances, friends of the family, authority figures, strangers, friends, and dates, and this type of sexual abuse generally occurs outside the family home in educational, day care, recreational and religious settings (Johnson et al., 2021).

Infrastructure is the organization’s resources, policies, relationships, and culture (Nease et al., 2018). This will be operationally defined in a Likert scale in the data collection tool.

Knowledge about child abuse is the awareness of the child maltreatment protection laws, understanding the symptoms and the different types of maltreatment (emotional, physical, sexual, neglect) (Feng & Wu, 2008). This will be operationally defined in a Likert scale in the data collection tool.

Neglect is “the failure of a parent or other person with responsibility for the child to

provide needed food, clothing, shelter, medical care, or supervision to the degree that the child's health, safety, and well-being are threatened with harm" ("Definitions of Child Abuse and Neglect", 2019).

Perceived behavioral control is the degree of confidence in the behavior of acting on suspected child abuse (Ajzen, 1991). This will be operationally defined in a Likert scale in the data collection tool.

Perceptions are "patterns of behavior within a social group descriptive social norm constitute an important link that connects social norms to individual behavior" (McCarthy & Caravan, 2006). This will be operationally defined in a Likert scale in the data collection tool.

Physical Abuse (child) is "any nonaccidental physical injury to the child" and can include striking, kicking, burning, or biting the child, or any action that results in a physical impairment of the child or acts or circumstances that threaten the child with harm or create a substantial risk of harm to the child's health or welfare" ("Definitions of Child Abuse and Neglect", 2019).

Protective Factors are "attributes or conditions that can occur at individual, family, community or wider societal level" (Child Welfare Information Gateway, 2019).

Risk factors are "the measurable circumstances, conditions or events that increase the probability that a family will have poor outcomes in the future" (Child Welfare Information Gateway, 2019).

Rural is a population of less than 2,500 with no specific definition of the space or area involved. The method of determining rurality will be the Rural-Urban Commuting Area

(RUCA) codes. The rural-urban commuting area (RUCA) codes classify U.S. census tracts using measures of population density, urbanization, and daily commuting. A second dataset applies RUCA classifications to ZIP code areas by transferring RUCA values from the census tracts that comprise them. Whole numbers (1-10) delineate metropolitan, micropolitan, small town, and rural commuting areas based on the size and direction of the primary (largest) commuting flows ("Rural-Urban Commuting Area Codes", 2020). Codes for this study will be grouped into rural and non-rural designations: codes1-7 (Metro/Urban) will be considered non-Rural, and codes 8-10 Rural.

School Nursing is "the specialized practice of nursing, protects and promotes student health, facilitates optimal development, and advances academic success" (National Association of School Nurses, 2020).

Sexual abuse is "the employment, use, persuasion, inducement, enticement, or coercion of any child to engage in, or assist any other person to engage in, any sexually explicit conduct or simulation of such conduct for the purpose of producing a visual depiction of such conduct; or the rape, and in cases of a caretaker or inter-familial relationships, statutory rape, molestation, prostitution, or other forms of sexual exploitation of children, or incest with children" (*The Child Abuse Prevention and Treatment Act*, 2018).

Limitations

A possible limitation of this study can arise from the modification of the original survey tool developed by Feng & Wu (2008) for this study. Therefore, the previously determined psychometrics may no longer apply. An additional limitation of this study may be related to the sensitive nature of the topic of child maltreatment. This may make some school nurses reluctant

to participate in the survey and/or it may also alter their comfort level with answering the questions. The Hawthorn Effect may also influence participants' responses, in that they may answer what they consider to be a socially acceptable response or hesitate to answer honestly. This study is a self-report questionnaire; response bias could occur because of the subject's sensitivity and social values around child maltreatment (Feng & Wu, 2008; Kamdar Tiyyagura et al., 2017). Social desirability to advocate for children may influence their responses that question their behaviors toward reporting child maltreatment. School nurses may have prior experiences with child maltreatment prior to assuming the school nurse role. It is possible their responses may reflect previous experiences and not their current experience as a school nurse. Thus, the results will need to be considered with these possible limitations in mind.

Summary

Child maltreatment is a serious public health problem that can have long-term impact on health, and wellbeing. At least one in seven children have experienced child maltreatment, and 1,840 fatalities have occurred in 2019. Reporting suspected or confirmed child maltreatment by school nurses regularly encounter children can be the difference in prevention and early intervention of child maltreatment, thus, potentially changing the course of a child's life. This study will help determine baseline knowledge related to the school nurses' perceptions, beliefs, and their level of knowledge of child maltreatment and determine if these factors, along with various demographic factors which correlate with their intention to report child maltreatment. Studying the challenges and barriers that prevent the school nurse from reporting child maltreatment could help identify and strengthen those areas that facilitate reporting. Chapter Two will provide a review of the existing literature that is relevant to this phenomenon and population of study.

Chapter 2

Review of Literature

Child maltreatment is a prevalent issue that impacts the health and welfare of children. Current statistics by NCANDS (Children's Bureau, U.S. Department of Health and Human Services, 2020) reflect no downward trend in child maltreatment victimizations and indicates an increase in fatalities due to child maltreatment. School nurses interact with children regularly, rendering them uniquely qualified to play a critical role in intervening and reporting child maltreatment. Identifying victims of child maltreatment is key to improving childhood outcomes and stopping the cycle of maltreatment.

As previously identified, the purpose of this study is to explore what factors and influences create barriers and facilitators that impact school nurses' child maltreatment reporting. The specific aims of this study are: 1) to determine demographic (age, level of education, years of experience as a school nurse, location) frequencies of school nurses who work with child maltreatment. In addition, school nurses' knowledge scores and attitudes toward reporting of child maltreatment will be measured, 2) to determine the relationships among school nurses' demographics, knowledge, attitudes, subjective norms, and perceived behavioral control, toward the intent to child maltreatment, and 3) to determine significant differences in rural vs. non-rural school nurses' knowledge scores, attitudes, subjective norms, and perceived behavioral control, toward the intent to child maltreatment. Hypothesis: Subjective Norms and Perceived Behavioral Control factors will significantly predict school nurses' intent to report child maltreatment.

This chapter provides an extensive review of the literature and research related to school nurses reporting child maltreatment and provides a summary of what is known and not known in relation to this phenomenon in this population.

To determine what research has been conducted related to child maltreatment reporting and school nurses specifically, a systematic search was conducted using the databases CINAHL, PubMed, Academic Search Premier, and Embase. Searches included combinations of keywords: "child abuse," "child maltreatment," "prevalence or incidence," "school nurse," "school nursing," "reporting," "mandated reporting," "barriers that inhibit reporting," "rural," "nurse," "barriers of reporting," and "factors of reporting." The literature search eligibility criteria included peer-reviewed, 2016 - 2021, and within the United States. After finding limited results, the search was expanded to ten years (2011-2021) and broadened to international studies.

Child Maltreatment

Unintentional injury is the leading cause of death for children under 18 years old (Centers for Disease Control and Prevention, 2020); child maltreatment is part of this statistic. The types of child maltreatment are divided into five major categories: physical abuse, sexual abuse, physical neglect/failure to provide, physical neglect/lack of supervision, emotional maltreatment (English, 1997; Lane et al., 2016; Cicchetti et al., 2016; McTavish et al., 2020; Savell, 2005; Scoglio et al., 2019; U.S. Department of Health &Human Services, 2018; Vachon et al., 2015; Zeanah & Humphreys, 2018). Neglect is the most prevalent type. However, co-occurrences of more than one type are the rule rather than the exception (U.S. Department of Health & Human Services, 2018).

A variety of risk factors have been identified that lead to a child being at an increased risk for maltreatment at different levels (individual, familial, and community) (Australian Institute of Family Studies, 2017; Gonzalez et al., 2019), which includes caregiver characteristics, parental and family functioning factors, and extrafamilial (a person not part of the nuclear family i.e.: mother's boyfriend, aunt, uncle, teacher, coach) relationships (Barczyk

et al., 2020, Tal et al., 2018). Parental characteristics that have shown to be risk factors for child maltreatment are unemployment, low socioeconomic status, younger parents, lower education levels, and being raised by a single parent (Barczyk et al., 2020; Berger & Waldfogel, 2011; Donohue et al., 2017; Maguire-Jack & Font, 2017; Matthews et al., 2020; Walsh, 2012; Zielinski et al., 2017). Parental and family functioning factors include parental alcohol use, parental substance disorder, mental illness, multifamily dwelling and overcrowding, domestic violence, lack of social support, daycare need, social isolationism, food insecurity, and housing insecurity (Maguire-Jack & Kim, 2021; Garg et al., 2019; Matthews et al., 2020; Wolf, 2021; Zielinski et al., 2017). Additionally, families with children who are premature, chronically ill, diagnosed with attention deficit disorder, or mental illness have a higher risk of child maltreatment due to the increased care requirements and potential parent burnout (Perkins, 2018). Risk factors specifically for sexual exploitation and sex trafficking are identified as childhood maltreatment, running away from home, hunger, mental health, substance use, frequent encounters with child protective services, racial minorities, and low educational achievement (Gonzalez et al., 2021; Hass et al.,2021; Jaeckl & Laughon, 2021).

Children who experience maltreatment have long-lasting effects and may experience depression, poor self-image, anxiety disorders, eating disorders, cognitive disorders, increased suicide rates, posttraumatic stress disorder (Jordan & Steelman, 2015; Perkins, 2018). These effects can last into adulthood, resulting in adverse outcomes, a higher rate of depression, anxiety, behavior disorders, suicide attempts, substance abuse, and risky sexual behaviors in adulthood (Crouch et al., 2019; Gonzalez et al., 2019; Ho et al., 2017; McCrae et al., 2019; Maguire-Jack et al.,2020; Norman et al., 2012). Victims of child maltreatment have a higher risk of becoming abusive parents, leading to a cycle of maltreatment (Crouch et al., 2019;

Perkins, 2018).

While risk factors put a child at risk for child maltreatment, it does not indicate that the presence of these factors will always lead to child maltreatment. Protective factors are associated with the decreased incidence of child maltreatment. The identification of protective factors can be used to create a systemic response to address the causes, including parental education, additional services, and support (Centers for Disease Control and Prevention, 2020, The Red Flags of Child Abuse, 2020). Protective factors are identified as individual/child factors, family/parental factors, and social/environmental factors. Specific protective factors can be supportive family environments, supportive social networks, parental employment, adequate housing, access to health care, and knowledge of parenting and child development (Australian Institute of Family Studies, 2017; Centers for Disease Control and Prevention, 2020; The Red Flags of Child Abuse, 2020).

Child Maltreatment in Rural Areas

Child maltreatment occurs in rural as well as urban areas of the United States. However, rural children are found to have twice the rate of overall maltreatment as the general population, and the incidence of overall maltreatment in rural counties has been found to be 1.7 times the rate in major urban counties (10.8 versus 6.4 children per 1,000) (Getto & Pollack, 2015). Chronic stressors: poverty, economic stress, lower educational levels, substance abuse, and alcohol abuse, are factors strongly linked to increased prevalence of child maltreatment and significantly present in rural areas (Crouch et al., 2019; Miller & Azar, 2018). Rural areas have less access to social services, health care services, and drug treatment resulting in increased risk for child maltreatment (Puls et al., 2018). A scoping literature review of rural differences in child maltreatment by Maguire-Jack et al. (2020) found that other factors such as race, family

and family structure are indicators for the increased incidence of child maltreatment. Poverty itself was found not to be a direct cause of maltreatment but a mechanism where the child experiences material hardship, family stress, and lower parental attention which are all linked to child maltreatment (Chaudry & Wimer, 2016; Crouch et al., 2019). Several studies found that child maltreatment rates tend to be higher in urban areas among people of color and higher in rural areas among white people (Finno-Valasques et al., 2017; Maguire-Jack et al.,2020; Puls et al., 2018; Smith & Pressley, 2019). The neighborhood protective factors (family, community, faith) can positively impact the incidence of child maltreatment. Several studies found that black children are more likely to reside in neighborhoods with less social integration and less childcare availability, and both are inversely associated with maltreatment (Coulton et al., 2007; Klein, 2011; Puls et al., 2018). Several promising strategies have been identified to assist rural providers and families to counteract child maltreatment in the form of telehealth, video conferencing, comprehensive web training via distance technologies (Rural Health Information Hub, 2019; Walsh & Mattingly, 2012)

Maltreatment reporting have been found to be higher in rural areas for both professional and nonprofessional reporters. Additionally, nonprofessional reporters comprised a greater percental of rural reporters (Maguire-Jack & Kim, 2021). This may be due to the shortage of health care professionals (nurses, physicians), so the burden to report defaults to nonprofessionals.

Mandatory Reporting of Child Maltreatment

Prompted by the exploitation of child labor and publication of a seminal article “The Battered-Child Syndrome” by Henry Kempe (1971), Congress enacted the Child Abuse Prevention and Treatment Act (CAPTA)of 1974. CAPTA does not include federal mandatory

reporting provisions but requires each state to pass its separate mandatory reporting laws (Brown & Gallagher, 2014). An amendment "Title 42, Section 13031 of the United States Code" provided categories of people who must report known or suspected instances of child maltreatment. The specific professions mandated to report are medical professionals (including nurses), mental health professionals, counselors, school officials, childcare workers, social workers, law enforcement personnel, foster parents, and commercial film and photo processors (Brown & Gallagher, 2014; Ho et al., 2017). There is an additional category for voluntary reporters in each state often, referred to as permissive reporters (a person who reports concerns of child abuse regardless of their profession) ("Mandated Reporter", 2021) for nonmandated reporters.

In addition to state laws, institutional reporting responsibility refers to the internal policies and procedures for handling maltreatment reports when working for an institution such as a school, daycare, or hospital ("Mandatory Reporters of Child Abuse and Neglect," 2019). These institutions may have protocols that designated a specific department or designee in charge of reporting maltreatment. Seventeen states, the District of Columbia and the Virgin Islands make it clear that the mandatory reporter is not relieved of his responsibility to report by any institutional policy, and the employer is prohibited from any form of retaliation. Mandatory reporting is considered privileged communication, and it requires the reporter to provide the facts and circumstances that led them to suspect the maltreatment but does not require the burden of proof ("Mandatory Reporters of Child Abuse and Neglect," 2019). Since these mandatory reporting laws were enacted, there has been a significant decrease in the annual number of child maltreatment victims and deaths (Ho et al., 2017). Medical professionals account for only 11% of the total reports of child maltreatment. The National Child Abuse and

Neglect Data System (NCANDS) that collects the data does not differentiate individual disciplines, beyond medical professionals, but nurses are included in that category. However, according to NCANDS data analyst H. Larrabee physicians are the largest discipline within that group that report (H. Larrabee, personal communication, March 6, 2020). Therefore, nursing, as part of the group of medical professionals, would make up a very small percentage of those reporting child maltreatment overall.

Mandated Reporting Issues related to Nurses in General

Mandatory reporting laws are designed for professionals who have contact with children to report known or suspected child maltreatment with a goal to preventing long-term adverse health and developmental outcomes (Foster et al., 2017). Nurses have contact with victims of child maltreatment in every area of their profession. Legally and professionally, nurses are mandated reporters of child maltreatment in all 50 states.

Education for child maltreatment is typically covered during the undergraduate nursing course work; however, the content and the number of hours devoted to this topic vary among nursing programs. Additionally, continuing education varies for licensure. Continuing education on child maltreatment is mandated in only four states. Iowa requires that nurses must complete training for identification and reporting of child maltreatment every five years. Kentucky mandates a one-time course in ‘Pediatric Abusive Head Trauma’. New York has a requirement for a one-time, two contact hour education on child maltreatment. Pennsylvania requires two contact hours of child maltreatment education for every license renewal (biannual). The remainder of the 50 states do not have any education requirements ("Nursing Continuing Education Requirements by State", 2021). It should be noted that all these state initiatives have only been started since 2017.

A landmark study by Feng & Wu (2008) investigated factors that inhibit nurses from reporting suspected child maltreatment. This study examined the factors that influenced the Taiwanese nurses' intent to report suspected child maltreatment, utilizing the Theory of Planned Behavior (Ajzen, 2001) to guide their study. In their study, it was found that nurses will report suspected child abuse if they believe that "(a) reporting would have a positive outcome for children and their families, (b) significant people think they should report, and (c) they have control over reporting" (Feng & Wu, 2008, p. 338-339).

This was a cross-sectional, correlational study recruiting nurses (n=1,362) from pediatric, psychiatric, and emergency room units throughout Taiwan's four regions. The first phase of this study was developing the survey tool (Child Abuse Report Intention Scale – CARIS). The results of their study indicate that only 14% of the nurses had ever reported child maltreatment, and 21% indicate they did not report after suspecting child maltreatment stating they were uncertain about the evidence. Additionally, 80% of the nurses reported they never had any child maltreatment education in their degree program. Among nurses who did have continuing education 75% stated they felt the information was inadequate. The authors identified limitations about the survey tool as a new tool, and that the severity of maltreatment was not addressed. The application of The Theory of Planned Behavior, and the Child Abuse Report Intention Scale survey tool have subsequently been used or modified to study factors associated with the intent to report child maltreatment (Atencion et al., 2019; Ben Natan et al., 2012; Fraser et al., 2010; Lee & Kim, 2018) with other nurses. However, no studies have specifically focused on school nurses.

A similar study by Atencion et al. (2019) replicated the study in the Philippines, focusing on hospital nurses. They concluded that attitude, subjective norms, and perceived

behavioral control are significantly associated with the intention to report child maltreatment among district hospital staff nurses in the Philippines. Other studies have concluded that nurses' knowledge about child maltreatment and experience in child maltreatment cases is correlated with the nurses' intention to report (Fraser et al., 2010; Engh Kraft & Eriksson, 2015). The application of this study is the intent that a school nurse will act on behalf of a child, as a product of past experiences and influences of social pressure.

Several studies within the United States have focused on nurse's working in the hospital setting, finding that common factors/barriers of reporting child maltreatment among nurses are: inadequate knowledge about the signs and symptoms of child maltreatment, familiarity with child & family, ambivalence, complicated process, fear for self, fear of repercussions, and previous poor experience with Child Protective Services (Green, 2020; Jordan and Steelman, 2015; Jordan et al., 2017; Engh Kraft et al., 2017; Lavigne et al., 2017; Walsh & Jones, 2015). Similar results were found in international research which indicated factors/barriers to reporting child maltreatment were the complicated process of reporting due to navigating the rigid systems and information sharing, inadequate education on the recognition of child maltreatment, fear of making mistakes and misidentification, fear for their job, and the statement 'we are not allowed' (Alaggia et al., 2019; Elarousy & Abed, 2019; Kuruppu et al., 2020; Lee & Kim, 2018; Lines et al., 2020; Nouman et al., 2020; Pietrantonio et al., 2013). Additional findings concluded that negative attitudes act as a barrier toward making a report, whereas positive attitudes will promote reporting maltreatment (Foster et al., 2017; Fraser et al., 2010; Perkins, 2018; Pietrantonio et al., 2013).

As noted, insufficient knowledge about the signs of child maltreatment and the process for reporting have been found, in multiple studies, to be correlated with the lack of intent to

report (Atencion et al., 2019; Elarousy & Abel, Fraser et al., 2010; Herendeen et al., 2014; Engh Kraft & Eriksson, Lee & Kim, 2018; Lines et al., 2017). Only one study by Ben Natan et al. (2012) found no correlation between knowledge and intent to report behaviors. The factor of knowledge relates to perceptions, experiences, and education about child maltreatment (Feng & Wu, 2008; Fraser et al., 2010; Lee & Kim,2018; Walsh & Jones, 2015). In several studies, nurses reported they had some education but felt it was insufficient. The individual experiences with child maltreatment and child protective services did not align with the education they had received, thus creating confusion and lack of confidence. Therefore, the confusion between education and actual experience became a barrier to their mandated reporter responsibility (Alazri & Hanna, 2020, Ben Natan et al., 2012, Fraser et al., 2010, Hackett 2013, Herendeen et al., 2014, Lee & Kim 2017, Lines et al., 2020). The integrative review by Lines et al. (2018) included over sixty studies involving the nurse's roles and experiences with child maltreatment concluded that nurse's knowledge mainly came from their experiences and not continuing education (Davidov et al., 2012; Elarousy & Abed, 2019; Fraser et al., 2010; Hackett, 2013; Louwers et al., 2012; Ramen et al., 2012; Tingberg et al., 2008).

The familiarity with the patient and family creates a stressor for the nurse when deciding to report maltreatment (Azizi & Shahhossini, 2017). This may be a particularly important factor in rural communities. The nurse may encounter the issue outside of the work setting and this may contribute to the fear of retribution from the family and other professionals. Nurses in some studies have reported they fear repercussions for the child after reporting, and fear retribution from the community should further harm come to the child (Azizi & Shahhossini, 2017; Walsh & Jones, 2015).

School Nurses

In the United States, there are 95,776 school nurse positions filled by 132,300 practicing school nurses in public and private schools (Davis et al., 2021). They are filled by various workforce combinations, as seen in Table 2 (Willgerodt et al., 2018). The National Association of School Nurses (NASN) workforce survey found that not all schools have nursing coverage. The national percentage of schools with any type of school nurse coverage are: 35% private schools & 82% public schools, while an estimated 11.4% do not employ a school nurse at all. Having a full-time nurse at a school appears to be regional. The workforce study found that 55% of schools in the western U.S. had a full-time nurse, while the Midwest was 38%, and the South & Northeast U.S. regions report 61%. The workforce study also found that different nurse combinations (RN &/or LPN) are used for school nurse coverage.

Table 2

Workforce for school nurse coverage

RN	69.5%
RN + LPN	13.6%
LPN	4.7%
No Nurse	11.4%

The National Association of School Nurses defines the school nursing practice as "professional, licensed nurses who are working in public and private schools to promote individual and population-based student health, provide care coordination, advocate for quality student-centered care and advance academic success" (2017). The principles of practice framework for school nursing are care coordination, leadership, quality improvement, and community/public health (Best et al., 2017; Davis et al., 2019; Darnell et al., 2019; Fleming et al., 2018). An integrative review by Best et al. (2017) revealed that the value of school nursing

interventions grounded in evidence and linked to positive outcomes are a powerful tool for school nurses. School nurses who can link positive student outcomes and nursing interventions are better positioned to advocate for child health. The school nurse uses this framework of practice when interacting with students to keep them safe, healthy, and ready to learn by recognizing health issues before becoming complications (Best et al., 2017; Fleming et al., 2017; NASN, 2017). The school nurse is "considered competent when they have the knowledge, judgment, skills, energy, experience, and motivation to meet performance expectations and professional responsibilities in a safe, effective, and appropriate manner. The evaluation process can measure competence if the evaluation tool is based on the standards of practice" (McDaniel et al., 2013, p.30). The school nurse is expected to use the nursing process and evidence-based information to guide their practice to promote of health and management of illness (Darnell et al., 2019; McDaniel et al., 2012; NASN, 2017).

Clearly, reporting of any suspected child maltreatment is not only mandated, but is within the scope of practice for school nurses. The safety and health of students are paramount to school nursing practice, and early identification, reporting and intervention of possible child maltreatment with help improve the health and safety of students. Despite this potentially important role, no studies could be in the extant literature which specifically examined the factors influencing intent to report among school nurses.

Rural School Nurses

In rural area, school nurses (when employed by rural schools), play a vital role in the health of the community. A Robert Wood Johnson article (2013) reports that school nurses in rural areas are the frontline experts and conduits to health information, particularly in rural communities that may lack a physician or nurse practitioner. Thus, the role of these rural school

nurses in reporting known or suspected child maltreatment becomes vital, particularly in the absences of other health care providers. Rural areas have limited health care providers; physicians, and nurse practitioners can be scarce, and the school nurse is often the health professional most consistently dealing with school children (Burch & Stoeckel, 2021; Ziller & Milkowski, 2020). Rural school nurses face critical health issues impacting children and work with families for basic needs like access to health care services and healthy food (Mills et al., 2017). School nurses in rural areas often must travel to different schools to provide health care and screening (Burch & Stoeckel, 2021; Ramos et al., 2014). A qualitative study by Burch & Stoeckel (2021) focusing on the experiences and challenges faced by rural school nurses in Colorado found that in addition to the standard health concerns and screening of children, rural school nurses must deal with health issues related to families living in impoverished family conditions. The school nurses identified they had high stakes communication with students, parents, and administrators. Frequently the school nurse was the confidant of a student that had nowhere else to turn about family conditions, complicated situations, or health issues. Nurses working in rural settings often have deep roots within the community and may know their patients and families personally (Smith et al.,2021). This may result in a personal conflict when dealing with sensitive issues such as child maltreatment. The school nurse must often communicate with teachers, school administrators, and medical professionals about challenging issues via the phone and not in person due to the transient status of the nurse (Burch & Stoeckel, 2021; Ramos et al., 2014, Risse et al., 2018).

Access to professional development can present an additional barrier to the rural school nurse. A study by Risse et al. (2018) examined the effectiveness of a rural pediatric outreach program to address the barriers and challenges of rural nurses in obtaining continuing

education. Rural nurses identified long travel times, the expense of overnight stays, staff scheduling issues, and the general cost and lack of time for on-site educators as significant challenges to obtaining continuing education. Although this research was to address the educational need of nursing staff in a rural hospital setting in Colorado, some of these challenges may be faced by rural nurses, regardless of the practice setting. As stated by the National Association for School Nurses, an education goal is to provide the tools (education) to attain confidence and self-efficacy to be able to take appropriate actions when encountering and reporting child maltreatment (Jordan & Steelman, 2015). Rural nurses need the opportunity for their continuing education needs to be met to be able to respond and report child maltreatment.

Child Maltreatment Reporting and School Nurses

School nurses are daily observers in a child's life, leaving them uniquely qualified for real-time assessment, prevention, and reporting. Child maltreatment is among many conditions (chronic and acute) that challenge the school nurse in caring for school children. School nurses may encounter various types of child maltreatment, including physical, sexual, emotional, neglect, and trafficking. It is estimated that physical and sexual abuse is higher than reported because many children do not disclose it until adulthood. (Blakey et al., 2019; McGuire & London,2017; Stige et al., 2020). Children can delay disclosure, fearing they will not be believed, and they will be blamed or accused of tearing their family apart (Blakey et al., 2019; McElvaney et al., 2014). Often the school nurse may become the confidant for that student to disclose the maltreatment. School nurses may hesitate to report child maltreatment for fear of retaliation and professional vulnerability (Alazri & Hanna, 2020; Ben Natan et al., 2012; Blakey et al., 2019; Hackett, 2013; Harding et al., 2019; Herendeen et al., 2014; McGuire & London, 2017; Stige et al., 2020). They are part of the school team and are not individually

practicing alone. The expectations from families, other professionals, and superiors may result in role confusion and fear of retaliation (Alazri & Hanna, 2020; Ben Natan et al., 2012; Hackett, 2013; Harding et al., 2019; Herendeen et al., 2014).

The National Association for School Nurses (2018) position statement prompts school nurses to use the Strengthening Families approach to focus on primary prevention and community awareness to address concerns before child maltreated occurs. This approach focuses on protective factors, including parental resilience, social connections, knowledge of parenting & child development, social and emotional competence of children, and concrete support in times of need (Freeland et al., 2018; Haas, 2021). New informational articles about online education and the roles and responsibilities of the school nurse in detecting child maltreatment have been published (Combe, 2019; Haas, 2021; Lucas et al., 2021). School nurses are required to speak up about child maltreatment and to educate school staff to advocate for their students (Haas, 2021; Lucas et al., 2021).

Within the last five years (2016-2021), only two published research studies could be located which studied any aspects of reporting of child maltreatment by school nurses specifically within the United States. Jordan et al., (2017) studied the effectiveness of education on child maltreatment and school nurse's reporting in North Carolina elementary schools. A total of 174 school nurses participated in a face-to-face evidence-based education on child maltreatment, using a pre and post-test for evaluation. The second phase of this study used focus groups case scenarios to discuss the scope of the problem of child maltreatment, and to identify the barriers of recognition and reporting. The results indicated that with education, school nurses increased knowledge, confidence, attitude, and self-efficacy, with identification of child maltreatment and used protective interventions to promote safety of the child. However, this

study was a one-time education and evaluation The actual long-term application for real time effectiveness and retention of material was not studied but was suggested by the authors as an area for future research. This study also did not specifically examine the factors, other than education, which influence school nurses' reporting behavior or intent to report.

In a related study, Sekhar et al. (2018) examined the challenges when screening for childhood sexual maltreatment with various roles in the school system (school nurses, teacher, counselors, & administrators) by utilizing focus group conversations. The participants stated that childhood sexual maltreatment is often hidden, and they struggled with identification, the ability to provide confidentially consistently, and the variability in reporting (Sekhar et al., 2018). In this study the school nurses were less than 25% of the participants and thus the findings did not reflect the role of the school nurse explicitly. Additionally, the focus of the study was specific to screening for child sexual maltreatment, rather than reporting of maltreatment overall.

Summary

The role of the school nurse is to provide direct care to students, but also to promote a healthy school environment, promote health thru education and information, and as a liaison between school, family, health care professionals, and the community (Magalnick & Mazyck, 2008). School nurses are mandated reporters for child maltreatment. The current Covid-19 pandemic has shed light on the school nurse's role in child maltreatment as children become isolated, declining calls to hotlines were noted, and there was an increase in child fatalities in 2019. A review of the literature found there was little recognition of the school nurses' impact on child maltreatment prior to 2010. Within the United States only two regional studies, using small samples, have focused on the impact school nurses may have on child maltreatment, yet internationally several studies have focused on the school nurses' roles and experiences in child

maltreatment (Engh Kraft &Eriksson, 2015; Engh Kraft et al., 2016; Hackett, 2013; Land & Barclay, 2008; Paavilainen et al., 2014; Sundler et al., 2019). A major gap in literature reflects that no studies have focused on the factors that influence school nurses' intent to report child maltreatment., and neither have any examined potential differences between rural and non-rural nurses in relation to these factors. School nurses do not work independently, they work within the community and within a school system. No clear correlational relationship between influencing factors and the school nurses' intent to report child maltreatment has been established in the extant literature.

Chapter 3

Methods

Child maltreatment (CM) is a global problem and can have long-term impact on the well-being of children. Reporting suspected or confirmed child maltreatment by school nurses who regularly encounter children can be the difference in prevention and early intervention of child maltreatment, thus, potentially changing the course of a child's life. The purpose of this chapter was to outline the research methodology for this quantitative descriptive, correlational study to determine what factors correlate with school nurses' intent to report child maltreatment. This chapter presented the methodology for this study, including the study design, sample and setting, procedures, protection of human subjects, test and measures, data management and analysis plan. The Theory of Planned Behavior will guide this study.

Specific Aims

The outcomes for this study will be achieved by examining the following specific aims:

Specific Aim 1: To determine demographic (age, level of education, years of experience as a school nurse, location) frequencies of school nurses who work with child maltreatment. In addition, school nurses' knowledge scores and attitudes toward reporting child maltreatment will be measured.

Specific Aim 2: To determine significant differences in rural vs. non-rural school nurses' knowledge scores, attitudes, subjective norms, and perceived behavioral control toward the intent to report child maltreatment.

Specific Aim 3: To determine the relationships among school nurses' demographics, knowledge, attitudes, subjective norms, and perceived behavioral control toward the intent to report child maltreatment.

Hypothesis

H1: Subjective Norms and Perceived Behavioral Control factors will significantly predict school nurses' intent to report child maltreatment.

Research Design

This study used a quantitative, descriptive, correlational design to: a) investigate the relationship between school nurses individual knowledge about child maltreatment and their intent to report, b) investigate the relationship between the school nurses' attitude toward reporting child maltreatment and their intent to report, c) investigate the relationship between the school nurses' subjective norm and their intent to report child maltreatment, d) investigate the relationship between the school nurses' perceived behavioral control and their intent to report child maltreatment, e) assess the relationship of the school nurses individual knowledge about child maltreatment on their attitude toward reporting child maltreatment, and f) examine the relationship between the school nurses' demographic variables and their intent to report child maltreatment. The survey tool will allow the researcher to describe the relationship of factors on the school nurses' intent to report child maltreatment. An online survey was used for data collection, and correlational statistics assessed the relationship between the variables. As there is little known about the school nurses' perceptions about reporting child maltreatment, the relationships between the factors gave insight to their behaviors.

It should be noted that the survey questionnaire as developed uses different terminology from child maltreatment, for example: Knowledge of Child Abuse and the reporting law. As defined by the World Health Organization (2020) "Child maltreatment is the abuse and neglect that occurs to children under 18 years of age and includes all types," however the original author

of this tool (Feng & Levine, 2005) used the term child abuse throughout the survey. Specifically in the case scenarios the question used the term abuse. For example, the case scenario questions are: "In your own professional judgement, does this incident constitute *abuse*?" "All things considered, what overall impact would a child *abuse* report be likely to have on this child?" and "All things considered, what overall impact would a child *abuse* report be likely to have on the rest of the family?" Thus, the reader will note that when discussing the tool and results in relation to the tool, the term child "abuse" will be used rather than child "maltreatment."

Theoretical Framework

The Theory of Planned Behavior provided the theoretical framework for this descriptive, correlational study. The Theory of Planned Behavior as developed by Ajzen (1991,2002), asserts that the determinant of an individual engaging in the behavior is directly correlated with the strength of their intention to perform the behavior. This Theory uses four independent variables (predictors): knowledge, attitude, subjective norms, and perceived behavioral control ("often used interchangeably with self-efficacy" Montanaro et al., 2018) to predict the intent to act (the dependent variable). The Theory of Planned Behavior furthers explains that the factors that directly influence the intention to engage in health behavior and the individual's perception of the subjective norms concerning the behavior are directly linked to the extent to which the individual perceived themselves to have control concerning the behavior (Fishbein, 2001).

Knowledge

Knowledge was determined by the individual's awareness of child maltreatment as an issue and the nurses' legal requirement to report child maltreatment (Feng & Wu, 2008). In addition, an individual's knowledge can be influenced by previous experience with child maltreatment or education on the topic.

Attitude

Attitude was determined by the individual's behavioral beliefs and measured by the evaluation of their behavioral outcomes. Attitude was an individual's overall evaluation of the behavior (Guo et al., 2019). An individual's attitude was more favorable if they believe it will lead to a positive outcome or prevent a negative one.

Subjective Norm

The subjective norm was determined by the individual's belief that they approve or disapprove of performing the behavior and were motivated to complete the behavior. The subjective norms were influenced by the external variables of demographics, attitudes toward targets, and personality traits (Ajzen, 1991; Guo et al., 2019).

Perceived Behavioral Control

Perceived behavioral control was also determined by the presence or absence of facilitating or inhibit the behavior. The ability to perform or not perform a given behavior can be predicted by an individual's sense of competence (Guo et al., 2019). According to Ajzen (1991), the stronger the intention to engage in a behavior, the more likely they are to perform the behavior.

The Theory of Planned Behavior used the four influencing independent variables to predict an individual's behavioral intentions (Guo et al., 2019). Ajzen states that the more favorable the attitude and subjective norm in relation to the behavior, the greater the planned behavioral control and thus the strong an individual's intention to perform the behavior (Ajzen, 1991; Guo et al., 2019).

Montanaro et al., (2018) found that the theory is limited by suggesting that all the

variables collectively need to be targeted to create change. Additionally, the behavioral change interventions are limited to the exposure of the given component of the study (Hagger et al., 2021; Montanaro et al., 2018). A meta-analysis by Steinmetz et al., (2016) on the effectiveness of the Theory of Planned Behavior concluded a significant correlation between interventions and resulting actions. The results of this analysis were highlighted in the utility of the theory for designing and evaluating the effectiveness of interventions across different target behaviors. This analysis further found that investigators must first establish whether individuals fail to perform the desired behavior because they are not motivated to do so, or cannot do so (Steinmetz et al., 2016).

The Theory of Planned Behavior has been used in studies as a predictor of behavioral change in tobacco usage (Tapera et al., 2020), alcohol prevention (Kim Younkyoung et al., 2020), education, and learning (Nadifatin et al., 2020; Persada et al., 2020; Rahimdel et al., 2019), role transition (Johnston et a., 2021; Hassan et al., 2021), and health predictors (Dressler, 2018; Fattahi et al., 2019; Getahun et al., 2020). The Theory of Planned Behavior has been used in two studies with nurses and two studies with school nurses. Lee & Kang (2020) applied the Theory of Planned Behavior to investigate nurses' intention to care for patients with emerging infectious diseases. Rogers et al., (2017) used the theory to examine behavioral factors that determine why nurses do not obtain and administer medications from automated dispensing cabinets. A cross-sectional study by Schnieder (2017), used the theory of planned behavior to explore the beliefs and roles of school nurses in concussion care management. Lineberry et al., (2021) used the theory of planned behavior as a framework to examine the relationship of variables to the school nurses' intent to delegate diabetes-related tasks to unlicensed assistive personnel. Thus, there was an established precedent of using the

Theory of Planned Behavior as an indicator of intent among both nurses in general, and school nurses.

In addition, the theory has been utilized as a predictor of the intention to report child abuse with nurses in emergency rooms and pediatric units (Atencion et al., 2019; Ben Natan et al., 2021; Feng & Wu, 2008; Foster et al., 2017; Guo et al., 2019; Hye Young et al., 2021; Lee & Kim, 2018, Salami et al., 2020). Feng & Wu (2008) also applied this theory to assess Taiwanese nurses reporting suspected child abuse. Use of the Theory of Planned Behavior as a theoretical framework for studies with school nurses and child maltreatment reporting is not found in the extant literature, but there were sufficient studies which have effectively used it samples of nurses to provide support for this being an appropriate framework for the current study.

Application to Child Maltreatment

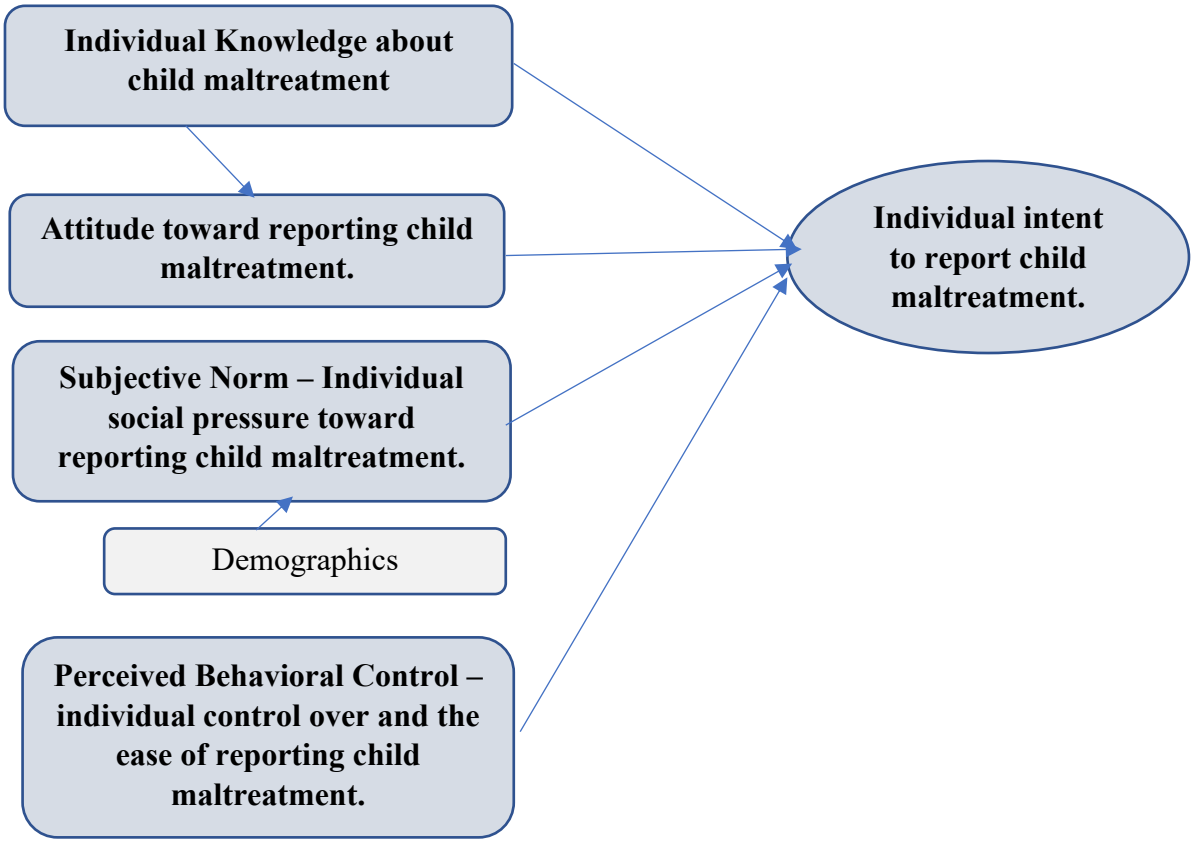
As noted, the Theory of Planned Behavior used four independent variables (predictors): knowledge, attitude, subjective norms, and perceived behavioral control in this study. Attitude was the degree of positive or negative value placed on reporting child abuse. The subjective norms were the nurses' perceptions of social pressure (of significant people) to report or not report child abuse. Perceived control over reporting child abuse was the perceived ease or difficulty in doing so. Knowledge about child maltreatment was the awareness of the child maltreatment protection laws, understanding the symptoms and the different types of maltreatment (emotional, physical, sexual, neglect) (Feng & Wu, 2008).

This study used the Theory of Panned Behavior to guide the survey tool that collected data about attitudes, the actual subjective norms of school nurses', the school nurses' actual knowledge about child maltreatment, and the school nurses perceived control over the reporting

process. Additionally, the Theory provided direction for correlation of these factors with intent to report child maltreatment (i.e., the planned behavior). Figure 1 illustrates The Theory of Planned Behavior, specifically applied to this study.

Figure 1

Model for the intention to report child maltreatment



Population and Sample

The target population for this study was comprised of all school nurses in the United States. The sample consisted of school nurses that were members of the Nurses Association of School Nurses (NASN). The National Association of School Nurses is an organization of voluntary membership by school nurses. The current membership is 17,000 and included all 50

states (including Washington D.C.). The demographics of the NASN school nurse membership (Willgerodt et al., 2018) were: 98% Female, 87% white, 22% Associate Degree Nurse graduates, 51% Bachelor of Science in Nursing graduates, 12% Master of Science in Nursing graduates, 60% were between the ages of 31 and 60, 62 % worked in elementary schools, 25% worked in high schools and the remainder worked in multiple schools.

Inclusion criteria for the study were: 1) Licensed as a Registered Nurse; 2) Employment as a school nurse in the United States (kindergarten through high school); 3) Membership in the National Association for School Nurses; and 4) English speaking. The exclusion criteria was 1) nurses who did not work in a school within the defined age group (kindergarten through high school), and 2) school nurses who were not members of the National Association for School Nurses.

Power analysis to determine sample size was calculated using the Qualtrics estimator software. The estimated sample size was determined by setting the confidence level at 90%, and the margin of error at 5%. Using this calculation, the ideal sample size was 239.

Recruitment

An application to the National School Nurses Association (NASN) research board was submitted for permission to complete the study. The participants were recruited using a random sampling process. The NASN research department randomly emailed the survey to 2000 of its members in a one-time mailing. Given the required 239 participants to reach power, a survey return rate of 12% was required.

An introduction cover letter accompanied the survey to include: the purpose and specific aims, the process to maintain confidentiality, and the voluntary participation statement. A URL

link to the survey was provided. The NASN research department sent a reminder email to the nurses three weeks after sending the initial survey, to solicit additional participants.

Data Collection

The National Association of School Nurses permits research used their membership mailing lists. The organizational research department controls all research mailing requests. Email lists are not for public access. However, the NASN's research department distributes research on behalf of the researcher through the membership database. The survey was entered into the University of North Dakota Qualtrics survey tool to develop the link. This link was provided to NASN's research department for distribution.

The Child Abuse Report Intention Scale (CARIS) (See Appendix A) was used to collect data related to the variables in the Theory of Planned Behavior (attitudes, knowledge, subjective norms, perceived control, and intended behavior) as they relate to child maltreatment. Feng & Wu (2008) designed the CARIS to measure Taiwanese nurses' intention of reporting behaviors regarding child abuse in Taiwan. Taiwanese experts in child abuse provided content validity in the original study. The content validity indices were documented as 89% to 98%. After the pilot test, the Cronbach's alphas for the subscales were .62 - .91. A study by Atencion et al. (2019) used the tool after establishing content validity by a Philippine panel of experts relying on the previous Cronbach's alpha provided by the Feng & Wu study with no modifications. Lee & Kim (2017) used the tool without modifications to predict the emergency room nurses' intention to report child abuse with Korean nurses. A panel of expert professors completed the content validity of the tool. They used the Kuder-Richardson to measure the tool's reliability was determined as 0.89 in the preliminary study and 0.92 in the current study. These studies were completed with a population of bedside nurses and emergency nurses.

The tool for this study was an adaptation of the Child Abuse Report Intention Scale (Feng & Wu, 2008). Written permission from Dr Feng was obtained, via email from the assistant Yi-Ting Chang (see Appendix B). The only modification to this tool was the addition of demographic information of the school nurse participants.

This study aimed to identify the factors affecting the school nurse's intent to report child maltreatment. For this study, the theoretical, conceptual framework identified the independent variables (knowledge, attitude, subjective norms, and perceived behavioral control) on the intent to report (the dependent variable). This tool had seven sections: demographics, personal reflection, and five additional sections that address the variables. Each section consisted of six to seven questions regarding the nurses' perceived behavioral control, knowledge about child maltreatment, subjective norms influence on action, their attitude toward child abuse, and their intended practice behaviors (table 3).

Table 3

Survey questions and corresponding variables

	Section/subsection	Question number
Demographics	1 1b	1-7 8-10
Personal Reflection	7 8	57-58 59-61
Attitude	5a 5b 5c	14/1-6 15/1-5 16/1-7
Knowledge	2	11/1-13
Subjective Norm	3	12/1-2
Perceived Behavioral Control	4	13/1-8
Intended Reporting Behaviors	6/1 6/2 6/3 6/4 6/5 6/6 6/7 6/8	17-21 22-26 27-31 32-36 37-41 42-46 47-51 52-56

To determine the rural/non-rural living status, respondents were asked to provide their school zip code. This zip code was entered into the "Am I Rural?" website tool (http://www.ruralhealthinfo.rg/am-i-rural) to determine the school's RUCC code. For example, non-rural was defined as RUCC codes 1-3, while rural was defined as RUCC codes 4-9 (US Department of Agriculture, 2020).

Data Analysis

The study data was analyzed using the Statistical Package for Social Sciences 24 (SPSS), after receiving the completed questionnaires (initial emailing and reminder email). The questionnaire responses were reviewed for completeness, to ensure that the resulting data did not have any missing data before coding. Survey's that were not complete (missing data) were

omitted – listwise deletion (Kang, 2013), with the intent of still retaining the 239 surveys needed. Using SPSS, the data was encoded, and data analysis completed. An alpha level of 0.05 was the criterion or significance.

Data analysis for each study aim is planned as follows:

a) **Specific Aim 1:** To determine demographic (age, level of education, years of experience as a school nurse, location) frequencies of school nurses who work with child maltreatment. In addition, school nurses' knowledge scores and attitudes toward reporting of child maltreatment will be measured.

Descriptive statistics was used to calculate percentages of the following variables: the nurses' age, levels of education, years of experience as a school nurse, location, and type of school nurse (state, elementary school, middle school, high school). The results were analyzed using the means, standard deviations, frequencies, and percentages. Further analysis of school nurses' knowledge scores, and attitudes toward reporting of child maltreatment were be measured. The questionnaire to measure nurses' knowledge and attitudes toward child maltreatment reporting practices utilized a Likert Tool with numerical values attached to the scale and scored as follows: one (1) indicates strongly disagree and five (5) indicate strongly agree. The data was reported in frequency distributions that included summaries of the following categories: means, and standard deviations.

b) **Specific Aim 2:** To determine significant differences in rural vs. non-rural school nurses' knowledge scores, attitudes, subjective norms, and perceived behavioral control toward the intent to report child maltreatment. The second Specific Aim was accomplished by determining significant differences between the perceived factors that influence reporting of child abuse by the rural vs non-rural school nurses' response was calculated using *t*-test analysis.

c) **Specific Aim 3:** To determine the relationships among school nurses' demographics, knowledge, attitudes, subjective norms, and perceived behavioral control toward the intent to report child maltreatment. Analysis of the third Specific Aim was accomplished by using Pearson's correlational analyses to determine the significance of relationships among the following study variables: demographics, knowledge about child maltreatment and attitudes toward child maltreatment.

d) **Hypothesis -H1**: Subjective Norms and Perceived Behavioral Control factors will significantly predict school nurses' intent to report child maltreatment. Analysis of this hypothesis was accomplished using a simple multiple regression analysis.

Human Subjects' Protection

The University of North Dakota Institutional Review Board (IRB) approval was obtained before commencing the study. Protection of human subjects was attended to in the following ways.

Risks and Benefits

Participation was a voluntary response to the survey sent out by the National Association of School Nurses' research department. Participants were school nurses, and no vulnerable populations were intentionally targeted for this research. No one under the age of 18 were included. Risks anticipated by this type of study were the risk to the participants anticipated to be minimal. Participation in this survey did not interfere with the performance of the school nurses' professional responsibilities.

The benefits of this study did not apply to the individual participant as this study was anonymous. However, this study aimed to achieve a social benefit (Resnik, 2008) to the school

nurses' practice. The study goal to identify the areas needed for improvement by the school nurses could lead to an increased child welfare outcome which would benefit the broader good.

The risk of psychological harm existed to the school nurses completing the survey. The stress or feeling of guilt or embarrassment by considering the individual's actions or thoughts toward child maltreatment could arise ("UCI Office Of Research," 2021). The risk of the participant's perception that the survey could be an invasion of their privacy. Although the survey was anonymous, the participant reveals their perceptions of child maltreatment and could be perceived as an invasion of their private thoughts. These risks can be addressed by assuring anonymity and confidentiality to the participant.

Anonymity and Confidentiality

Individual names were not included in the survey, and since the recipients of the survey were randomly chosen by NASN, the identity of the potential and actual participants in the study was not known by the investigators. However, survey data may be shared with members of the principal investigator's (PI) dissertation committee for analysis assistance. All the survey information and responses will remain on a password-protected computer file by the principal investigator for a minimum of three years. At that time, all files will be securely destroyed.

Informed Consent: All participants received a cover letter with the specific aims and a brief description of the research's purpose. All participants were provided a study information sheet at the beginning of the survey, which outline the risks, benefits, and measures to protect their anonymity and confidentiality. The cover letter and study information sheet informed the participant that completing the survey is voluntary; they may withdraw at any time and skip any

uncomfortable questions. Information was also be provided about contacting the PI, dissertation chair, and IRB if the participants have any questions or concerns.

Costs and Compensation: There was no monetary cost associated with the study. The only cost to the participants was the time required to complete the survey. No compensation was provided to participants.

Challenges

The design plan was to distribute the survey through the National Association of School Nurses' research department. Should the application for distribution not be accepted or not enough completed responses were received, the alternative plan was to distribute the survey via individual state school nurses' associations. Volunteers were to be recruited by advertising in the state organizational newspaper.

This study could be changed to a qualitative study by recruiting school nurses via school administrators. In addition, the survey questions would be changed to a qualitative format, using interviews in person or via a video web platform.

Missing data could present an unanticipated challenge. To meet this challenge, the missing data was addressed by omitting surveys by listwise deletion. However, this process could result in too few surveys and not attaining the 239 needed. An alternative format would then need to be established to deal with the missing data.

Summary

This quantitative descriptive study design was to investigate the relationships of the factors affecting the school nurse's intent report child maltreatment and compare findings

between rural and non-rural school nurses. To address the purpose and specific aims, data collection was a web-based survey distributed randomly to 2,000 school nurses through the National Association of School Nurses research department. This study was the first time the Child Abuse Report Intention Scale (CARIS) was used with school nurses within the United States. The findings, discussion, nursing implications, and areas for future studies were addressed in the chapters which follow.

Chapter 4

Results

Child maltreatment is a prevalent issue with a significant number of victimizations and fatalities. School nurses have an opportunity to place a critical role in intervention and reporting child maltreatment. Identifying victims of child maltreatment is key to improving childhood outcomes and stopping the cycle of maltreatment.

As a reminder to the reader, the purpose of this study was to explore what factors and influences create barriers and facilitators that impact school nurses' child maltreatment reporting. The specific aims of this study were:

Specific Aim 1: to determine demographic (age, level of education, years of experience as a school nurse, location) frequencies of school nurses who work with child maltreatment. In addition, school nurses' knowledge scores and attitudes toward reporting of child maltreatment will be measured.

Specific Aim 2: to determine significant differences in rural vs. non-rural school nurses' knowledge scores, attitudes, subjective norms, and perceived behavioral control, toward the intent to child maltreatment.

Specific Aim 3: to determine the relationships among school nurses' demographics, knowledge, attitudes, subjective norms, and perceived behavioral control, toward the intent to child maltreatment.

Hypothesis: The Subjective Norms and Perceived Behavioral Control factors will significantly predict school nurses' intent to report child maltreatment.

This chapter presents the results of the study.

Pre-Analysis Data Screening

Before data analysis all participant identifiers from the Qualtrics survey results were deleted. Twenty participants opened the survey but did not complete the survey, these entries were deleted. Descriptive statistics were computed on all entries that completed the first ten demographic questions. Entries that did not complete the questions after the first ten were deleted prior to further analysis. Before completing the rural vs non-rural analysis, entries that did not have a zip-code were deleted.

For the survey questions that were answered with a Likert scale, the data were transformed from text (i.e., strongly disagree) to the equivalent score using a 1-3 or 1-5 scale. The negatively worded items were reverse scored prior to any analysis: Knowledge of child abuse and the reporting law (Items 2,3,4,5,6,8,9,13), Perceived Behavioral Control (Items 2,4,7), Attitudes regarding punishment and culpability of offenders or victims of child abuse (Items 1,2), and Attitudes regarding professional responsibility (Items 3,5,7).

Missing data entries that were less than ten percent of the participants total entries were replaced with the calculated means for the variable. The final analyzed sample size was 158.

Sample Demographics and Characteristics

The target population for this study was school nurses within the United States. The sample of school nurses were randomly selected members of the Nurses Association of School Nurses (NASN). The inclusion criteria for the study were 1) licensed as Registered Nurse, 2) employment as a school nurse, and 3) membership in the National Association of School Nurses. The NASN research department randomly emailed 2000 members with the introduction letter, the study information sheet, and the Qualtrics survey link. A total of 186 members opened the

survey; however, only 160 participants entered the survey, and 153 completed the entire survey. Thus, with an *N* of 153, the power analysis sample size of 239 was not reached. After many delays, the survey was sent out in the middle of May. This time frame was, unfortunately, at the end of the school year. A reminder request was sent out two weeks later. The survey was not resent due to the NASN policy not to send out any surveys during the summer as many school nurses do not work then. Waiting to resend the survey would have incurred a delay of four additional months which was not feasible for dissertation completion.

The regional distribution of the study example was defined by the zip codes provided in the survey responses. Rural vs. Non-Rural status were identified by entering each zip code into the 'Am I Rural' section of the Rural Information Hub (http://www.ruralhealthinfo.rg/am-i-rural). The RUCA codes 4-9 were designed as Rural; all others were designated non-Rural. Forty-four states were represented in the survey responses, and seven states are not represented. The twenty-six not completed surveys did not provide zip codes so they were eliminated only from this portion of the analysis. Six participants chose not to enter a zip code. The information from these completed surveys was part of the data analyzed set that included all participants. The completed surveys without a zip code were not part of the rural vs. non-rural analysis. Exact Zip Codes were not published to maintain privacy and confidentiality. The number of participants according to rural vs non-rural zip codes are displayed in Table 4.

Table 4

Rural and Non-Rural Participants

	N	Percent
Rural	34	22.7
Non-Rural	116	77.3
Total	150	100

Reliability

The results of reliability analysis for each variable are shown in table 5. The subscales of this survey included: Knowledge, which consisted of 13 items (α=.334), Subjective Norms consisted of two items (α = .958), Perceived Behavioral Control consisted of eight items (α = .189), and Attitude, which was broken down by a) Childbearing Belief & Discipline which consisted of six items (α = .857), b) Punishment & Culpability consisted of five items (α = .561), and c) Professional Responsibility consisted of seven items (α= .306). Only Subjective norms and Attitudes of Childbearing Belief and Discipline are in the acceptable range, the remainder had poor Cronbach's alpha scores.

Table 5

Cronbach Alpha Score for the Variables

Variable	Survey number	Cronbach's Alpha
Knowledge of child abuse & the reporting law	11	.334
Subjective Norms	12	.958
Perceived Behavioral Control	13	.189
Attitude – childbearing belief & discipline	14	.857
Attitude – Punishment & culpability	15	.561
Attitude- Professional responsibility	16	.306

Factor Analysis

Several variables resulted in a low Cronbach Alpha score in response to an exploratory factor analysis using Principal Axis Factoring. The analysis for Perceived Behavioral Control yielded two factors explaining 61% of the variance for the entire set of items. However, Cronbach's Alpha remained poor at .573 & .540, indicating poor psychometrics. The Regression analysis using Subjective Norms, and the two items in Factor 1 (6-Many resources are available to me for reporting child abuse, & 7 reverse scored-I feel my professional training doesn't meet the clinical need for child abuse) for the Perceived Behavioral Control with the intent to report

child abuse was completed did not yield a significant result. The correlation between Relationships Among “In your work, have you ever filed a report of suspected child abuse” and the two items in Factor 1 yielded a similar negative correlation.

The analysis for Attitudes regarding professional responsibility yielding one factor explaining 41% of the variance for the entire set of items. However, Cronbach’s Alpha remained poor at .022, indicating poor psychometrics.

The analysis of Attitudes regarding punishment and culpability of offenders or victims of child abuse yielded one factor explaining 51% of the variance for the entire set of items. However, Cronbach’s Alpha remained poor at .667, indicating poor psychometrics. Correlation analysis was run using Factor 1 items (1 reverse scored-Abusive parents should lose the right to raise their children, & 2 reverse scored – Severe punishment of child abusers would help stop abuse of children) to replace the Attitudes regarding punishment and culpability of offenders or victims of child abuse. The correlation against reflection questions: “In your work, have you ever filed a report of suspected child abuse,” & “Do you personally know anyone who has been abused as a child” found no significant results. The correlation between the Factor 1 items and Knowledge of child abuse and the reporting law did not yield a significant result.

Specific Aim 1

To determine demographic (age, level of education, years of experience as a school nurse, location) frequencies of school nurses who work with child maltreatment. In addition, school nurses' Knowledge scores and Attitudes toward reporting of child maltreatment will be measured.

Demographics

Table 6 and 7 present demographic information for the sample.

The frequencies and frequency distributions were calculated for the participants and displayed in Table 6. Most of the school nurses were female (*n*=151; 95%). 88% of the participants are over 40, which is slightly higher than the NASN workforce study (Mangena & Maughan, 2015), which reports that 74% of their school nurses are over 40. More than half of the participants had a baccalaureate nursing degree (*n*=92; 57.86%), which is close to the NASN workforce study (BSN: 51.3%). Respondents recorded that more than 50% had over ten years as a school nurse (*n*= 90; 56.96%). The NASN workforce study reported the average school nurse had practiced for 19 years. Elementary school accounted for 30% of the respondent's primary place of employment & 23% as mixed. Other accounted for 12.56% of the respondents, a list of the text responses to "Other" is found in table 7.

Table 6

Demographic Characteristics of Participants

Characteristic	*n*	%
Gender		
Female	151	94.97
Male	6	3.77
Prefer not to say	2	1.26
Age		
20-29	3	1.89
30-39	15	9.43
40-49	37	23.27
50-59	47	29.56
>60	57	35.85
Highest Nursing Degree		
Diploma	3	1.89
Associate Degree	18	11.32
Baccalaureate Degree	92	57.86
Master's Degree	44	27.67
Doctorate Degree	2	1.67
Years Practiced as an RN		
<1	3	1.89
1-5	5	3.14
6-10	14	8.81
10-20	30	18.87
20-30	36	22.64
>30	71	44.65
Years Practiced as a School Nurse		
<1	26	16.77
1-5	38	23.87
6-10	4	2.53
>10	90	56.96
Type of School		
Elementary school	69	30.67
Middle school	38	16.89
High School	37	16.44
Mixed	53	23.56
Other	28	12.44

Table 7

Frequencies for the Demographic Question 'Other' (type of school)

Text	n	%
K to Young Adult Program	1	6.25
Early Childhood	2	12.5
Pre-School	3	18.75
ALC (7-12), level IV(K-12), transitional 18+	1	6.25
K-8, special needs	1	6.25
K-8	1	6.25
Pre-K	2	12.5
Pre-K, head start	1	6.25
Pre-K, K-8	1	6.25
Pre-K, 18-22 special ed	1	6.25
Autistic, ID kids	1	6.25
3 elementaries, 1 middle school, 1 high school, An alternative high school	1	6.25

Knowledge

Results related to Knowledge of Child Abuse and the reporting law results are listed in table 8. In each statement the participant had the options of 1(agree), 2 (disagree), or 3(not sure). Statements 1,7,10,11, & 12 were posed as true statements. Statements 2,3,4,5,6,8,9, & 13 were posed as false statements.

Table 8

*Frequency Distribution Scores for **Negatively** stated Questions for Knowledge of Child Abuse and the Reporting Law*

Item	%Agree	% Disagree	%Not sure	M(SD)
2)A professional must have physical evidence of child abuse before reporting the case to child protective services. (F)	.6	98.7	.6	2.00(.113)
3)Most sexual abuse of children involves physical force. (F)	3.8	86.8	9.4	2.06(.36)
4)Children who have been abused usually tell someone soon after the abuse (F)	.6	91.2	8.2	2.08(.288)
5)Professionals who report a case of suspected child abuse can be sued if the case is not substantiated in court. (F)	.6	96.2	3.2	2.03(.194)
6)Bruises that circumscribe the neck are usually associated with accidental trauma. (F)	4.4	91.2	4.4	2.00(.298)
8)In most cases, children who are sexually abused are by strangers. (F)	0	99.4	.6	2.01(.08)
9)Most sexual abuse of children includes intercourse(F)	2.5	91.7	5.7	2.03(.287)
13)Child abuse and neglect rarely occur among middle and high social economic class. (F)	1.3	98.1	.6	1.99(.138)

Note: Scores for each item ranged from 1(Agree), 2(disagree), & 3(Not sure).

As can be seen in Table 8, the majority of school nurses appropriately disagreed with these statements, indicating the sample had appropriate knowledge of child abuse and the reporting law.

Table 9

*Frequency Distribution scores for **Positively** Stated Questions Knowledge of Child Abuse and the Reporting Law*

Item	%Agree	% Disagree	%Not sure	M(SD)
1)Nurses are mandated by law to report Suspected child abuse(T)	100	0	0	1.00(0)
7)In most cases of child abuse and neglect children are not removed from their parents' home. (T)	57.6	17.7	24.7	1.67(.848)
10)Many runaway children and adolescents have been abused before running away(T)	74.7	10.8	14.7	1.40(.731)
11)A sexually abused child may have a normal physical examination (T)	88.0	3.8	8.2	1.20(.573)
12)Failure on the part of a health professional to report suspected child abuse or neglect can result in paying a fine. (T)	51.9	19.6	28.5	1.77(.868)

Note: Scores for each item ranged from 1(Agree), 2(disagree), & 3(Not sure)

While 100% of nurses correctly agreed that nurses are mandated by law to report suspected child maltreatment, responses to the other positively stated questions had mixed results. For example, only 57.6% of participants correctly agreed with the statement that "in most cases of child abuse and neglect, children are not removed from their home," and only 51.9% know that "failure on the part of the health professional to report can result in paying a fine." A higher percentage (88%) knew that a sexually abused child may have a normal physical exam," and 74.7% correctly agreed that "many runaway children have been abused before running away."

Attitudes

Nurses' Attitudes toward reporting child abuse and discipline play an important role in the decision-making process (Feng & Levine.2005). Scores related to participants Attitudes regarding childbearing beliefs and discipline, punishment culpability of offenders or victims of child abuse, and professional responsibility results are listed in table 10.

Childrearing Belief and Discipline

Participants consistently rated items about childrearing belief and discipline with strongly disagree: For example, for the statement 'It is Ok for the parent to slap their children when they talk back" 53.4% responded strongly disagree, with an overall mean of 1.84. In response to "corporal punishment is an effective way to educate children" 63.2% answered strongly disagree (M =1.69), and "parents who spare the rod will spoil the child" responded 54.2% strongly disagree (M = 1.96). However, for several questions regarding discipline, participants were not as definitive in their responses. For the statement "I intend to use physical punishment with my children when needed," 42% responded strongly disagree, 13% were neutral, and 22% responded somewhat disagree, with a Mean of 2.33. For "I don't consider physical punishment as child abuse," about 25% indicated they either agreed or strongly agreed, while about 55% either disagreed or strongly disagreed (M=2.41), and for "Parents have the absolute right to decide the ways they discipline their children," while approximately 56% disagreed, more than a fourth (28%) either agreed or strongly agreed to this statement (M=2.5).

Punishment and Culpability of offenders or victims of child abuse

Attitudes toward abusive parents were not conclusive in their responses. For example, for the statement "Abusive parents should lose the rights to raise their children" 46% responded they strongly agreed or agreed, while 30% responded they disagree or strongly disagreed (M=3.25). In response to "severe punishment of child abusers would help stop the abuse of children" just over 50% disagreed or strongly disagreed, while 31% responded they agreed or strongly agreed (M=2.73).

Table 10

Cumulative Item Scores for the School Nurses Attitudes

Item	%Strongly Disagree	% Somewhat Disagree	%Neutral	% Somewhat Agree	% Strongly Agree	M(SD)
Childrearing belief and discipline						
1)It is OK for parents to slap their children who talk back	53.55	20.65	16.77	6.45	2.58	1.84(1.08)
2)Corporal punishment is an effective way to educate children	63.23	16.13	11.61	7.10	1.94	1.69(1.06)
3)I intent to use/have used physical punishment with my children when needed	42.21	16.23	13.64	22.73	5.19	2.33(1.37)
4)I don't consider physical punishment as child abuse	33.12	21.43	20.78	20.13	4.55	2.41(1.28)
5)Parents who spare the rod will spoil the child	54.19	12.90	18.06	12.26	2.58	1.96(1.21)
6) Parents have the absolute right to decide the ways they Discipline their children	29.03	27.10	15.48	21.94	6.34	2.5(1.29)
Punishment and culpability of offenders or victims of child maltreatment						
1)Abusive parents should lose the right to raise their children	3.23	27.74	22.58	33.55	12.90	3.25(1.09)
2)Severe punishment of child abusers would help stop abuse of children	18.06	34.19	16.13	20.65	10.97	2.73(1.29)
3)Each case of abuse should be reported to the authorities	1.94	0.65	1.29	13.55	82.58	4.75(.695)
4)People who abuse children should be prosecuted as criminals	1.94	8.39	10.32	37.42	41.94	4.09(1.014)
5)Reports should not be made if there is only one incident of child abuse	74.68	18.83	1.95	0.65	3.90	1.4(.883)
Professional responsibility						
1)Nurses should advocate for abused children	0.65	0	0	5.16	94.19	4.92(.383)
2)In my practice, I intend to screen for child abuse	0.65	0.65	12.26	28.39	58.06	4.44(.777)
3)In my practice, I don't want to ask parents about child abuse	26.45	22.10	23.23	19.35	3.87	2.47(1.18)
4)Nurses should always report child abuse case	0.65	0	0.65	7.14	91.56	4.89(.432)
5)Reporting child abuse is troublesome to me	44.16	16.88	10.39	20.78	7.79	2.32(1.41)
6)Nurses have the responsibility to protect children from further abuse	1.30	0.65	3.25	14.94	79.87	4.72(.678)
7)It is very time-consuming to deal with child abuse cases	12.34	11.04	25.32	29.87	21.43	3.38(1.27)

Note: ** Scores for each item ranged from 1(strongly disagree) to 5(strongly agreed)

Participants agreed with the statements: “Each case of abuse should be reported to the authorities” 96% agreed or strongly agreed (*M*=4.75), and the responses for “people who abuse children should be prosecuted as criminals,” were 79% agreed or strongly agreed, with less than 9% stated they disagreed (*M*=4.09). The last question in this section stated “Reports should not be made if there is only one incident of child abuse” just over 93% strongly disagreed or disagreed (*M*=1.4)

Professional Responsibility

Attitudes regarding professional for reporting child maltreatment were diverse. Four of the statements in this section were presented positively and three of the statements were presented in a negative manner. For the positively posed questions, overall participants indicated a high percentage of agreement. For example, 99% either agreed or strongly agreed with the statement “Nurses’ should advocate for abused children” (*M*= 4.92). For the statement “nurses should always report child abuse cases” 98% indicated Strongly Agree or agreed (*M*=4.89), and for “nurses have the responsibility to protect children from further abuse” 95% stated they strongly agreed or agreed (*M*=4.72). Several questions were asked about actions in their practice with different responses. The statement “in my practice, I intend to screen for child abuse” the responses were 87% agreed or strongly agreed (*M*=4.44), while “In my practice, I don’t want to ask a parent about child abuse “48% responded disagree or strongly disagree and 23% responded agree or strongly agree (*M*= 2.47). Questions that were not conclusive were “Reporting child abuse is troublesome to me” participants responded that 61% disagree or strongly disagree and 29% agreed or strongly agreed. Additionally, the statement “It is time consuming to deal with child abuse cases,” 51% agreed or strongly agreed and 23% disagreed or strongly disagreed

Specific Aim 2

To determine significant differences in rural vs. non-rural school nurses' Knowledge scores, Attitudes, Subjective Norms, and Perceived Behavioral Control toward the intent to report child maltreatment.

Significant differences between rural vs non-rural school nurses' perceived factors that influence reporting of child abuse were analyzed using a *t*-test. The number of survey results between the groups was unequal; thus, a *t*-test could not be run using individual survey responses. Instead, the individual survey responses were grouped by their zip codes into rural and non-rural, and the mean scores were calculated for each variable (knowledge, attitudes, subjective norms, and perceived behavioral control scores), within the group of rural or non-rural. The independent sample *t*-tests were analyzed for differences between the mean groups.

The independent samples *t*-test was conducted between each of the variables (Perceived Behavioral Control, Subjective Norms, Knowledge of child abuse and the reporting law, and attitudes) and the Intent to report to determine whether there is a difference in Non-Rural & Rural School Nurses'. As can be seen in Table 11, there were no significant differences between rural and non-rural school nurse participants for any of the subscale. With a *p* value of .05 for significance, none of the variables approached it.

Table 11

Cumulative Independent Sample t-test; Rural vs. Non-Rural

Item	Rural *M*(SD)	Non-Rural *M*(SD)	*t* (df)	*p**
Perceived Behavioral Control Mean	3.07(.389)	2.98(.433)	1.124(149)	.263
Subjective Norms Mean	4.77(.660)	4.46(1.13)	1.452(149)	.149
Knowledge of child abuse & the reporting law - mean	1.78(.146)	1.78(.160)	.077(151)	.939
Attitude – childrearing belief & discipline mean	2.40 (1.146)	2.06(.866)	1.79(151)	.076
Attitude – punishment & culpability mean	3.37(.533)	3.22(.640)	1.247(150)	.214
Attitude – Professional responsibility mean	3.95(.466)	3.86(.412)	1.122(150)	.264

Note: *Denotes two-tail

The higher score in the category of Knowledge of child abuse and the reporting law indicated that the nurses had a high level of knowledge. Knowledge were evaluated on 13 items, with the option of 1- Agree, 2-Disagree, and 3-Not sure. The range for the sums of these scores were 13-39, as noted in Table 12. The scores were 36 (rural) & 35 (non-rural), & no significant differences between the means were found (p= .981). The scores were high indicating that the school nurses had a high level of Knowledge about child maltreatment and the reporting law in both groups.

Perceived Behavioral Control, Subjective norms, and Attitude were scored based on 1= strongly disagree to 5= strongly agree. The mean scores of this sum calculations are reflected in Table 12. Perceived Behavioral Control had eight items and were scored for a range of 8-40. Higher scores indicate the nurses perceived they possessed more control over reporting behavior (Feng & Levine, 2005). The scores of 27 (rural) and 26 (non-rural) indicate that the school nurses were scored in the mid-range about how they perceived they had control of reporting, and

there are no significant differences between the two groups (p=.383).

The higher scores in Attitude indicate negative attitude toward child physical discipline, lower tolerance towards the perpetrators, and positive attitude in the responsibility of reporting (Feng & Levine, 2005). Attitudes Regarding Childrearing Belief and Discipline contained six items for a scoring range of 6-30. The between the two groups were not significant (p= .069). The scores of the groups were 14 (rural) and 12 (non-rural) reflected the median of the range, thus indicating there was not a strong negative attitude toward child physical discipline. Attitudes regarding punishment and culpability of offenders or victims was not significant for a difference between the means (p=.193). This section of Attitudes contained 5 items for a sum range of 5-25. The scores were 16 (rural) and 16 (non-rural), slightly above the medians indicating that school nurses had a lower tolerance toward perpetrators. Attitudes regarding professional responsibility contained seven items for a range of 7-35. There was no significance between the means (p=.829), however the scores were 27 (rural) and 27 (non-rural) indicating an increase attitude towards the responsibility of reporting.

Subjective Norms had two items with a range of 2-10. The higher score indicated that important others had a greater influence on the school nurses. The differences between the two groups were significant (p=.048), thus indicating there was a difference in the responses. Rural score was 9.5 and the non-Rural score was 8.9. Indicating that Rural school nurses perceived those important others had an increase influence on the school nurses' intent to report compared to non-Rural school nurses.

Table 12

TPB Variables
Means of Sum Totals: Rural vs non-Rural

	Rural Score mean (SD)	Non-rural Score mean (SD)	*p*
Perceived Behavioral Control	27.00 (4.47)	26.06 (5.40)	.393
Subjective Norms	9.53 (1.32)	8.91 (2.26)	.048
Knowledge of child abuse and the reporting law	36.38 (2.61)	35.82 (3.11)	.981
Attitude- childrearing belief & discipline	14.25 (6.97)	12.23 (5.12)	.069
Attitude- Punishment & culpability	16.84 (2.66)	16.04 (3.18)	.193
Attitude – Professional responsibility	27.16 (3.80)	26.97 (4.56)	.829

Specific Aim 3

To determine the relationships among school nurses' demographics, Knowledge, Attitudes, Subjective Norms, and Perceived Behavioral Control toward the Intent to report child maltreatment.

Demographics

To assess the linear relationship between demographics, Subjective Norms, Perceived Behavioral Control of the Intent to report were determined by calculating Pearson's correlations. The cases presented depicted the four types of abuse: physical, sexual, psychological, and neglect. Each form of abuse was represented by two cases, one severe, and one less severe (Feng & Levine, 2005). In each case the participant was asked to respond to: "How likely would you be to report this case," and given the option of a Likert scale 1-5. The overall intent to report mean was determined by averaging the intent to report from each of the eight cases.

The demographic variables of the highest degree of nursing, age of the school nurse, and years of experience as a school nurse were correlated to the intent to report child maltreatment were analyzed using the Pearson's Correlation. The results are displayed in tables 13, 14, & 15.

The only positive correlation among the demographic factors and intent to report was the Associates degree r (154) = (.16), p = (.046).

Table 13

Relationships Among the Nursing Degree Options and Intent to Report Child Maltreatment

Degree	M	SD	*r*	*p**
Diploma	.22	1.52	.10	.216
Associate	2.54	7.05	.16	.046
Bachelors	18.83	16.39	-.131	.102
Masters	12.41	19.84	.015	.853
Doctorate	.71	6.2	-.059	.463

Note: *Denotes correlation is significant at .05 (2-tailed)

Table 14

Relationships Among Age and the Intent to Report Child Maltreatment

Age Range	M	SD	*r*	*p**
20-29	.21	1.50	.115	.154
30-39	2.09	6.47	-.068	.398
40-49	7.73	14.02	-.016	.841
50-59	12.81	20.05	-.022	.789
>60	19.84	26.49	.045	.591

Note: *Denotes correlation is significant at .05 (2-tailed)

Table 15

Relationships Among Years Practiced as a School Nurse and the Intent to Report Child Maltreatment

Years range	M	SD	*r*	*p**
<1	1.74	4.03	-.05	.534
1-5	5.29	9.43	-.031	.701
6-10	.835	5.20	-.032	.690
>10	25.06	21.85	.062	.441

Note: *Denotes correlation is significant at .05 (2-tailed)

The personal reflection questions included “have you ever filed a report of suspected child abuse”, and “do you personally know anyone who has been abused as a child”. These

questions were answered yes or no. The Pearson's correlation for filing suspected child abuse and the variables of knowledge, subjective norms, perceived behavioral control, and attitudes toward reporting are reflected in table 16. The Pearson's correlation for "have you ever filed a report of suspected child abuse" (89% yes, 11% no) and the variables of Knowledge about child abuse and the reporting law are positively moderately significant at [r = .331, p = <.001, n=141], and Perceived Behavioral Control is weak significant correlation [r = -.184, p = .029, n=141]. Thus, the more Knowledge of child maltreatment that school nurses had and the more Perceived Behavioral Control they had, the more likely they were to have previously filed a report child maltreatment. There were no significant correlations between "do you personally know anyone who has been abused as a child" and the variables as reflected in table 17.

Table 16

Relationships Among "In your work, have you ever filed a report of suspected child abuse" and the Variables Knowledge, Subjective Norms, Perceived Behavioral Control and Attitude Toward Reporting

	r	*p*
Knowledge -mean	.331	<.001*
Subjective norms-mean	.045	.600
Perceived behavioral control-Mean	-.184	.029**
Attitude- childrearing belief & Discipline – mean	-.056	.508
Attitude – punishment & culpability Of offenders-mean	.033	.702
Attitude – professional Responsibility-mean	.017	.842

Notes: * Denotes Correlation is significant at the .01 level (2-tailed), ** Denotes correlation is significant at the .05 level (2-tailed)

Table 17

Relationships Among- "Do you personally know anyone who has been abused as a child" and the Variables Knowledge, Subjective Norms, Perceived Behavioral Control and Attitude Toward Reporting

	r	*p*
Knowledge -mean	.103	.226
Subjective norms-mean	-.037	.663
Perceived behavioral control-Mean	-.084	.321
Attitude- childrearing belief & Discipline – mean	-.136	.109
Attitude – punishment & culpability Of offenders-mean	.035	.680
Attitude – professional Responsibility-mean	.087	.304

The variables of Subjective Norms & Perceived Behavioral Control were analyzed using the Pearson's Correlation for correlation to the intent to report child maltreatment (table 18).

Subjective Norms

Subjective Norms (nurses' perception of social pressure to report or not) are comprised of two items, each analyzed using The Pearson's correlation. The Pearson's correlation coefficient between first Subjective Norm ("Most people who are important to me think I should report suspected child abuse") and the Intent to report there was a medium negative correlation [r = -.41, p= .614, n=154]. The Pearson's correlation coefficient between the second Subjective Norm ("Most people whose opinion I respect think I should report suspected child abuse") and the Intent to report there was a large negative correlation [r = -.65, p= .159, n=154]. Thus, school nurses did not consider the social pressure of others when they encounter child maltreatment and their Intent to report. Although the correlations were moderate to strong, they were not statistically significant, therefore Subjective Norms and the Intent to report do not influence each other.

Perceived Behavioral Control

The school nurses Perceived Behavioral Control over reporting child maltreatment was analyzed by the mean of the individual responses of each item and the mean of the Intent to report child maltreatment using the Pearson's correlation. The Pearson's correlation coefficient between Perceived Behavioral Control and the intent to report found there were no linear relationship in all but three items (although even in these items the correlations are quite small).

The Pearson's correlation coefficient between the item: "As a nurse, I don't feel I can do anything about child abuse" and the Intent to report there was a small negative correlation [r = -.115, p= .01, n=151]. The Pearson's correlation coefficient between the item: "Many resources are available for me to report child abuse" and the Intent to report indicated there was a small positive correlation [r = .155, p= .058, n=151]. The Pearson's correlation coefficient between the item:" I feel my professional training does not meet the clinical needs for child abuse" and the intent to report indicated there was a small negative correlation [r = -.125, p= .125, n=151]. Thus, as nurse perceived their inability to do anything about child abuse to be high, their Intent to report was low. Similarly, if nurses agreed their training had not met the clinical needs for child abuse, their intent to report was lower. Further, if they agreed they had the resources necessary to report, their intent to report was also higher.

Table 18

Relationships Among Subjective Norms & Perceived Behavioral Control vs Intent to Report Child Maltreatment

Item	n	M	SD	*r*	*p**
Subjective Norms					
1.Most people who are important to me think I should report suspected child abuse	154	4.51	1.074	-.41	.614
2. Most people whose opinion I respect think I should report suspected child abuse	154	4.48	1.110	-.65	.426
*Perceived Behavioral Control***					
1. I have control over reporting suspected child abuse	151	4.25	1.052	.017	.833
2. As a nurse, I don't feel I can do anything about child abuse	151	1.56	.780	-.115	.159
3. It is mostly up to me whether or not I report suspected child abuse	151	3.09	1.722	-.008	.925
4. I feel I do not get support from physicians when I suspect child abuse	151	2.68	.948	-.011	.897
5.I know how to report child abuse	151	4.70	.748	.095	.245
6. Many resources are available for me to report child abuse	151	4.11	1.074	.155	.058
7.I feel my professional training does not meet the clinical needs for child abuse	151	2.38	1.295	-.125	.125
8. I have higher priorities in clinical than child abuse. This affects my decision to become involved or not in reporting child abuse	151	1.26	.718	.056	.497

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

Case Scenarios

Eight briefly written cases were presented in the survey, each describing a different scenario involving child maltreatment. Following each case presentation, the same questions were asked. For Knowledge: 1) Based on the information, how serious is this incident (K1), 2) In your own professional judgement, does this constitute abuse (K2), and 3) In your view, would you be required by law to report this incident (K3). For Attitude: 1) All things considered, what overall impact would a child abuse report be likely to have on this child (A1), and 2) All things considered, what overall impact would a child abuse report be likely to have on the rest of the family(A2). To measure Intended reporting behavior asks, participants were asked, "How likely would you be to report this case" (I). Mean scores for each of the eight case scenarios are presented in Table 19.

Table 19

Descriptive statistics for nurses' intention of reporting based on severity and type of child maltreatment

Case scenario	M	SD
1.Severe neglect	4.67	.694
2.Less severe child neglect	4.08	1.18
3.Severe Child sexual abuse	5.00	.000
4.Less severe child sexual abuse	3.69	1.229
5.Severed child physical abuse	4.82	.527
6.Less severe child physical abuse	5.00	.000
7.Severe child emotional abuse	2.92	1.323
8.Less severe child emotional abuse	4.90	.441

Note: range 1-5

For each of the eight cases a Pearson's correlation coefficient was conducted to assess the linear relationship between a) Knowledge (3 aspects) of child maltreatment and the Intended reporting behavior, and b) the reporting Attitude (2 aspects) and the Intended reporting behavior. The frequencies and means are provided in Table 20 and the results of the correlations are in Table 21.

The first case scenario states that the parents regularly left their 9-year-old child alone inside the house after dark. Often, they did not return until midnight. On one occasion, the child started a small fire. Pearson's correlation was computed, and based on the results, the Knowledge question- "Would you be required by law to report the relationship to the intent to report the relationship?" was positive, strong correlation, and statistically significant [r =.705, p <.001, n=155]. The relationship between "How serious is this incident?" and the intent is to report had a positive, moderate correlation and was statistically significant [r = .451, p <.001, n=155].

Table 20

Frequencies and Means for each Case Scenario and Questions

Case/question	Likert scale (percentage)					Mean
	1	2	3	4	5	
Case one-severe neglect						
K1	0	0	6.3	19	74.1	4.68
K2	1.9	6.3	20.9	24.7	44.9	4.06
K3	3.2	.6	4.4	14.6	75.9	4.06
A1	0	3.8	34.2	39.2	20.9	3.79
A2	3.2	14.8	34.2	32.9	14.9	3.41
I	0	2.5	5.1	15.2	75.9	4.67
Case two-less severe neglect						
K1	0	1.3	7.1	30.8	30.9	4.51
K2	1.9	8.9	29.7	27.2	31	3.78
K3	5.1	7.0	20.3	15.8	50.6	4.01
A1	1.9	7.0	22.8	26.6	40.5	3.98
A2	4.4	19.0	28.5	25.3	21.5	3.41
I	3.2	10.1	15.2	17.1	53.2	4.08
Case three-severe sexual abuse						
K1	0	0	0	1.3	97.5	4.99
K2	0	0	0	.6	98.1	4.99
K3	0	0	0	0	100	5.00
A1	1.9	.6	5.8	13.5	78.2	4.65
A2	14.7	9.0	21.2	10.9	44.2	3.61
I	0	0	0	0	100	5.00
Case four-less severe sexual abuse						
K1	.6	3.9	23.4	39.4	32.5	3.99
K2	3.2	8.4	24	35.1	29.2	3.79
K3	14.3	10.4	24.7	22.7	27.9	3.40
A1	2.6	11.7	30.5	29.5	26	3.64
A2	4.5	20.1	46.1	17.5	11.7	3.12
I	7.8	6.5	29.2	22.1	34.4	3.69
Case five-severe physical abuse						
K1	0	.7	2.6	31.4	65.4	4.61
K2	0	.7	4.6	13.1	81.7	4.75
K3	0	.7	3.3	9.2	86.9	4.82
A1	3.3	4.6	15	30.1	47.1	4.13
A2	4.6	16.3	34.6	16.3	28.1	3.47
I	0	.7	2.6	9.8	86.9	4.82
Case six-less severe physical abuse						
K1	0	0	0	0	100	5.00
K2	0	0	0	0	100	5.00
K3	0	0	0	0	100	5.00
A1	1.3	1.3	3.9	5.9	87.6	4.77
A2	8.5	7.8	9.8	22.2	51.6	4.01
I	0	0	0	0	100	5.00
Case seven-severe emotional abuse						
K1	1.9	10.1	35.4	36.1	13.3	3.50
K2	5.9	17	30.7	30.7	15.7	3.33
K3	30.7	13.1	24.2	20.3	11.8	2.69
A1	4.6	11.1	49.7	21.6	13.1	3.27
A2	4.6	19.6	52.3	11.1	12.4	3.07
I	20.9	14.4	31.4	19	14.4	2.92
Case eight-less severe emotional abuse						
K1	0	0	1.3	5.2	93.5	4.92
K2	0	.7	2.6	4.6	92.2	4.88
K3	.7	.7	9.2	19	70.6	4.58
A2	8.6	7.9	28.5	14.6	40.4	3.70
I	0	1.3	1.3	3.3	94.1	4.90

Table 21

Pearson's correlation: Individual cases Knowledge & Attitudes vs how likely you would be to report this case?

Item	Pearson's correlation per case 1	2	3	4	5	6	7	8
Based on the information, how serious is this incident?*	.451	.489	[c]	.619	.642	[c]	.669	.655
In your own professional judgement, does this incident constitute abuse? *	.391	.676	[c]	.761	.819	[c]	.762	.849
In your view, would you be required by law to report this incident? *	.705	.901	[c]	.820	.874	[c]	.808	.377
All things considered, what overall impact would a child abuse report be likely to have on this child? **	.343	.584	[c]	.581	.425	[c]	.606	x
All things considered, what overall impact would a child abuse report be likely to have on the rest of the family? **	.129[a]	.390	[c]	.404	.227[a]	[c]	.420	.133[a]

Note: All of the correlations have p<.001 with the exception of [a] = <.05.

* Denotes a knowledge question, ** Denotes an attitude question

[c] Denotes unable to be computed- a variable was found to be a constant (M=5.0).

X Denotes not value available

The second case scenario describes that the parents ignored the fact that their 10-month-old child was obviously ill, crying constantly and not eating. When they finally brought the child to a hospital he was found to be seriously dehydrated. Pierson's correlation was computed, and based on the results there was a positive, strong correlation between "Would you be required to report by law?" and the intent to report and it was statistically significant [$r = .901$, $p < .001$, n=156]. Additionally, there was a positive, moderate correlations between "Does this incident constitute abuse?" [$r = .676$, $p < .001$, n=156], and the perceived overall impact a report would have on a child and the intent to report [$r = .584$, $p < .001$, n=156].

The third case scenario stated that, on occasion, the parent and the child engaged in sexual intercourse. The parent told the child that it is the lesson that parents teach their children to become adults. All the participants scored 5 (would report). Thus, the Pearson's correlation coefficient indicates there is no linear relationship.

The fourth case scenario reported that a couple has only one child, an eight-year-old girl. They keep her hair cut short like a boy's and frequently dress her in boy's clothing. They keep telling their girl they really wanted to have a boy instead of a girl. The Pearson's correlation was computed, and based on the results, the three questions about the nurses' Knowledge about child abuse and the law and the relationship to the Intent to report were positive, strong correlations, and statistically significant: "How serious is this incident?" [$r = .619$, $p < .001$, n=154], "Does this incident constitute abuse?" [$r = .761$, $p < .001$, n=154], and "Would you be required by law to report this incident?" [$r = .820$, $p < .001$, n =154].

The fifth case scenario states that a nine-year-old boy comes to school. The teacher notices that there are red marks on his palms and legs. When asked, he tells the teacher that yesterday he went over to a friend's house to play instead of going home to do his homework. When his father found out, he hit him on the palms and legs repeatedly with a cane. He says that his father does this whenever he does not do his homework. The Pearson's correlation was computed, and based on the results, the three questions about the nurses' Knowledge about child abuse and the law and the relationship to the Intent to report were all positive, strong correlations, and statistically significant: "How serious is this incident?" [$r = .642$, $p < .001$, n=154], "Does this incident constitute abuse?" [$r = .819$, $p < .001$, n=154], and "Would you be required by law to report this incident?" [$r = .874$, $p < .001$, n=154].

The sixth case scenario describes a 20-year-old woman, five months pregnant, who brought her 19-month-old child to the emergency room with facial bruises and swelling. X-rays revealed old, healing rib fractures. The mother reported that the injuries were the result of beating by the child's father, who had been angered by her crying. All the participants scored 5 (Intent to report) and all three knowledge questions, thus the Pearson's correlation coefficient indicates there is no linear relationship.

The seventh case scenario states the parents often compare the school performance of the child to others, and make the child feel inferior. The parents ridicule and criticize the child whenever the child does not do well in the exams. The Pearson's correlation was computed, based on the results the three questions about the nurse's Knowledge of child abuse and the law and the relationship to the Intent to report were all positive, strong correlations and statistically significant: "How serious is this incident?" [$r = .669$, $p < .001$, n=154], "Does this incident constitute abuse?" [$r = .762$, $p < .001$, n=154], and "Would you be required by law to report this incident?" [$r = .808$, $p < .001$, n=154]. In addition, the Attitude question, "What overall impact would a report likely have on a child?" and the relationship to the intent to report was a positive strong correlation and statistically significant [$r = .606$, $p < .001$, n=154].

The eighth case presents a scenario where, the parents repeatedly showed the child pornographic pictures. The first Attitude question did not make the survey due to a technical issue, therefore there were no statistics for this item. The Pearson's correlation was computed, based on the results the two questions about the nurse's Knowledge of child abuse and the law and the relationship to the Intent to report were positive, strong correlations and statistically significant: based on the results "How serious is this incident?" [$r = .655$, $p < .001$, n=151], and "Does this incident constitute abuse?" [$r = .849$, $p < .001$, n=151].

Hypothesis H1

Subjective Norms and Perceived Behavioral Control factors will significantly predict school nurses' Intent to report child maltreatment.

The Intent to report calculation was determined by averaging the Intent to report from each of the eight cases. Calculated means for the variable's Subjective Norms and Perceived Behavioral Control were used for the regression. Analysis was then performed in SPSS using the linear regression model, entering the variables: Intent to report (dependent variable), Subjective Norm (predictor), and Perceived Behavioral Control (predictor)

The analysis reflected no linear relationship between the variables. The results indicated there is minimal difference between the Mean Squares (table 23).

A simple linear regression was also used to test if Subjective Norms significantly predicted the school nurse's intent to report child maltreatment. The overall regression was not statistically significant [R^2= .004, F (1, 152) = .293, p= 746]. It was found that Subjective Norms did not significantly predict the school nurses' intent to report child maltreatment [β=-.062, p= .448], see table 22.

A simple linear regression was used to test if Perceived Behavioral Control significantly predict the school nurse's intent to report child maltreatment. The overall regression was not statistically significant [R^2= .004, F (1, 152) = .293, p= .746]. It was found that Perceived Behavioral Control did not significantly predict the school nurses' intent to report child maltreatment [β= .017, p= .835], see table 22. Thus, the null hypothesis could not be rejected, and the results did not support the proposed study hypothesis.

Table 22

Regression Analysis: Subjective Norms & Perceived Behavioral Control to predict school nurses' intent to report child maltreatment.

Item						95% Cl for *B*	
	B	*SE B*	β	t	*p*	*LL*	*UL*
Subjective norms – mean	-.023	.030	-.062	-.760	.448	-.082	.036
Perceived Behavioral control- Mean	.016	.076	.017	.209	.835	-.134	.165

Table 23

Analysis of variance for a small data set

Source of Variation	Degrees of freedom	Sum of squares	Mean square	F	P
Regression	2	.090	.045	.293	.746
Residual	153	23.55	.154		
Total	155	23.64			

Findings in the context of the Theory of Planned Behavior Model

Applying the Theory of Planned Behavior Model proposed predicted that the variable Knowledge of Child abuse and the Reporting Law should influence the Attitude variable on the intent to report child maltreatment. The correlation results between the variables are found in table 24.

Table 24

Relationship Among Knowledge of Child Abuse and the Reporting Law and Attitudes on Child Abuse

Attitude Variable	*r*	*p*
Childrearing belief and discipline-mean	-.024	.760
Punishment and culpability of offenders or victims of child maltreatment-mean	-.073	.362
Professional responsibility	-.010	.904

The Pearson's correlation coefficient between the item: "Childrearing belief and discipline" and the knowledge of child abuse indicated there was a small negative correlation [r = -.024, p= .760, n= 151]. The Pearson's correlation coefficient between the item: "Punishment and culpability of offenders or victims of child maltreatment" and the knowledge of child abuse indicated there was a small negative correlation [r = -.073, p= .362, n= 151]. The Pearson's correlation coefficient between the item: "Punishment and culpability of offenders or victims of child maltreatment" and the knowledge of child abuse indicated there was a small negative correlation [r = -.010, p= .904, n=151]. Thus, none were found to be statistically significant

Application of the model also predicted that the demographic variables would influence the subjective norms variable on the intent to report child maltreatment. The Pearson's correlations as reflected in Table 20 show no statistically significant linear correlations between the demographic variables and Subjective Norms.

Table 25

Relationship among demographic variables and Subjective Norms (mean)

Variable	*r*	*p*
Age	.064	.426
Highest nursing degree	-.066	.407
Years practiced as a school nurse	-.055	.497
Years practices as a registered nurse	-.027	.734

Personal Reflection Questions

Personal reflection questions were asked at the end of the survey. Several the multiple-choice questions as well as open ended questions were asked. Results for the multiple-choice are shown in Table 26. The most common response for "How many hours does you estimate you received on child maltreatment during your nursing education?" was 1-2 hours (n=71; 45.22%). For the question "At what level do you feel your nursing education prepared you to deal with child maltreatment?" the largest percentage of nurses responded "minimal" (n=89; 55.91%), and only 25% felt it was "adequate". The largest response to "Have you ever received any continuing education about child maltreatment in your role as a school nurse?" was 77.36% for "Yes". A total of 80.85% of participants responded "yes" to "Do you personally know anyone who has been abused as a child?", and 88.65% responded "yes" to 'In your work, have you ever filed a report of suspected child abuse?" A total of 15.6% indicated "yes" to "Have there ever been times when you thought a child was being abused and did not report it? "With the most common reason being "feeling uncertain about the evidence" (n=28; 73.68%).

Table 26

Frequency Distribution for the personal reflection questions

Item	*n*	%
During your nursing education in school, how many hours of instruction, if any, do you estimate you received on child maltreatment	157	
(1)0	15	9.55
(2)1-2	71	45.22
(3)3-5	41	26.11
(4)6-10	16	10.19
(5)>10	14	8.92
At what level do you feel your nursing education prepared you to deal with cases of child maltreatment	159	
(1) Adequate	41	25.79
(2) Minimal	89	55.91
(3) Inadequate	29	18.24
Have you ever received any continuing education about Child maltreatment in your role as a School Nurse?	159	
(1) Yes	123	77.36
(2) No	36	22.64
Do you personally know anyone who has been abused as a child?	141	
(1) Yes	114	80.85
(2) No	27	19.15
In your work, have you ever filed a report of Suspected child abuse?	141	
(1) Yes	125	88.65
(2) No	16	11.35
Have there ever been times when you thought a child Was being abused but did not report it?	141	
(1) Yes	22	15.60
(2) No	119	84.40
If yes indicate the reasons why you did not report		
(1) Fear of reprisal	1	2.63
(2) Feeling uncertain about the evidence	28	73.68
(3) Fear of Litigation	0	0
(4) Lack of faith in the legal authority	6	15.79
(5) Fear of community pressure	2	2.63
(6) Personal relationship with family made it difficult	1	5.26

The final three questions were in the format of an open text boxes, allowing the participant to write their answers. Content analysis was conducted to identify common themes among the responses to each question. Table 27 reflects the responses to “Is there anything else you would like to state in relation to your role in child maltreatment?” The common themes from the written responses were lack of faith in the legal authority, feeling uncertain about the

evidence, need for further education, relationship with the family, and child advocacy & reporting.

Table 27

Summary table: Is there anything else you would like to state in relation to your role in child maltreatment

	Example Quote
Lack of faith in legal authority	"The protective services are understaffed and cannot keep up with all the cases reported. We have students that receiver brief intervention and then end up having issues again" "I have filed reports and watched kids remain in homes then abuse more for the report" "The county does not usually open cases for emotional and medical neglect for most reports" "Cases have to extreme for any action to be taken, children have nearly no rights" 'So much depends on who answers the phone at child protective ser ices. Very inconsistent" 'In our state CPS does not keep an active record of reports. It is frustrating when what you report does not rise to the level of needing 'investigation'"
Feeling uncertain about the evidence	"child maltreatment cases are not always clear cut. "Verbal abuse is hard to determine the true effects on an individual child"
Need for further education	"I feed undereducated on the subject" "Yearly training required" "Difference between abuse and neglect is not clear" "More training on the gray areas like: neglect, severe criticism punishment, gender suppression is needed" "Would love to have more training regarding how reports are handled"
Relationship with family	"reporting can create lack of trust between nurse and family or nurse and child" "I seek the truth and work with the families" "I believe in trying to make a connection with the family in low income and neglect cases and offer assistance/education"
Advocacy & reporting	"It is a high priority to me to report abuse and maltreatment" "Each case must be taken individually& circumstances should be examined. In a school nurse setting, I believe in multidisciplinary approach in deciding to report a case or not" "The school nurse can be an advocate for students and families" "I am a mandatory report and I do so"

Table 28 reflects the themes among the responses to 'What is your biggest barrier in reporting child maltreatment". The common themes were causing more harm than good, lack of

evidence, lack of confidence in child protective services, none, and issues directly related to the role of the school nurse. It should be noted that many participants wrote in none or no barriers.

Table 28

Summary table: What is your biggest barrier to reporting child maltreatment?

	Example quote
Causing more harm than good	"Doing more damage than good if the child is not removed" "I am very fearful that a parent would be found guilty of child abuse when, in fact, they did not commit abuse" "I have also seen how the justice system can cause more harm than good, especially in a small community. I have also seen how reporting did no good due to there being a lack of foster homes to take in endangered children" "Concern that the child will be further mistreated before effective resource can intervene"
Lack of evidence	"Lack of evidence, no return calls when reports are made" "It is difficult to report cases of emotional and verbal abuse because the parameter is so subjective" "Misreading cues/signs" "Lack of evidence and knowledge; 'parent said, child said' "Not knowing what normal bruises, wounds, scars look like compared to abuse wounds" "Lack of information"
Lack of confidence in child protective services	"Lack of follow through by DHS" "The hotline is so busy that you often have to wait hours for a call back to make the report" "Lack of action by child protective services in most cases" "The lack of resources for Child services to conduct their investigations and provide education/treatment for their clients" "Lack of follow through by DHS" "Trusting the system"
Workplace issues	"Time constraints" "Lack of administrative report" "Other coworkers/supervisor not agreeing/supporting decision" "Covering multiple buildings" "District nurse so not in the building developing close relationships with students"

Table 29 reflects the responses to 'What makes it easier for you to report child maltreatment'. The common themes are ease in reporting, actual physical evidence, and school nurse support from administration and coworkers.

Table 29

Summary table: What makes it easier for you to report child maltreatment?

	Example quote
Ease in reporting	” online reporting” “Anonymity” “Ability to report at the time I place the call to the hotline” “Ease in paperwork”
Evidence	“Physical evidence” “Strong evidence”
Child advocacy	“knowing you are helping the child” “Knowing that I could potentially be saving a child’s life”
Support	“Support from administration” “Knowing there is no retaliation” “Colleague support”

Summary

This chapter contains the analysis results to explore what factors and influences create barriers and facilitators that impact school nurses’ intent to report child maltreatment. The target population for this study was school nurses within the United States. The sample of school nurses were those who were members of the Nurses Association of School Nurses (NASN). The inclusion criteria for the study were 1) licensed as Registered Nurse, 2) employment as a school nurse, and 3) membership in the National Association of School Nurses. Participant responses were186 members who opened the survey from a random email of 2000 NASN members; however, only 160 participants entered the survey, and 153 completed the entire survey.

The CARIS survey tool was used to gain school nurses’ perceptions on reporting child maltreatment. The variables analyzed were Knowledge of child abuse reporting laws, Attitudes about child maltreatment, Subjective Norms about social pressures, and Perceived Behavioral Control over the act of reporting child maltreatment consistent with the Theory of Planned Behavior (Ajzen, 1991). The survey consisted of a total of 61 questions.

The demographic responses, unfortunately, led to an unequal number of rural vs. non-rural school nurses based on their zip codes. However, in total, 44 states were represented. The participants were primarily female, over 40 years old, with a BSN degree, who worked as school nurses for more than ten years, and the majority worked in an Elementary school setting.

School nurses responded appropriately to questions indicating their increased Knowledge of child abuse, and their understanding of the reporting law. Attitudes toward the different aspects of child maltreatment indicated a strong sense of professional responsibility to report child maltreatment. However, Attitude scores did not indicate a strong influence in child discipline and punishment to make a conclusive statement.

There were no significant differences between rural and non-rural school nurses' aggregate mean scores in relation to their Knowledge, Attitudes, Subjective Norms, and Perceived Behavioral Control toward the Intent to report child maltreatment. The study by Feng & Levine (2005) states that Subjective Norm refers to the nurses' perceptions of social pressure to report child maltreatment. The individual scores for Subjective Norms were totaled, the higher score indicate an increased perception that others have a greater influence on the school nurse to report child maltreatment. The means of the sum totals for Subjective Norms for rural vs. non-rural were found to be statistically significant. The rural scores were found to be higher than the non-rural scores, indicating that rural school nurses are more influence by others on their intent to report child maltreatment.

Knowledge was the primary predictor of the intent to report child maltreatment with the case scenarios. However, correlations of Attitudes and Intent to report were varied depending on the perceived severity of the case presented. The severe cases had a higher Knowledge score, than the less severe cases. The exception was the less severe physical abuse case, that also

scored high. This is consistent with the comments by school nurses' that they feel more confident to report when there are obvious signs of abuse.

A regression analysis was calculated to examine if Subjective Norms and Perceived Behavioral Control factor significantly predict school nurses' intent to report child maltreatment. No linear relationship was found. The results indicate that subjective norms and perceived behavioral control factors do not significantly predict the intent to report child maltreatment.

The next chapter, chapter five provides a discussion of the findings. Implications for nursing, as well as the limitations of the study are addressed.

Chapter 5

Summary of the Study

Child maltreatment is among many conditions (chronic and acute) that challenge the school nurse in caring for children. School nurses may encounter various types of child maltreatment, including physical, sexual, emotional, neglect, and trafficking. A major gap in the literature reflects that no studies have focused on the factors that influence school nurses' intent to report child maltreatment, and neither have any examined potential differences between rural and non-rural nurses in relation to these factors. No clear correlational relationship between influencing factors and the school nurses' intent to report child maltreatment has been established in the extant literature in the United States. The purpose of this study was to explore what factors and influences create barriers and facilitators that impact school nurses' child maltreatment reporting. The specific aims of this study were:

Specific Aim 1: to determine demographic (age, level of education, years of experience as a school nurse, location) frequencies of school nurses who work with child maltreatment. In addition, school nurses' knowledge scores and attitudes toward reporting of child maltreatment will be measured.

Specific Aim 2: to determine significant differences in rural vs. non-rural school nurses' knowledge scores, attitudes, subjective norms, and perceived behavioral control, toward the intent to child maltreatment.

Specific Aim 3: to determine the relationships among school nurses' demographics, knowledge, attitudes, subjective norms, and perceived behavioral control, toward the intent to child maltreatment.

Hypothesis: The Subjective Norms and Perceived Behavioral Control factors will significantly predict school nurses' intent to report child maltreatment.

This chapter presents a summary of the study and conclusions drawn from the data and describes the limitations, and interpretations of the implications for nursing research, practice, policy, and education.

Participants and Tool

The random sampling email distributed by NASN to 2000 members resulted in a total of 186 responses, a 9.6% response rate but not achieving a priori power analysis sample size of 239. The survey distribution was delayed and finally sent in May. The school year for many nurses ends in May or June. The response rate may have been higher there been opportunity to send the survey out earlier in the school year, thus providing additional time for school nurses to complete the survey. The demographic results of this study calculated that 56% of the school nurses who responded to the survey had over ten years in that position. Sending the survey late may have been perceived as a burden to less experienced school nurses in a rush at the end of the year. An additional factor contributing to poor response could be that the school nurse workforce study (2018) indicated that nationally, only 39.3% of schools employ a full-time school nurse (Willgerodt et al.,2018), and the majority (55.9%) covered more than one school. The survey distribution late in the year may not have reached the part-time school nurses in time for completion.

Additionally, the goal was to compare the responses of the rural school nurse and the non-rural school nurse. Unfortunately, the sample sizes were uneven: 23% rural and 77% non-rural. However, the rural responses were from 21 states across the country and not just one region, therefore the responses could reasonably reflect rural school nurses nationally.

The survey tool was replicated with permission from Dr. Feng and initially used with Taiwanese nurses. This tool has been validated, used, and revised by several other authors (Atencion et al., 2019; Ben Natan et al., 2021; Feng & Wu, 2008; Foster et al., 2017; Guo et al., 2019; Hye Young et al., 2021; Lee & Kim, 2018; Salami et al., 2020). The reliability of the survey result was completed using Cronbach's alpha; only the sections on Subjective norms and Attitudes of Childbearing Belief and Discipline were in the acceptable range. Only the demographics, including personal and professional, were changed to reflect the population; the remaining survey questions were not changed, but additional reflection questions were added at the end. Factor analysis and using individual item replacement did not change Cronbach's Alpha, or significance in correlation. This survey had not previously been used with just school nurses in the United States. Given the low reliability of most of the sections, further development, and testing of the tool for use with school nurses is warranted.

Sample Demographic and Characteristics

The demographics of the study participants were similar to the national School Nurse Workforce Study by NASN (Willgerodt et al., 2018). The majority were female, and BSN was the most common highest degree. The sample had a more significant percentage of older nurses than the overall school nurse workforce. In this study, 23% of school nurses were in their 40's, 30% were in their 50's, and 35% were over sixty. The school nurse workforce surveyed included 28% in their 40's, 34% in their 50's, and 14% over 60.

Types of schools the school nurse practiced were pre-K to various types of elementary schools (43%). According to the Child Maltreatment report, 2020 (2022), Sixty-three percent of child maltreatment victims are ages 2 to 13. Therefore, this representation of school nurses likely works with a large percentage of children at risk for maltreatment victims and has frontline

perspectives on the current situation these children encounter. Additionally, the survey participants were from 44 states, giving us a national perspective of the school nurse.

Knowledge

Knowledge in this survey was evaluated in several sections. The Knowledge of child abuse and the reporting law were 13 positively and negatively worded questions in the survey tool. The case scenarios had three questions about Knowledge and the intent to report the case. Additionally, there were three questions about the school nurse's child abuse education and open text boxes for responses. The responses to the 13 questions reflected appropriate Knowledge of child abuse and the reporting law. The responses to the case scenarios indicated that the school nurses had good Knowledge of child maltreatment reporting. However, the school nurses indicated they had limited education on child maltreatment and were minimally prepared to deal with cases of child maltreatment. The open text boxes indicate the need for specific education on the signs and symptoms of specific child maltreatment types and the online reporting tool.

The majority of school nurses appropriately disagreed with the negatively stated statements, indicating that overall, the sample had appropriate responses. One hundred percent of nurses agreed that they are mandated by law to report suspected child abuse. The four remaining questions of positively stated questions also indicated that a large percentage agreed with the statement. However, the responses to the statement "In most cases of child abuse and neglect, children are not removed from their parent's home" did not reflect a robust positive agreement but a wide variety of strongly agree to disagree strongly. This uneasy feeling toward child protection services responses to child maltreatment was reiterated in the open-ended question, "Is there anything else you would like to state in relation to your role in child maltreatment?" The participants identified a lack of faith that their reports of child maltreatment

would result in removal of the child from the home. Additionally, the participants expressed concern that parent were able to hide the abuse, leaving the child in the home to sustain further abuse after a report to child protective services is made. School nurses were knowledgeable about some aspects of child maltreatment but need further understanding in the child protective services process, and how they could impact change.

For the statement "Failure on the part of a health professional to report suspected child abuse or neglect can result in paying a fine," participants responded that 51.9% agreed, 19.6% disagreed, and 28.5% agreed. The school nurses understood that they are mandated reporters, but it is possible that they did not understand the complete law in their state and that they could be fined. In the United States, the law is defined differently per state. "Twenty States and the District of Columbia, Guam, the Northern Mariana Islands, and the Virgin Islands specify in the reporting laws the penalties for a failure to report" (Penalties for Failure to Report & False Reporting of Child Abuse and Neglect, 2019). This is another area for continuing education for each state.

Feng & Levine (2005) scored the knowledge section as a total score. The Knowledge section consisted of 13 statements, with the score options as 1= Agree, 2=Disagree, and 3=not sure. A high score in the category of Knowledge of Child Abuse and the reporting law indicates that the nurse had a high level of Knowledge of Child Abuse. This study found that 96% of school nurse answered the Knowledge of Child Abuse and the reporting law questions correctly, indicating that school nurses had a high level of Knowledge. This percent is higher compared to other studies with nurses. Feng & Levine (2005) found that 60% of nurses answered the questions correctly; Chen et al. (2015) 74%, Lee & Kim, (2018) 74.5%, Fraser et al. (2010) 72-90% of similar questions, and Ben Natan et al. (2012) 60%. The other studies were not with

school nurses specifically, so the findings may indicate that the school nurses in this study may possess a higher level of knowledge than nurses in other studies.

Bachmann & Bachmann (2018) found that knowledge and training had a positive impact in recognition and reporting. The study with pediatric healthcare providers found that education and training in adverse childhood experiences, social determinants of health-related toxic stress, and child maltreatment made a significant difference in the recognition of child maltreatment and their willingness to report it to child protective services. A large percentage of school nurses in the current study stated they had only 1-2 hours (45.5%) of undergraduate education in child maltreatment. Additionally, the majority (56%) of school nurses indicated their nursing education only minimally prepared them to deal with cases of child maltreatment. However, 77% stated they had received continuing education about child maltreatment during their role as school nurse. Many responses found in the open-ended question, "Is there anything else you would like to state in relation to your role in child maltreatment" indicated the need for further education. However, when evaluating the case scenarios, the school nurses scores appeared to indicate a high level of Knowledge about child abuse and the reporting law. Therefore, it is unclear exactly what types of education the school nurses felt they needed in relation to child maltreatment. This is an issue for further study, which could be elucidated through interviews or focus groups with school nurses.

Attitudes

Attitudes toward reporting child maltreatment and discipline play an essential role in the decision-making process in addition to Knowledge of child maltreatment and the reporting law. Childrearing belief and discipline statements were negatively worded, and most school nurses appropriately signified they disagreed with the statements. Thus, indicated the overall negative

attitude toward corporal punishment in the sample. The frequencies reflect a lack of clear pattern in responses to some of the statements. For example, “I do not consider physical punishment as child abuse” had a wide range of answers: Disagree (54.55%), Neutral (20%), and Agree (24.6%). “Parents have the absolute right to decide the ways they discipline their children” again had a range of answers: Disagree (56%), Neutral (15.5%), and Agree (28.3%). A study by Kitano et al. (2018) found that there was an association between childhood experiences with corporal punishment and undergraduate student’s acceptance of this as a parent strategy. A future study could explore the impact that childhood experiences have on health professional decisions in the area of child maltreatment reporting.

Attitudes toward the punishment of abusive parents again were not reflective of a definitive trend. Responses to the statement “Abusive parents should lose the right to raise their children” was split into Disagree (31%), Neutral (22.6%), and Agree (46.5%). Consistent with the Knowledge of the reporting law, 94% disagreed that reports should be made if there was only one incident.

The school nurses understood their professional responsibility. Almost all 99% said nurses should advocate for abused children and always report child abuse cases. Additionally, the school nurses understood their responsibility to protect children from further abuse (95% Agreed). “Reporting child abuse is troublesome to me” indicated conflict to some: 48% disagreed, 10% were neutral, and 28% agreed. Frustration in dealing with child protective services, difficulty in reporting, not knowing if the report went through or if there was any follow-up, and the outcome depended on who answers the phone were all concerns raised by participants.

In the current study, survey responses indicated that 66% of the school nurses had a negative attitude toward child physical discipline, 73% agreed that they had a lower tolerance toward perpetrators, and 76% had a more positive attitude toward reporting suspected child abuse. The results are consistent with other studies by Feng & Levine (2005) with Taiwanese nurses, and Fraser et al. (2010) with Australian nurses.

Rural vs. Non-rural School Nurses Comparison

An independent samples t-test was conducted to compare the means of the variables. There were no significant differences between rural and non-rural school nurse participants for the subscales, except Subjective Norms. Subjective Norms refer to the nurses' perceptions of social pressure to report or not to report child maltreatment. The higher the score indicated that important others had greater influence on nurses. Rural nurses scored significantly higher than non-rural nurses on subscale Subjective Norms indicating that rural school nurses had the support and /or social pressure of important others in their reporting than the non-rural nurses.

Relationship of the variables

Pearson's correlation coefficient was calculated to assess the relationships between demographics, subjective norms, and perceived behavioral control with the intent to report child maltreatment. The analysis of demographic variables: highest nursing degree held, age, and how many years you have practiced as a school nurse correlated with the intent to report child maltreatment was only statistically significant for Associates degree [$r = .16$, $p = .046$, $n=154$]. The results indicate that the associate degree prepared school nurse was more inclined to have the intent to report child maltreatment, yet they were only 11% of the participants. A literature search did not provide any studies exploring child maltreatment reporting and the different nursing degrees. Future research on this topic could explore in further detail if there is a

difference in this group of school nurses, a larger group of school nurses, or nurses in general.

The question "have you filed a report of suspected child abuse" was significantly correlated with Knowledge of child abuse and the reporting law [r = .331, p = .001, n=141], and with perceived behavioral control [r = -.184, p = .029, n=141]. Thus, school nurses who had correct Knowledge of child maltreatment and those who felt they had control over their reporting behavior were more likely to have reported child maltreatment in the past. In bivariate correlation analysis with nurses, Lee & Kim (2018), found that Knowledge about child abuse, Perceived Behavioral Control, & Attitude toward child abuse were correlated with the intent to report child abuse. Ben Natan et al. (2012) concluded similar correlations in a study with both doctors and nurses finding that the more support provided by the system, the higher sense of control, and the higher reporting rates.

The correlation between school nurses' Subjective Norms and Perceived Behavioral Control was also examined. No significant relationships were found. The regression analysis also found no linear relationship between subjective norms and perceived behavioral control on the intent to report child maltreatment. Subjective Norms are the nurse's perception to report or not report child maltreatment. School nurses also stated in the open-end text boxes that lack of organizational support was a barrier to reporting child maltreatment. Additionally, the school nurse identified organizational support as the principal, administration, coworkers, supervisors, and school district. Perceived Behavioral Control refers to the degree of confidence the school nurses had to report child maltreatment. The school nurses would need to feel confident in identifying and recognizing the symptoms of child maltreatment to have the intent to report the case. Thus, the school nurse would need to feel that they have adequate Knowledge of child maltreatment and overcome the lack of organizational support to feel empowered to report it.

Case scenarios

School nurses recognized that each case constituted abuse and the seriousness of the abuse in the case scenarios for sexual abuse, physical abuse, and emotional abuse and their intent to report. The case scenarios for severe sexual child abuse and less severe physical abuse indicated that 100 percent of the school nurses had the intent to report. Similar to studies done with sample of other nurses (Fraser et al., 2010; Lee 7& Kim, 2018; Salami & Alhalal, 2020), the case scenarios for neglect were found to have a smaller correlation and were less inclined to report the case of severe neglect. This is consistent with the responses that the school nurse felt uncertain about the evidence and the identified need for more education on the signs and symptoms of neglect.

Each case scenario had two questions about the reporting attitude of the school nurse. "All things considered, what overall impact would a child abuse report be likely to have on the child and have on the rest of the family". School nurses did not feel strongly about a report's overall impact on the child. However, different results occurred considering the overall impact on the rest of the family; the correlations were weak to moderate. Therefore, it indicates that the consideration of the impact on the family does lead to a strong intention to report child maltreatment.

In the personal reflection questions, 84% of the school nurse indicated that there had been times they thought a child was being abused but did not report it. The primary reason for not reporting was "Feeling uncertain about the evidence" (73%). In the text responses, school nurses also identified the need for more education on the less obvious signs of neglect, emotional, psychological, and sexual maltreatment. With increased Knowledge about child abuse, the

school nurse could be more confident in their responses to the case scenarios, particularly in cases where the evidence was less clear, and there was increased intent to report.

These other studies were all with nurses but not school nurses. Dr. Feng initially wrote the case scenarios for Taiwanese nurses. However, this study focused on school nurses within the United States. Although the case scenarios were written to engage general Knowledge and the standard types of child abuse, different applications and situations may occur depending on the work setting for the nurse. Specifically, the term neglect, is recognized as a form of child maltreatment. However, different countries have their policies and the level of implementation and intervention services that vary based on resources (Kobulsky et al., 2020).

Theory of Planned Behavior

The proposed model stated that Knowledge, Subjective Norms, Attitudes, and Perceived Behavioral Control would predict the intent to report child maltreatment. The survey results found that school nurses responded appropriately to their Knowledge of Child Abuse and the reporting law, Attitudes regarding professional responsibility, Perceived Behavioral Control, and Subjective norms. However, no correlation or regression analysis was found directly between the variables and the intent to report. Contrary to these results, Pearson's analysis of the case scenarios found a moderate to strong correlation between Knowledge and Attitudes on the intent to report, with the exceptions for severe neglect and less severe emotional abuse, which were weak findings. This finding is not consistent with results from similar results. Lee & Kim (2018) found correlations between Knowledge, Attitude, Perceive Behavioral Control, and the intent to report among emergency room nurses. Studies by Ben Natan et al. (2012) and Atencion et al. (2019) found a positive correlation between Perceived Behavioral Control and the intent to report but no correlation with Knowledge among hospital doctors and nurses. Therefore, future

research with a revised tool and larger sample would need to be completed to determine if the variables did or did not predict the intent to report.

Factors that influence the intent to report child maltreatment

Participant answers to two open ended questions provided insights into issues face by the school nurses when reporting child maltreatment "What is your biggest barrier in reporting child maltreatment," and "Is there anything else you would like to state in relation to your role in child maltreatment?"

The Knowledge section scores, and the text boxes indicated that school nurses felt uncertain about the evidence related to child maltreatment, and this may create a barrier in their reporting. School nurses indicated their reasons for this barrier as: the definition of maltreatment varies, lack of awareness of suspected child maltreatment when covering several schools, the definition of why neglect is considered abuse, lack of obvious evidence, subjective parameters for emotional and verbal abuse, lack of information, and identification of bruises normal vs. abuse. This same barrier of uncertainty of evidence has been identified in similar studies with nurses as a whole (Adams, 2005; Feng & Wu, 2005; Jones et al., 2018; Paavilainen et al., 2002; Piltz & Wachtel, 2009; Smith, 2006). Atencion et al. (2019) surveyed Pilipino nurses using the same tool. Feeling uncertain about the evidence was reported in 54.6% of the participants. Walsh & Jones (2015) surveyed health professionals (using a convenience sample) and found similar responses in 41% of the participants. The need for continuing education was a common theme in the text responses of the current study. The third open-ended question in this study asked, "What makes it easier for you to report child maltreatment?" Responses reflected the same need: obvious signs, strong evidence, clear-cut suspicions, and more education.

Lack of faith in the legal authority was a strong thread in the open-ended responses. It is interesting to note that while 100%of participants knew they had the mandate to report suspected child maltreatment, the responses to the question "have there been times why you thought a child was being abused but did not report it "(15% yes, 84% no) indicate that not all of the nurses are reporting it when suspected. The lack of confidence in child protective services and the hotline expressed in their open-ended responses may help explain this. The most frequent statements were: child protective services do not take the case/lack of response, length of time it takes, no return calls, a child is not removed from the situation, and the abuse continues, lack of confidence that the workers take the case as serious, lack of time to make the report due to other duties (covering more than one school), and the perception that the county does not do anything about it. In addition, the lack of confidence in legal authority can be found in similar studies (Atencion et al., 2019; Fraser et al., 2010; Jones et al., 2008; Walsh & Jones, 2015). For example, Walsh & Jones (2015) surveyed professionals frequently involved in child maltreatment reporting (teachers, counselors, social workers, and medical professionals). The participants stated they were frustrated with the screening process and how decisions were made. Additionally, they stated concerns with the length of time it took for a response, primarily when they were concerned about the child's safety and the need for an overhaul of the reporting system. The study by Walsh & Jones was an online survey within the United States, finding that other reporting professionals had the same concerns with child protective services. Thus, the need for revision or collaboration on the process with child protective services is a similar thread in the current study as well as previously published studies and one that should be concerning for child protection services.

The school nurses expressed a lack of institutional support on several levels. Some examples were that the school principal did not agree with the report, coworkers and superiors not agreeing or supporting the decision, and the lack of administrative support to report. Other studies exploring barriers or challenges of child abuse reporting have identified a lack of institutional support. For example, Azizi & Shahhosseini (2020) found that organizational barriers, including poor communication and weak legal processes for reporting, were healthcare professionals did not report child abuse cases. Tiyyagura et al. (2017) also identified a lack of supervisor support as a barrier to reporting with prehospital care workers. School nurses work with other professionals but are independent in their practice. Reporting child maltreatment can often be sensitive, and they may fear reprisal from the family or coworkers. Support from their supervisors would allow the school nurse to feel more confident when reporting to child protective services.

Fear for family and child with or without a report to child protective services was commonly expressed. School nurses responded in the open text boxes that they feared reporting child maltreatment would cause more damage than good (retaliation or continued abuse) if the child is not removed from the home. Fearing that if the parent were falsely charged with a report, the impact on the child and family would destroy the family bond was reported as a barrier to the school nurse's intent to report. A meta-analysis by McTavish et al. (2017) found concerns about the potential for harm, stating that the reporter is not in control of the outcome of the child protection agency's investigation. Often the report would be unfounded or have no consequence, thereby leaving the reporter asking why they reported.

School nurses also identified items that would make it easier to report child maltreatment, many of which have already been addressed here. Repetitive themes were

coworker/colleague/administrative support, positive school culture about reporting, and assistance from a social worker or school counselor. A reoccurring theme regarding changes to child protective services elicited suggestions for the addition of anonymous online reporting and the ability to call the hotline and have it answered by a respective individual. The idea that reporting was in the child's best interest and knowing it could potentially be saving the child's life was repeated many times throughout the open-ended questions. The focus of the school nurse is always the welfare of the child. Therefore, suggestions to streamline the process and increase feedback are essential.

Limitations

This study was as a replication survey used with Taiwanese nurses. While the tool (CARIS) has been used and tested with nurses in the U.S. and other countries, it has never been utilized before in a study with school nurses in the U.S. Rewritten questions and more appropriate case scenarios and psychometric testing of a redesigned tool would be needed to address the specific environment and role of the American School Nurse. Additionally, this study used a cross-sectional design that did not permit causal inferences. This study also only measured the school nurses' intent to report though hypothetical case scenarios, and the actual reporting behavior of the nurses is unknown. A future study could use a longitudinal design to capture the school nurse's intent and their actual behavior of reporting.

The sample size was small, with a 9.6% response rate, not reaching power. To reach power the sample size should have been 239, however with 186 responses from 44 states the analysis was moved forward. As previously stated, in future studies the survey should need to be distributed earlier in the school year, with additional time to respond due to the increased workload of some of the school nurse who must cover multiple buildings. The Rural vs. Non-

Rural sub-sample, sizes were very different but distributing the survey earlier and over an extended time could also lead to more responses from rural school nurses.

This survey came at the end of the Covid-19 pandemic. However, this study was not designed to include questions about how the pandemic might have impacted the school nurses' Knowledge, Attitude, or Behaviors. Several studies posted a decline in the number of calls to the child abuse hotlines and reports to child protective services. A review by Sege & Stephens (2021) found that there was a decrease in reports to child welfare agencies by 70% " National Child Abuse and Neglect Data System data showed that educators made 21% of reports and childcare professionals, 0.7% of reports in 2019. Instead, reduced reporting by schools may have diminished the disproportionate reporting of families of color, one example bias that has led to widely acknowledged racial disparities in child welfare reporting." It is likely that the COVID – 19 pandemics had an effect on school nurses' reporting of child maltreatment, but the ways that the COVID- 19 pandemic impact their practice were not part of this study.

Implications

Practice Implications

The school nurse's role involves caring for the entire school population. The school nurses' practice in the U.S. (Willgerodt et al., 2018) includes caring for and screening students with all types of physical and mental health conditions, care coordination, leadership in developing policies, and quality improvement to evaluate their interventions. The school nurse's role is also to detect, report prevent child maltreatment (Haas, 2021; Harding et al., 2018). This role depends on education and training, which was identified as a barrier for the school nurse. Additionally, school nurses identified that "time" is needed for assessment, prevention, and

reporting. School nurses also identified that they often cover more than one school and that the paraprofessional staff (often the school secretary), are frequently the first point of contact, when the school nurse is not in the building. Therefore, processes that focus on the school nurse's role must be developed to focus on assessment, reporting, and time incorporated into their daily workflow. Paraprofessional staff should also be well-educated in child maltreatment and reporting since they are responsible for the health and welfare of children when the school nurse is not present.

Education Implications

A large percentage of school nurses indicated they were minimally prepared to deal with child maltreatment in their practice from the education provided in their prelicensure education. Considering this feedback, the amount of time devoted to child maltreatment should be increased in undergraduate nursing curricula. Currently, basic information on child maltreatment is commonly covered in Pediatric and Medical/Surgical courses. In addition, simulations on child maltreatment have been created for nurse practitioners (McClure et al., 2020), Emergency Departments (Smeekens et al., 2011), and interprofessional collaboration for hospitals (Wilcox et al., 2017; Victor-Chmil et al., 2016). Creating simulations for the application of child abuse assessment could increase the knowledge of the nursing student prior to entering practice.

Child maltreatment education is currently not mandated by each state. However, there are multiple resources for nurses and school nurses to voluntarily educate themselves on the topic. The National Association of School Nurses provides numerous white papers on child maltreatment and educational resources for the school nurse. In addition, there are graduate education programs for school nursing -MSN and Masters in Education, as well as non-credit certifications. Child maltreatment assessment and the reporting process are part of these

programs. Every professional nursing organization promotes lifelong learning, which should be the same for school nurses. Organizational and financial support is needed to encourage school nurses to continue their education in some format.

School nurses identified their frustration with the online reporting system and lack of support from superiors and coworkers. In addition, not all nurses were aware of the law and penalties. An educational forum can be developed to address the ease of reporting and an understanding of the law, anonymity, and penalties for not reporting.

Policy Implications

The correlation analysis between reporting suspected child abuse and Knowledge was significant. The first three questions for each case was about Knowledge of child abuse and the reporting law. The correlation analysis with the intent to report the cases were all strongly significant. Therefore, nurses who possess adequate knowledge of child maltreatment are more likely to report child maltreatment when it occurs. Currently, Pennsylvania is the only state that requires continuing education on child maltreatment and reporting with every renewal. Iowa requires continuing education every five years, and Kentucky requires a one-time continuing education course. At a policy and regulatory level, states need to require state-approved child maltreatment training that includes signs and symptoms and how to report them. Increased Knowledge could lead to an increased intent to report child maltreatment and impact on child welfare outcomes.

The school nurses expressed concerns about Child Protective Services and the reporting process. A partnership between school nurses/NASN and Child Protective Services to develop a process that could lead to easier reporting may help alleviate the concerns expressed by the

school nurses in this study. A barrier to school nurses' reporting was the lack of feedback about the report and after the feedback. Developing an algorithm or protocol to provide the school nurse with feedback would overcome this barrier and could lead to an increase in reporting suspected child abuse.

Research Implications

The unexpected finding that Associate Degree nurses were more likely to report suspected child maltreatment needs more exploration. Future research could look at the perceptions of the Associate Degree nurse and the Baccalaureate nurse about their intent to report child abuse. An evaluation of the Associate Degree and Baccalaureate Degree curriculum to assess differences and define needs for further education. Additionally, exploring any workload or demographic differences between the degrees that would impact the school nurses' intent to report suspected child maltreatment.

Knowledge of child maltreatment is an indicator of increased intent to report. School nurses identified their need for continued education on the signs and symptoms of child maltreatment. Future research on the effectiveness of an educational program could guide education provided in nursing schools and continuing education modules. This research is needed to determine if increased knowledge from education would empower the school nurse to report suspected child maltreatment.

Influences in the work environment on reporting of child maltreatment should also be studied further. In this study the school nurses identified a barrier: pressure from administrators and coworkers on their intent to report/not report child maltreatment as a challenge. Further research is needed to explore the negative pressure the school nurse feels when reporting, what

infrastructure/organizational changes need to occur, or what education needs to change that environment. There are other types of schools, for example charter schools, and private schools. Research needs to be expanded to cover every type of school to assess different influences the school nurse may encounter.

Data collected for this research utilized a self-report questionnaire based on the school nurses' reflections on their experiences. The open text boxes unexpectedly yielded a large number of responses. In addition, several responses expressed the need to consider other factors that were not addressed in this survey or could influence the responses of the school nurses for example, cultural diversity, socioeconomic status, intervention instead of reporting, and family counseling. A qualitative study would allow further exploration of these topics, and a phenomenology study of the school nurse experience could more accurately explore their work environment and enlighten their day-to-day experiences in relation to child maltreatment.

The survey tool was used with nurses in various workplaces in previous studies. However, future research should develop and test a tool that applies specifically to the school nurse environment. Additionally, the survey design could consist of separate questionnaires for rural and non-rural school nurses. Although the findings from this study indicate no differences between the groups, differences may still exist. Contextual factors exist between rural and non-rural nurses practiced. Demographics between the groups are different. The rural nurse typically centers on the community's needs and aims to become familiar with local residents and social dynamics to meet their health needs (Splane, 2021). Creating different questionnaires would allow for a focused exploration of each school nurse environment and accurately reflect the factors associated with the intent to report child maltreatment. Further development of the tool with varied populations of nurses in varied settings is warranted.

During the Covid-19 pandemic, reports of child maltreatment dropped drastically (Haas,2021) while family stressors increased. A study by Sharma et al. (2021) found an increase in neglect and emotional abuse during the Covid-19 pandemic but no change in demographics where children are at risk prior to the pandemic. School nurses must now assess, interact, and intervene with children who were a product of this environment. Future research on the impact of the school nurse post-pandemic and their intent to report child maltreatment is needed.

Conclusion

The overarching of this research was to understand the factors affecting school nurses' reporting of child maltreatment to increase reporting. Any report of suspected child maltreatment could save a child's life or get help early enough to increase a child's health outcomes. Although, as nurses, we understand that we are mandated reporters of child maltreatment, school nurses work within a school system. They must feel empowered in their position to report any suspected child maltreatment.

School nurses' have the opportunity to interact with children and sometimes their families more frequently than other healthcare professionals. Therefore, providing a voice and an avenue for the actual perspective of the school nurse will guide how we can improve reporting of child maltreatment.

This study was initial research to understand the issues faced by school nurses in relation to reporting child maltreatment. Adjusting the tool to reflect and be inclusive of the school nurse environment would permit additional and more precise information. In addition, adding a qualitative research process could explore the phenomenon of the lived experience of the school nurse.

This survey indicated that school nurses have Knowledge of Child Abuse and have appropriate Attitudes about Child Abuse and reporting. School nurses identified barriers to reporting as mainly time to report, the difficulty of the reporting process, lack of administrative report, fear of repercussions for the child and themselves, and lack of response or action by child protective services. The passionate responses in the open-text boxes relayed that school nurses wanted to do more for children and their families. School nurses' indicated their desire to understand the families' cultures and primary socioeconomic status so that prevention, intervention, counseling, and education can occur.

The need for continuing education may be key to increase reporting by school nurses. It should not be the sole responsibility of the National Association of School Nurses to provide continuing education on the subject of child maltreatment. Individual state nursing boards need to follow the lead of several states and make this education a part of every registered nurse's license renewal. More education for all nurses has the potential to increase knowledge, attitude, and professional responsibility to report any case of suspected child maltreatment.

APPENDICES

Appendix A

IRB APPROVAL

Date: 2022-11-02 07:48:04

Printed by: Catherine Marjorie Jordan

Subject: UND IRB Approval Letter for Exempt Protocol

From: Michelle Bowles

Sent date: 2022-04-14 01:08:00

To: Tracy Annette Evanson <tracy.evanson@und.edu>

CC: Catherine Marjorie Jordan <catherine.jordan@und.edu>

Division of Research & Economic
Development Office of Research
Compliance & Ethics

Principal Investigator: Tracy Annette Evanson

Protocol Title: FACTORS THAT INFLUENCE SCHOOL NURSES' INTENT TO REPORT CHILD MALTREATMENT

Protocol Number:
IRB0004319
Protocol Review
Level: Exempt 2
Approval Date:
04/14/2022
Expiration Date:
04/13/2025

The application form and all included documentation for the above-referenced project have been reviewed and approved via the procedures of the University of North Dakota

Institutional Review Board.

If you need to make changes to your research, you must submit an amendment to the IRB for review and approval. No changes to approved research may take place without prior IRB approval.

This project has been approved for 3 years, as permitted by UND IRB policies for exempt research. You have approval for this project through the above-listed expiration date. When this research is completed, please submit a termination request to the IRB.

Sincerely,

Michelle L. Bowles, M.P.A., CIP

she/her/hers

Director of Research Assurance & Ethics

Office of Research Compliance & Ethics

Division of Research & Economic Development

University of North Dakota

Technology Accelerator,

Suite 2050 4201 James Ray Drive

Stop 7134 Grand Forks, ND 58202-7134

O: 701.777.4279

D: 701.777.4079
F: 701.777.2193
Michelle.Bowles@UND.edu
https://und.edu/research/resources/index
.html

Appendix B

UNIVERSITY OF NORTH DAKOTA
Institutional Review Board
Study Information Sheet

Title of Project: **Factors that Influence School Nurses' Intent to Report Child Maltreatment**

Principal Investigator: *Catherine Jordan,*
catherine.jordan@und.edu

Advisor: **Tracy Evanson PhD, RN, PHNA-BC**
tracy.evanson@und.edu, 701-777-4559

Purpose of the Study:
The purpose of this doctoral research study is to determine the factors that influence the school nurses' decision to report child maltreatment.

Procedures to be followed:
You will be asked to complete a one-time survey. You are free to skip any questions that you would prefer not to answer. The first section of the survey is general demographic information, years of experience, and nursing education. The second section asks that you examine and reflect on the statements about reporting child maltreatment and child rearing. The questions consistently ask you to rate from strongly disagree to strongly agree. The third section provides a case (1-3 sentences), for each case the same 6 questions are presented. The fourth section provides you the opportunity to express your own opinion.

Risks:
There are no risks in participating in this research beyond those experienced in everyday life. Some of the questions may cause discomfort due to the sensitive nature of the topic.

Benefits:
It is not expected that you will personally benefit from this research.
Possible benefits to others: future knowledge gained from the research can provide guidance toward a process that empowers school nurses to report child maltreatment without any barriers. The goal of the future knowledge is to have a positive impact on decreasing child maltreatment.

Duration:
We expect that it will take approximately 15 minutes to complete.

Statement of Confidentiality:

The survey does not ask for any information that would identify who the responses belong to. Therefore, your responses are recorded anonymously. If this research is published, no information that would identify you will be included since your name is in no way linked to your responses.

All survey responses that we receive will be treated confidentially and stored on a secure server. However, given that the surveys can be completed from any computer (e.g., personal, work, school), we are unable to guarantee the security of the computer on which you choose to enter your responses. As a participant in our study, we want you to be aware that certain "key logging" software programs exist that can be used to track or capture data that you enter and/or websites you visit.

Right to Ask Questions:
The researchers conducting this study are Catherine Jordan and her PhD advisor: Tracy Evanson. You may ask any questions you have now. If you later have questions, concerns, or complaints about the research please contact Catherine Jordan or Tracy Evanson at 701-777-4559 during the day.

If you have questions regarding your rights as a research subject, you may contact The University of North Dakota Institutional Review Board at (701) 777-4279 or UND.irb@UND.edu. You may contact the UND IRB with problems, complaints, or concerns about the research. Please contact the UND IRB if you cannot reach research staff, or you wish to talk with someone who is an informed individual who is independent of the research team.

General information about being a research subject can be found on the Institutional Review Board website "Information for Research Participants" http://und.edu/research/resources/human-subjects/research-participants.html

Compensation:
You will not receive compensation for your participation.

Voluntary Participation:
You do not have to participate in this research. You can stop your participation at any time. You may refuse to participate or choose to discontinue participation at any time.

You do not have to answer any questions you do not want to answer.

You must be 18 years of age older to participate in this research study.

Completion and return of the survey imply that you have read the information in this form and consent to participate in the research.

Please keep this form for your records or future reference.

Appendix C

THE UNIVERSITY OF NORTH DAKOTA
CONSENT TO PARTICIPATE IN RESEARCH

Project Title: FACTORS THAT INFLUENCE SCHOOL NURSES' INTENT TO REPORT CHILD MALTREATMENT

Principal Investigator: **Catherine Jordan**

Phone/Email Address: catherine.jordan@und.edu

Department: **Nursing**
Research Advisor **Tracy Evanson PhD, RN, PHNA-BC**
Phone/Email Address: **tracy.evanson@und.edu, 701-777-4559**

What should I know about this research?

- Taking part in this research is voluntary. Whether you take part is up to you.
- If you don't take part, it won't be held against you.

How long will I be in this research?
We expect that your taking part in this research will last approximately 15 minutes

Why is this research being done?
The purpose of this research is to determine the factors that influence the school nurses decision to report child maltreatment.

What happens to me if I agree to take part in this research?
If you decide to take part in this research study, you will be asked to complete a one-time survey. You are free to skip any questions that you would prefer not to answer.

Could being in this research hurt me?
The most important risk or discomfort that you may expect from taking part in this research include that you may find the subject to be uncomfortable or sensitive in nature.

Will being in this research benefit me?
It is not expected that you will personally benefit from this research.
Possible benefits to others is the benefit of future knowledge gained from the research, and a positive impact on decreasing child maltreatment.

How many people will participate in this research?
Approximately 2000 people will take part in this study through the National Association of School Nurses.

Will it cost me money to take part in this research?
You will not have any costs for being in this research study.

Will I be paid for taking part in this research?
You will not be paid for being in this research study.

Who is funding this research?
The University of North Dakota and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

What happens to information collected for this research?
Your private information may be shared with individuals and organizations that conduct or watch over this research, including:

- The Institutional Review Board (IRB) that reviewed this research
- Tracy Evanson, research advisor

We may publish the results of this research. However, we will keep your name and other identifying information confidential. We protect your information from disclosure to others to the extent required by law. We cannot promise complete secrecy.

Data or specimens collected in this research will not be used or distributed for future research studies, even if identifiers are removed.

(If the researcher is a mandatory reporter: You should know, however, that there are some circumstances in which we may have to show your information to other people. For example the law may require us to show your information to a court or to tell authorities if we believe you have abused a child, or you pose a danger to yourself or someone else.)

What if I agree to be in the research and then change my mind?
If you decide to leave the study early, we ask that you not complete the survey.

Who can answer my questions about this research?
If you have questions, concerns, or complaints, or think this research has hurt you or made you sick, talk to the research team at the phone number listed above on the first page.

This research is being overseen by an Institutional Review Board ("IRB"). An IRB is a group of people who perform independent review of research studies. You may talk to them at 701.777.4279 or UND.irb@UND.edu if:

- You have questions, concerns, or complaints that are not being answered by the research team.
- You are not getting answers from the research team.
- You cannot reach the research team.
- You want to talk to someone else about the research.
- You have questions about your rights as a research subject.
- You may also visit the UND IRB website for more information about being a research subject: http://und.edu/research/resources/human-subjects/research-participants.html

Your signature documents your consent to take part in this study. You will receive a copy of this form.

Subject's Name: _____

_____ _____

Signature of Subject Date

I have discussed the above points with the subject or, where appropriate, with the subject's legally authorized representative.

_____ _____

Signature of Person Who Obtained Consent Date

Appendix D

CHILD ABUSE REPORT INTENTION SCALE (MODIFICATION)

Section 1 General information

1. What is your gender?

(1) _____ Female

(2)_____ Male

(3) _____Non-Binary

(4)_____Other

2. Age: (1)_____ 20-29

(2)_____ 30-39

(3)_____ 40-49

(4)_____ 50-59

(5)_____ >60

3. What is the highest nursing degree you hold?

(1)____ Diploma

(2)____ Associate Degree

(3)____ Baccalaureate Degree

(4)____ Master's degree

(5)____ Doctorate Degree

4. How many years have you practiced as a Registered Nurse?

(1)_____ < 1

(2)_____ 1-5

(3)_____ 6-10

(4)_____ 10-20

(5)_____20-30

(6)_____ >30

5. How many years have you practiced as a school nurse?

(1)_____<1

(2)____ 1-5

(3)____ 6-10

(4)____ >10

6. What type of school do you primarily work in? (check all that apply)

(1)____ elementary school (ie: K-5)

(2)____ middle school (ie:6-8)

(3)____ high school (ie:9-12)

(4)____ mixed (i.e.: K-12)

(5)____ other _____

7) What schools zip code do you work in? _____

Section 1b Nursing Education

8) During your nursing education in school, how many hours of instruction, if any, do you estimate you have received on child maltreatment?

(1)_____ 0 hours

(2)_____1-2 hours

(3)_____3-5 hours

(4)_____6-10 hours

(5)_____ >10 hours

9) At what level do you feel your nursing education prepared you to deal with cases of child abuse?

(1)____Adequate

(2)____Minimal

(3)____Inadequate

10) Have you ever received any continuing education about child maltreatment in your role as a school nurse?

(1)____Yes

(2)____No

Section 2a. Examine and reflect on your ***attitudes regarding childrearing belief and discipline***. Indicate with a check (√) the degree to which you disagree or agree with the following statements.

Questions	Strongly disagree 1	2	3	4	Strongly agree. 5
1) It is OK for parents to slap their children who talk back					
2) Corporal punishment is an effective way to educate children					
3) I intend to use/have used physical punishment with my children when needed					
4) I don't consider physical punishment as child abuse					
5) Parents who spare the rod will spoil the child					
6) Parents have the absolute right to decide the ways they discipline their children					

Section 2b: Examine and reflect on your ***attitudes regarding punishment and culpability of offenders or victims of child abuse***. Indicate with a check (√) the degree to which you disagree or agree with the following statements.

Questions	Strongly disagree 1	2	3	4	Strongly agree. 5
1) Abusive parents should lose the right to raise their children					
2) Severe punishment of child abusers would help stop abuse of children					
3) Each case of abuse should be reported to the authorities					
4) People who abuse children should be prosecuted as criminals					
5) Reports should not be made if there is only one incident of child abuse					

Section 2c: Examine and reflect on your ***attitudes regarding professional responsibility***. Indicate the degree to which you disagree or agree with the following statements:

Questions	Strongly disagree 1	2	3	4	Strongly agree. 5
1) Nurses should advocate for abused children					
2) In my practice, I intend to screen for child abuse					
3) In my practice, I don't want to ask parents about child abuse					
4) Nurses' should always report child abuse cases					
5) Reporting child abuse is troublesome to me					
6) Nurses have the responsibility to protect children from further abuse					
7) It is very time consuming to deal with child abuse cases					

Section 3: Examine and reflect on your ***knowledge of child abuse and the reporting law***. Please read each statement carefully and indicate the degree to which you agree or disagree with the following statements:

Statement	Agree 1	Disagree 2	Not Sure 3
1) Nurses are mandated by law to report Suspected child abuse *(T)*			
2) A professional must have physical evidence of child abuse before reporting the case to child protective services. *(F)*			
3) Most sexual abuse of children involves physical force. *(F)*			
4) Children who have been abused usually tell someone soon after the abuse. *(F)*			
5) Professionals who report a case of suspected child abuse can be sued if the case is not substantiated in court. *(F)*			
6) Bruises that circumscribe the neck are usually associated with accidental trauma. *(F)*			
7) In most cases of child abuse and neglect children are not removed from their parents' home. *(T)*			
8) In most cases, children who are sexually abused are by strangers. *(F)*			
9) Most sexual abuse of children includes intercourse. *(F)*			
10) Many runaway children and adolescents have been abused before running away. *(T)*			
11) A sexually abused child may have a normal physical examination. *(T)*			
12) Failure on the part of a health professional to report suspected child abuse or neglect can result in paying a fine. *(T)*			
13) Child abuse and neglect rarely occur among middle or high social economic class. *(F)*			

Section 4: Please read each statement carefully and indicate the degree to which you agree or disagree with the following statements: ***(Subjective Norms)***

Questions	Strongly disagree 1	2	3	4	Strongly agree. 5
1) Most people who are important to me think I should report suspected child abuse					
2) Most people whose opinion I respect think I should report suspected child abuse					

Section 5: Please read each statement carefully and indicate the degree to which you agree or disagree with the following statements: ***(Perceived Behavioral Control)***

Questions/Statements	Strongly disagree. 1	2	3	4	Strongly agree. 5
1) I believe I have a lot of control over reporting suspected child abuse					
2) As a nurse, I don't feel I can do anything about child abuse					
3) It is mostly up to me whether or not I report suspected child abuse					
4) I feel I don't get enough support from physicians when I suspect child abuse					
5) I know how to report child abuse					
6) Many resources are available to me for reporting child abuse					
7) I feel my professional training doesn't meet the clinical needs for child abuse					
8) I have higher priorities in clinical that child abuse. This affects my decision to become involved or not in reporting child abuse					

Section 6: Review the case and indicate the degree to which you disagree or agree with the following statements. ***(Intended Practice Behaviors)***

1. The parents regularly left their 9-year-old child alone inside the house after dark. Often, they did not return until midnight. On one occasion, the child started a small fire.

1) Based on the information, how serious is this incident? ***Knowledge***	1 Strongly Disagree	2	3	4	5 Strongly Agree
2) In your own professional judgment, does this incident constitute abuse? ***Knowledge***	1	2	3	4	5
3)In your view, would you be required by law to report this incident? ***Knowledge***	1	2	3	4	5
4) All things considered, what overall impact would a child abuse report be likely to have on this child? ***Reporting attitude***	1	2	3	4	5
5) All things considered, what overall impact would a child abuse report be likely to have on the rest of the family? ***Reporting attitude***	1	2	3	4	5
6) How likely would you be to report this case? ***Intended reporting behavior***	1	2	3	4	5

2. The parents ignored the fact that their 10-month-old child was obviously ill, crying constantly and not eating. When they finally brought the child to a hospital he was found to be seriously dehydrated

1) Based on the information, how serious is this incident?	1 Strongly Disagree	2	3	4	5 Strongly Agree
2) In your own professional judgment, does this incident constitute abuse?	1	2	3	4	5
3)In your view, would you be required by law to report this incident?	1	2	3	4	5
4) All things considered, what overall impact would a child abuse report be likely to have on this child?	1	2	3	4	5
5) All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	1	2	3	4	5
6) how likely would you be to report this case?	1	2	3	4	5

3. On one occasion, the parent and the child engaged in sexual intercourse. The parent told the child that it is the lesson that parents teach their children to become adults.

1) Based on the information, how serious is this incident?	1 Strongly Disagree	2	3	4	5 Strongly Agree
2) In your own professional judgment, does this incident constitute abuse?	1	2	3	4	5
3)In your view, would you be required by law to report this incident?	1	2	3	4	5
4) All things considered, what overall impact would a child abuse report be likely to have on this child?	1	2	3	4	5
5) All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	1	2	3	4	5
6) how likely would you be to report this case?	1	2	3	4	5

4. A couple have only one child, an eight-year-old girl. They keep her hair cut short like a boy's and frequently dress her in boy's clothing. They keep telling their girl they really wanted to have a boy instead of a girl.

1) Based on the information, how serious is this incident?	1 Strongly Disagree	2	3	4	5 Strongly Agree
2) In your own professional judgment, does this incident constitute abuse?	1	2	3	4	5
3)In your view, would you be required by law to report this incident?	1	2	3	4	5
4) All things considered, what overall impact would a child abuse report be likely to have on this child?	1	2	3	4	5
5) All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	1	2	3	4	5
6) how likely would you be to report this case?	1	2	3	4	5

5. A nine-year old boy comes to school. The teacher notices that there are red marks on his palms and legs. When asked, he tells the teacher that yesterday he went over to a friend's house to lay instead of going home to do his homework. When his father found out, he hit him on the palms and legs repeatedly with a cane. He says that his father does this whenever he does not do his homework.

1) Based on the information, how serious is this incident?	1 Strongly Disagree	2	3	4	5 Strongly Agree
2) In your own professional judgment, does this incident constitute abuse?	1	2	3	4	5
3)In your view, would you be required by law to report this incident?	1	2	3	4	5
4) All things considered, what overall impact would a child abuse report be likely to have on this child?	1	2	3	4	5
5) All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	1	2	3	4	5
6) how likely would you be to report this case?	1	2	3	4	5

6. A 20-year-old woman, five months pregnant, brought her 19-month-old child to the emergency room with facial bruises and swelling. X-rays revealed old, healing rib fractures. The mother reported that the injuries were the result of beating by the child's father, who had been angered by her crying.

1) Based on the information, how serious is this incident?	1 Strongly Disagree	2	3	4	5 Strongly Agree
2) In your own professional judgment, does this incident constitute abuse?	1	2	3	4	5
3)In your view, would you be required by law to report this incident?	1	2	3	4	5
4) All things considered, what overall impact would a child abuse report be likely to have on this child?	1	2	3	4	5
5) All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	1	2	3	4	5
6) how likely would you be to report this case?	1	2	3	4	5

7. The parents often compare the school performance of the child to others, and make the child feel inferior. The parents ridicule and criticize the child whenever the child does not do well in the exams.

1) Based on the information, how serious is this incident?	1 Strongly Disagree	2	3	4	5 Strongly Agree
2) In your own professional judgment, does this incident constitute abuse?	1	2	3	4	5
3)In your view, would you be required by law to report this incident?	1	2	3	4	5
4) All things considered, what overall impact would a child abuse report be likely to have on this child?	1	2	3	4	5
5) All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	1	2	3	4	5
6) how likely would you be to report this case?	1	2	3	4	5

8. The parent repeatedly showed the child pornographic pictures

1) Based on the information, how serious is this incident?	1 Strongly Disagree	2	3	4	5 Strongly Agree
2) In your own professional judgment, does this incident constitute abuse?	1	2	3	4	5
3)In your view, would you be required by law to report this incident?	1	2	3	4	5
4) All things considered, what overall impact would a child abuse report be likely to have on this child?	1	2	3	4	5
5) All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	1	2	3	4	5
6) how likely would you be to report this case?	1	2	3	4	5

Section 7: Personal Refection

1) Do you personally know anyone who has been abused as a child?

____Yes

____No

2) In your work, have you ever filed a report of suspected child abuse?

____Yes

____No

3) Have there ever been times when you thought a child was being abused but did not report it?

____Yes

____No

4) If yes to Number 3, please indicate the reasons why you did not report (check all that apply)

____Fear of reprisal

____Feeling uncertain about the evidence.

____Fear of litigation

____Lack of faith in the legal authority

____Fear of community pressure

____ Personal relations ship with family made it difficult.

Section 8: Your opinion

1) Is there anything else you would like to state in relation to your role in child maltreatment?

2) What is your biggest barrier in reporting child maltreatment?

3) What makes it easier for you to report child maltreatment?

THANK YOU FOR YOUR TIME!

REFERENCES

Aggarwal, R., & Ranganathan, P. (2019). Study designs: Part 2 - Descriptive studies. *Perspectives in clinical research*, *10*(1), 34–36. https://doi.org/10.4103/picr.PICR_154_18

Ajzen, I. (2001). Nature and Operation of Attitudes. *Annual Review of Psychology*, 52, 27-58. https://doi.org/10.1146/annurev.psych.52.1.27

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, *50*(2), 179-211.

Alaggia, R., Collin-Vezina, D., & Lateef, R. (2019). Facilitators and Barriers to Child Sexual Abuse (CSA) Disclosures: A Research Update (2000-2016). *Trauma, Violence & Abuse, 20(*2), 260-283. https://doi.org/10.1177/1524838017697312

Alazri, Z., & Hanna, K.M. (2020). School personnel and child abuse and neglect reporting behavior: An integrative review. *Children & Youth Services Review*, 112. https://doi.org/10.1016/j.childyouth.2020.104892

Am I Rural (2021). https://www.ruralhealthinfo.org/am-i-rural

American Academy of Pediatrics. (2016). *Role of the school nurse in providing school health services* (Policy Statement). *Pediatrics*. https://doi.org/10.1542/peds.2016-085

American Nurses Association National Association of School Nurses. (2011). School nursing: Scope and standards of practice (2nd ed.). Silver Spring, MD: Nursesbooks.org.

Atencion, B.C.S., Alingalan, A.F., Oducado, R.M.F., Cordova, J.D.N., Dumaguing, M.C.M., & Suaboksan, M.T.T. (2019). Factors Associated with Intention to Report Child Abuse

among District Hospital Nurses in Iloila, Philippines. *International Journal of Caring Sciences*, 12(1). 210-217.

Azizi, M., & Shahhosseini, Z., (2017). Challenges of reporting child abuse by healthcare professionals. A narrative review. *Journal of Nursing Midwifery Science*.

Barczyk, A. N., Jones, K., Duzinski, S.V., & Lawson, K.A. (2020). Predictors of Childhood Injury in Children Reported to Child Protective Services. *Journal of Trauma Nursing: The Official Journal of the Society of Trauma Nurses*, 27(5), 283-29. https://doi.org/10.1097/JTN.0000000000000530.

Bachmann, M., & Bachmann, B. A. (2018). The Case for Including Adverse Childhood Experiences in Child Maltreatment Education: A Path Analysis. *The Permanente journal*, *22*, 17–122. https://doi.org/10.7812/TPP/17-122

Belanger, K., & Stone, W. (2008). The social service divide: service availability and accessibility in rural versus urban counties and impact on child welfare outcomes. *Child Welfare*, 87(4), 101.

Ben Natan, M. Faour, C., Naamhah, S., Grinberg, K., & Klein-Kremer, A. (2012). Factors affecting medical and nursing staff reporting of child abuse. *International Nursing Review*, 59(3), 331-337. https://doi.org/10.1111/j.1466-7657.2012.00988.x

Berger, L.M., & Waldfogel. (2011). Economic Determinants and Consequences of Child Maltreatment. *OECD Social, Employment, and Migration Working Papers*, 111. https://doi.org/10.1787/5kgf09zj7h9t-en

Best, N.C., Oppewal, S., & Travers, D. (2018) Exploring School Nurse Interventions and Health and Education Outcomes: *An Integrative Review. Journal of School Nursing,* 34(1), 14-27. https://doi.org/ezproxylr.med.und.edu/10.1177/105984051774535

Blakey, J.M., Glaude, M., & Williams Jennings, S. (2019). School and program related factors influencing disclosure among children participating in a school-based childhood physical and sexual abuse prevention program. *Child Abuse & Neglect,* 96. https://doi:10.1016/jchiabu.2019.104092

Brown III, L.G., & Gallagher,K. (2014). Mandatory Reporting of Abuse: A Historical Perspective on the Evolution of States' Current Mandatory Reporting Laws with a Review of the Laws in the Commonwealth of Pennsylvania. https://digitalcommons.law.villanova.edu/vlr/vol59/iss6/5

Brown, S.M., Bender, K., Orsi, R., McCrae, J.S., Phillips, J.D., & Rienks, S. (2019). Adverse childhood experiences and their relationship to complex health profiles among child welfare-involved children. A classification and regression tree analysis. *Health Services Research*, 54(4),902-911. https://doi.org.ezproxy.library.un.edu/10.1111/1475-6773.13166

Burch, A. M., & Stoeckel, P. R. (2021). Rural School Nurse Face Challenges in Colorado: A Qualitative Study. The Journal of School Nursing: *The Official Publication of the National Association of School Nurses*. https://doi.org/10.1177/1059840520984448

Centers for Disease Control and Prevention. (2020). *Child Abuse and Neglect Prevention*. https://www.cdc.gov/violenceprevention/childabuseandneglect/index.html

Chanlongbutra, A., Singh, G. K., & Mueller, C. D. (2018). Adverse Childhood Experiences, Health-Related Quality of Life, and Chronic Disease Risks in Rural Areas of the United States. *Journal of Environmental & Public Health*, 1-15. https://doi.org/10.1155/2018/7151297

Chaudry, A., & Wimer, C, (2016). Poverty is Not Just an Indicator: The Relationship Between Income, Poverty, and Child Well-Being. *Academic Pediatrics, 16*(3), S23-S29. https://doi.org/10.1016/j.acap.2015.12.010

Child maltreatment report 2020. (2022). https://www.acf.hhs.gov/sites/default/files/documents/cb/cm2020.pdf

Child Welfare and Substance Use. (2018). https://www.ruralhealthinfo.org/resources/10939

Child Welfare Information Gateway. (2019). *Definitions of Child Abuse and Neglect in Federal Law.* https://www.childwelfare.gov/pubPDFs/define.pdf

Child Welfare Information Gateway. (2019). *Mandatory reporters of child abuse and neglect.* Washington, DC: U.S. Department of Health and Human Services, Children's Bureau. https://www.childwelfare.gov/topics/systemwide/laws-policies/statutes/manda/

Child Welfare Information Gateway (2018) https://www.childwelfare.gov/pubs/issue-briefs/rural/

Children's Bureau, U.S. Department of Health and Human Services. (2020). *Child Maltreatment 2018*. https://www.acf.hhs.gov/cb/resource/child-maltreatment-2018

Christodoulou, A. D., Abakoumkin, G., & Tseliou, E. (2019). Teachers' Intention to Report Child Maltreatment: Testing Theoretically Derived Predictions. *Child & Youth Care Forum*, 48)4), 513-517. https://doi.org/10.1007/s10566-019-09492-x

Chung EK, Siegel BS, Garg A, Conroy K, Gross RS, Long DA, Lewis G, Osman CJ, Jo Messito M, Wade R Jr, Shonna Yin H, Cox J, Fierman AH. Screening for Social Determinants of Health Among Children and Families Living in Poverty: A Guide for Clinicians. Curr Probl Pediatr Adolesc Health Care. 2016 May;46(5):135-53. https://doi.org/10.1016/j.cppeds.2016.02.004

Ciavaglia, J. (2020, June 5). Preparing for fallout: As state reopens, advocates expect spike in abuse reports. The Courier Times. https://www.thecouriertimes.com/

Cicchetti D, Hetzel S, Rogosch FA, Handley ED, Toth SL. An investigation of child maltreatment and epigenetic mechanisms of mental and physical health risk. *Dev Psychopathology*. 2016;28(4pt2):1305–1317. https://doi.org/10.1017/S0954579416000869

Combe, L.G. (2019) NASN President's Inaugural address. *Journal of School Nursing*, 35(4), 242-247. https://doi.org/10.1177/1059840519854790

Coutlton, C. J., Crampton, D. S., Irwin, M. Spilsbury, J. C., & Korbain, J. E. (2007). How neighborhoods influence child maltreatment: a review of the literature and alternative pathways. *Child Abuse & Neglect*, 31(11-12), 1117-1142. https://doi.org/10/1016/j.chiabu.2007.03.023

C.R. (2015). Recognizing Signs of Physical Abuse. *School Health Alert*, 31(3), 2-3

Crouch, E. (2020). Rural-Urban Differences in Adverse Childhood Experiences Across a National Sample of Children. *The Journal of Rural Health*, *36*(1).

Dallas Children'S Advocacy Center(2020). https://dcac.org/

Darnell, T., Hager, K., & Loprinzi, P. D. (2019). The Impact of School Nurses in Kentucky Public High Schools. *The Journal of School Nursing*, *35*(6), 434–441. https://doi.org/10.1177/1059840518785954

Davidov, D. M., Nadorff, M.R., Jack, S.M., & Coben, J.H. (2012). Nurse home visitors' perspectives of mandatory reporting of children's exposure to intimate partner violence to child protection agencies. *Public Health Nursing*, 29(5), 412-423. https://doi.org/10.1111/j.1525-1446.2001.01003.x

Davis, D., Maughan, E. D., White, K. A., & Slota, M. (2021). School Nursing for the 21st Century: Assessing Scope of Practice in the Current Workforce. *The Journal of School Nursing*, *37*(5), 374–386. https://doi.org/10.1177/1059840519880605

Definitions of Child Abuse and Neglect in Federal Law (2019). https://www.childwelfare.gov/topics/can/defining/federal

Donohue, B., Plant, C., Loughran, T., & Torres, A. (2017). Family Assisted Contingency Management within the context of evidence-supported treatment for child neglect and drug abuse. *Journal of Child & Family Studies*, 26(8), 2224-2236. https://doi.org/10.1007/s10826-017-0739-z

Dressler, C. (2018). Using the theory of planned behaviour when designing motivational letters: Exploring through patient interviews how determinants of behaviour are operationalized in letters of invitation to cardiac rehabilitation. *Nursing Practice Today*, 5(4), 403-412.

Einboden, R., Rudge, T., & Varcoe, C. (2019). Beyond and around mandatory reporting in nursing practice: Interrupting a series of deferrals. *Nursing Inquiry*, 2. https://doi.org/10/1111/nin.12285

Eisbach, S. S., & Driessnack, M. (2010). Am I sure I want to Go Down This Road? Hesitations in the Reporting of Child Maltreatment by Nurses. *Journal for Specialists in Pediatric Nursing*, 15(4), 317-323.

Elarousy, W., & Abed, S. (2019). Barriers that inhibit reporting suspected cases of child abuse and neglect among nurses in a public hospital, Jeddah, Saudi Arabia. *Eastern Mediterranean Health Journal*, 25(6), 413-421. https://doi.org/10.26719/emhj.18.055

Engh Kraft, L.E., & Eriksson, U. (2015). The school nurse's ability to detect and support abused children: a trust-creating process. *The Journal of School Nursing*, *31*(5), 353-362.

Engh Kraft, L.E., Rahm, G., & Eriksson, U. (2017). School nurses avoid addressing child sexual abuse. *The Journal of School Nursing*, *33*, 133-142.

English, D. J., Thompson, R., & White. C.R., (2015). Predicting risk of entry into foster care from early childhood experiences: A survival analysis using LONGSCAN data. Child Abuse & Neglect, 45, 57-67. https://doi.org/10.1016/j.chiabu.2015.04.017

Espeleta, H.C., Brett, E.I., Ridings, L.E., Leavens, E.L.S., & Mullins, L.L. (2018). Childhood adversity and adult health -risk behaviors: Examining the roles of emotion dysregulation

and urgency. Child Abuse & Neglect, 82, 92-101. https://doi.org/10.1016/j.chiabu.2018.05.027

Fattahi, A., Nikanjam, R., Mehr, M.B., & Moghimbeigi, A. (2019). Predictors of Physical Activity in Type 2 Diabetic Patients Based on the Theory of Planned Behavior. *Iranian Journal of Diabetes & Obesity (IJDO)*, 11(4), 226-232.

Feng, J. Y., & Levine, M. (2005). Factors Associated with Nurses' Intention to Report Child Abuse: A National Survey of Taiwanese Nurses. *Child Abuse and Neglect: The International Journal*, 29(7), 783-795.

Feng, J., & Wu, Y. B. (2008). Nurses' intention to report child abuse in Taiwan: a test of the theory of planned behavior. *Research in Nursing & Health*, 28,337-347.

Finno-Valasquez, M., He, A., Perrigo.J., & Hurlburt, M. (2017). Community informant explanations for unusual neighborhood rate of child maltreatment reports. *Child & Adolescent Social Work Journal*, 34(3), 1919-204. https://doi.org/10/1007/s10560-016-0463-3

Fishbein, M. (2008). A reasoned action approach to health promotion. *Medical Decision Making*, 28(6), 834-844.

Fleming, L., Lindahl, B., Gowda, A., Beshears, V., & National Association of School Nurses. (2018). Environmental Health in the School Setting-The Role of the School Nurse. Position Statement Revised. *National Association of School Nurses*.

Fleming, R., & Willgerodt, M.A. (2017). Interprofessional Collaborative Practice and School Nursing: A Model for Improved Health Outcomes. *Online Journal of Issues in Nursing*, 22(3),1. https://doi.org.ezproxy.library.und.edu/10.3912/OJIN.Vol22No03Man02

Foster, R.H., Olson-Dorff, D. Reiland, H.M., & Budzak-Garza, A. (2017). Commitment confidence, and concerns: Assessing health care professionals' child maltreatment reporting attitudes. *Child Abuse & Neglect*, 67, 54-63. https://doi.org/10.1016/j.chiabu.2017.01.024

Framework for 21st Century School Nursing Practice. Classifications and Updated Definitions (2020). *NASN School Nurse*, 35(4), 225-233. https://doi.org/10.1177/1942602X20928372

Fraser, J.A., Matthews, B., Walsh, K., Chen, L., & Dunne, M., (2010). Factors influencing child abuse and neglect recognition and reporting by nurses: a multivariate analysis. *International Journal of Nursing Studies*, *47*(2), 146-153. https://doi.org/10.1016/j.ijnurstu.2009.05.015

Freeland, M., Easterling, T., Reiner, K., & Amidon, C. (2018). Prevention and intervention of child maltreatment —The role of the school nurse (Position Statement). *National Association of School Nurses,* https://www.nasn.org/advocacy/professional-practice-documents/position-statements/ps-child-maltreatment

Garg, A., Tripodis, Y., Dwarsky, Z.D., & Sege, R.D. (2019). Do basic unmet maternal needs influence infant maltreatment risk? A nested case-control study. *Clinical Pediatrics*, 58(4)

Garma, C.T. (2017), Influence of health personnel's attitudes and knowledge in the detection and reporting of elder abuse: An exploratory systematic review. *Journal of Psychosocial Intervention*, 26(2). https://doi.org/10.1016/j.psi.2016.11.001

Getahun, T., Kaba, M.,& Derseh, B. T. (2020). Intention to Screen for Cervical Cancer in Debre Berhan Town, Amhara Regional State, Ethiopia: Application of Theory of Planned Behavior. *Journal of Cancer Epidemiology*, 1-8. https://doi.org/10.1155/2020/3024578

Getto, C.R., & Pollack, D. (2015). *American Bar Association*. http://www.americanbar.org/groups/public_interest/child_law/resources/child_law_practiceonline/child_law_practice/vol-34/march-2015/meeting-the-challenge-of-child-maltreatment-in-rural-areas/

Gonzalez, R., Velez-Pastrana, M.C., McCrory, E., Kallis, C., Aquilla, J., Canino, G., & Bird, H. (2019). Evidence of concurrent and prospective associations between early maltreatment and ADHD through childhood and adolescence. Social Psychiatry & Psychiatric Epidemiology, 54(6), 671-682. https://doi.org/ezproxy.library.und.edu/10.1007/s00127-019-01659-0

Green, M. (2020). Nurses' Adherence to Mandated Reporting of Suspected Cases of Child Abuse. *Journal of Pediatric Nursing*, 54, 109-113. https://doi.org/10.1016/j.pedn.2020.06.007

Guo, R., Hermanson, P. M., Berkshire, S. D., & Fulton, L.V. (2019). Predicting intention to use evidence-based management among U.S. healthcare administrators: Application of the theory of planned behavior and structural equation modeling. *International Journal of Healthcare Management*, 12(1), 25-32. https://doi.org/10.1080/20479700.2017.1336856

Haas, J. J. (2021). The Role of the School Nurse in Detecting and Preventing Child Abuse During This Age of Online Education. *NASN School Nurse*, *36*(1), 16–19. https://doi.org/10.1177/1942602X20958064

Hackett, A. J. (2013). The role of the school nurse in child protection. *Community Practitioner*, 86(12), 26-29.

Hagger, M.S., & Hamilton, K. (2021). Effects of socio-structural variables in the theory of planned behavior: a mediation model in multiple samples and behaviors. *Psychology & Health*, 36(3), 307-333. https://doi.org/ezproxy.library.und.edu/10.1080/08870446.2020.1784420

Harding, L., Davision-Fischer, J., Bekaert, S., & Appleton, J.V. (2019). The role of the school nurse in protecting children and young people from maltreatment: An integrative review of the literature. International Journal of Nursing Studies, 92, 60-72. https://doi.org/ezproxylr.med.und.edu/10.1016/j.ijnurstu.2018.12.017

Hassan, H. A., Zhang, X., Ahmad, A.B., & Liu, B. (2021). Public Service Motivation and Employee Change-Supportive Intention: Utilizing the Theory of Planned Behavior. *Public Personnel Management*, 50(2), 283-302. https://doi.org/10.1177/0091026020934515

Herendeen, P.A., Blevins, R., Anson, E., & Smith, J. (2014). Barriers to and Consequences of Mandated Reporting of Child Abuse by Nurse Practitioners. *Journal of Pediatric Healthcare*, 28(1), e1-7. https://doi.org/10.1016/j.pedhc.2013.06.004

Haas JJ. The Role of the School Nurse in Detecting and Preventing Child Abuse During This Age of Online Education. *NASN School Nurse*. 2021;36(1):16-19. doi:10.1177/1942602X20958064

Hines, L., & Brown, R. (2012, May). Child Abuse Awareness and Reporting in Schools. *NASN School Nurse, 27*(3), 122-124. https://doi.org/10.1177/194602X12440297

Ho, G.W.K., Gross, D.A., & Bettencourt, A. (2017). Universal Mandatory Reporting Policies and the Odds of Identifying Child Physical Abuse. *American Journal of Public Health*, 207(5), 709-716. https://doi.org/10.2105/AJPH.2017.303667

Hye Young, P., Choi Eun Jung, & Eun Nam, L. (2013). Intention to Report Child Abuse of Emergency Room Nurse. (English). *Journal of Korean Critical Care Nursing*, 6(2), 1-11.

Jaeckl, S., & Laughon, K. (2021). Risk Factors and Indicators for Commercial Sexual Exploitation/Domestic Minor Sex Trafficking of Adolescent Girls in the United States in the Context of Schol Nursing: An Integrative Review of the Literature. *Journal of School Nursing*, 37(1), 6-16. https://doi-org/10/1177/1059840520971806

Johnson, H.C., Underwood, L.A, Baum, J., & Newmeyer, M. (2021, June). Differences in Risk Scores among Intrafamilial and Extrafamilial Sexual Offenders. *International Journal of Emergency Mental Health and Human Resilience*

Johnston, R., Hewitt, B., McLeod, A., & Moczygemba, J. (2021). Examining Individual Transition from Healthcare to Information Technology Roles Using the Theory of Planned Behavior. *Perspectives in Health Information Management*, 1-13

Jordan, K.S., MacKay, P., & Woods, S.J. (2017, May). Child Maltreatment Optimizing recognition and reporting by school nurses. *School Nurse*, 192-199.

Jordan, K.S., & Steelman, S. (2015, April-June). Child Maltreatment: Interventions to improve recognition and reporting. *Journal of Forensic Nursing*, *11*, 107-11

Kamdar Tiyyagura, G., Gawel, M., Alphonso, A., Koziel, J., Bilodeau, K., & Bechtel, K. (2017). Barriers and Facilitators to Recognition and Reporting of Child Abuse by Prehospital Providers. *Prehospital Emergency Care*, *21*(1).

Kang H. (2013). The prevention and handling of the missing data. *Korean journal of anesthesiology*, *64*(5), 402–406. https://doi.org/10.4097/kjae.2013.64.5.402

Kempe, C. H. (1971). Paediatric implications of the battered baby syndrome. *Archives of Disease in Childhood, 46*(245), 28. http://dx.doi.org/10.1136/adc.46.245.28

Kim Youngyoung, Lee Chong Mi, & Kang Seo Young. (2020). Development of a Scale for Alcohol Drinking Prevention Behavior in Early Elementary School Based on Ajzen's Theory of Planned Behavior. *Journal of Korean Academy of Nursing,* 50(2), 210-227. https://doi.org/10.4040/jkan.2020.50.2.210

Kitano, N., Yoshimasu, K., Yamamoto, B. A., & Nakamura, Y. (2018). Associations between childhood experiences of parental corporal punishment and neglectful parenting and undergraduate students' endorsement of corporal punishment as an acceptable parenting strategy. *PLOS ONE,* 13 (10). https://doi.org/10.1371/journal.pone.0206243

Klein, S. (2011). The availability of neighborhood early care and education resources and the maltreatment of young children. *Child Maltreatment*, 16(4), 300-311. https://doi.org/10.1177/1077559511428801

Knight, K., Kenny, A., & Endacott, R. (2016). From expert generalist to ambiguity masters: Using ambiguity tolerance theory to redefine the practice of rural nurses. *Journal of Clinical Nursing*, 25(11/12), 1757-1765. https://doi.org/10.1111/jocn.13196

Kulig, J., Kilpatrick, K., Moffitt, P., & Zimmer, L. (2015). Recruitment and retention in rural nursing: It's still an issue! *Nursing Leadership*, 28(2), 40-50. https://doi.org/10/12927?cjnl.2015.24353

Kobulsky, J.M., Dubowitz, H., & Xu, Y. (2020). The global challenge of the neglect of children, *Child Abuse & Neglect*, 110 (1) https://doi.org/10.1016/j.chiabu.2019.104296.

Kuruppu, J. McKibbin, G., Humphreys, C., & Hegarty, K. (2020). Tipping the scales: Factors influencing the decision to report child maltreatment in primary care. Traums, Violence & Abuse, 21(3), 437-438. https://doi.org/10.1177/1524838020915581

Land, M., & Barclay, L. (2008). Nurses' contribution to child protection. *Neonatal, Paediatric & Child Health Nursing*, 11(1), 18-24.

Lane W, Sacco P, Downton K, Ludeman E, Levy L, Tracy JK. (2016). Child maltreatment and problem gambling: A systematic review. *Child Abuse Negl*ect, 2016;58:24–38. https://doi.org/10.1016/j.chiabu.2016.06

Lavigne, J.L., Portwood, S.G., Warren-Findlow, J., & Brunner Huber, L.R., (2017). Pediatric Inpatient Nurses' Perceptions of Child Maltreatment. Journal of Pediatric Nursing, 34, 17-22. https://doi.org/10.1016/j.pedn.2017.01.010

Lee, J., & Kang, S.J. (2020). Factors influencing nurses' intention to care for patients with emerging infectious diseases: Application of the theory of planned behavior. *Nursing & Health Sciences*, 22(1), 82-90. https://doi.org/10/1111/nhs.12642

Lee H.M., & Kim, J.S. (2018). Predictors of Intention of Reporting Child Abuse among Emergency Nurses. *Journal of Pediatric Nursing*, 38, e47-e52. https://doi.org/10.1016/j.pedn.2017.10.007

Lineberry, M., Noland, M., & Wilson, J.F. (2021). Intentions of Kentucky School Nurses to Delegate Diabetes-Related Tasks to Unlicensed Assistive Personnel. *Journal of School Nursing,* 37(2). 99-108 https://doi.org.ezproxy.library.und.edu/10.1177/1059840519849098

Lines, L.E., Hutton, A.E., & Grant, J. (2017). Integrative review: nurses' roles and experiences in keeping children safe. *Journal of Advanced Nursing*, 73(2), 302-322. https://doi.org/10.1111/jan.13101

Lines, L., Grant, J., & Hutton, A. (2018). How do nurses keep children safe from abuse and neglect, and does it make a difference? A scoping review. *Journal of Pediatric Nurse*, *43*, e57-e84.

Lines, L.E., Grant, J.M., & Hutton, A. (2020). Nurses' perceptions of systems and hierarchies shaping their responses to child abuse and neglect. *Nursing Inquiry*, 27(2), 1-9. https://doi.org/10.1111/nin.12342

Louwers, E.C.F.M., Korfage, I.J., Affourtit, M.J., DeKonig, H.J., & Moll, H.A. (2012). Facilitators and barriers to screening for child abuse in the emergency department. BMS Pediatrics, 12,167. https://doi.org/10.1186/1471-2431-12-167

Lucas, C., Crowell, K. R., & Olympia, R. P. (2021). School Nurses on the Front Lines of Healthcare: Red Flags and Red Herrings: Improving the Recognition of Bruises and Burns Associated With Physical Abuse in School-Age Children. *NASN School Nurse*, *36*(1), 32–38. https://doi.org/10.1177/1942602X20942922

Lucas, C., Lind, M., & Olympia, R. P. (2021). School Nurses on the Front Lines of Healthcare: Recognizing the Signs and Putting the "BRAKES" on the Commercial Sexual Exploitation of Children. *NASN School Nurse*, *36*(2), 92–98. https://doi.org/10.1177/1942602X20932589

Magalnick, H., & Mazyck, D. (2008). Role of the school nurse in providing school health services. *Pediatrics*, *121*(5), 1052–1056. https://doi.org/10.1542/peds.2008-0382

Maguire-Jack, K., & Font, S.A. (2017). Community and Individual Risk Factors for Physical Child Abuse and Child Neglect: Variations by Poverty Status. *Child Maltreatment, 22*, 215 - 226.

Maguire-Jack, K., Jespersen, B., Korin, J.E., & Spilsbury, J.C. (2020). Rural Child Maltreatment: A Scoping Literature Review. *Trauma, Violence & Abuse*. https://doi.org/10.1177/1524838020915592

Maguire-Jack, K., & Kim, H. (2021). Rural differences in child maltreatment reports, reporters, and service responses. *Children and Youth Services Review*, 120. https://doi.org/10/1016/j.childyouth.2020.105792

Mandated Reporter(2021). https://mandatedreporter.com/what-is-a-mandated-reporter

Mandatory Reporters of Child Abuse and Neglect (2019). https://www.childwelfare.gov/pubPDFs/manda.pdf

Mangena, A. S., & Maughan, E. (2015). The 2015 NASN School Nurse Survey: Developing and Providing Leadership to Advance School Nursing Practice. *NASN School Nurse*, *30*(6), 328–335. https://doi.org/10.1177/1942602X15608183

Martins, CBG, & Jorge, MHP, (2010). Child abuse: a review of the history and protection policies. *Acta Paulista de Enfermagem*, 23(3), 423-428

Matthews, E.J., & Desjardins, M. (2020). The meaning of risk in reproductive decisions after childhood abuse and neglect. *Journal of Family Violence*, 35(8), 793-802. https://doi.org/10.1007/s10896-019-00062-2

Maughan, E. D., & Jameson, B. E. (2020). Celebrating 21st-Century School Nursing Practice. *NASN School Nurse*, *35*(3), 133–135. https://doi-org/10.1177/1942602X20913908

McCarthy, A., & Garavan, T. (2006). Postfeedback development perceptions: Applying the theory of planned behavior. *Human resource development quarterly*, *17*(3), 245-267.

McClure, N., Nelson, B., Anderson, M., Donnell, C., & Knox, D. (2020). Child Abuse Response Simulation for Advanced Practice Nursing Students. *Clinical Nurse Specialist: The Journal for Advanced Nursing Practice*, 34(4), 157-161. https://doi-org/10.1097/NUR.0000000000000529

McCrae, J.S., Bender, K., Brown, S.M., Phillips, J.D., & Rienks, S. (2019). Adverse childhood experiences and complex health concerns among child welfare-involved children. *Children's Health Care*, 48(1), 38-58. https://doi.org/10.1080/02739615.2018.1446140

McDaniel, K.H., Overman, M., Guttu, M., & Engleke, M.K. (2013). School Nurse Evaluations: Making the process meaningful and motivational. *Journal of School Nursing*, 29(1), 19-30. https://doi.org/10/1177/1059840512469407

McElvaney, R., Greene., & Hogan, D. (2014). To tell or not to tell? Factors influencing young people's informal disclosures of child sexual abuse. *Journal of Interpersonal Violence*, 29(5), 928-947. https://doi.org/10.1177/0886260513506281

McGuire, K., & London, K. (2017). Common Beliefs About Child Sexual Abuse and Disclosure: A College Sample. *Journal of Child Sexual Abuse*, 26(2), 175-194. https://doi.org/10.1080/10538712.2017.1281368

McTavish, J.R., Gonzalez, A., Santesso, N. MacGregor, J.C.D., McKee, C., & MacMillian, H.L. (2020). Identifying children exposed to maltreatment: a systematic review update. BMC Pediatrics, 20(1), 113. https://doi.org/10.1186/s12887-020-2015-4

Miller, E. A., & Azar, S. T. (2019). Additive Contributions of Social Information Processing and Economic Stress to Maltreatment Risk in Disadvantaged Rural Fathers. *Child Maltreatment*, *24*(2), 169–180. https://doi.org/10.1177/1077559518815616

Montanaro, E.A., Kershaw, T.S., & Bryan, A.D. (2018). Dismantling the theory of planned behavior: evaluating the0 relative effectiveness of attempts to uniquely change, attitudes, norms, and perceived behavioral control. Journal of Behavioral Medicine, 41(6), 757-770. https://doi.org/10.1007/s10865-018-9923-x

Moreira, D. N., & Pinto da Costa, M. (2020). The impact of the Covid-19 pandemic in the precipitation of intimate partner violence. *International journal of law and psychiatry*, *71*, 101606. https://doi.org/10.1016/j.ijlp.2020.101606

Nadlifatin, R., Ardiansyahmiraja, B., Persada, S.F., Belgiawan, P.F. Redi, A.A.N.P., & Shu-Chiang Lin. (2020). The measurement of university students' intention to use blended learning system through Technology Acceptance Model (TAM) and Theory of Planned

Behavior (TBP) at developed and developing regions: lessons learned from Taiwan and Indonesia. International Journal of Emerging Technologies in Learning, 15(9), 219-230. https://doi.org/10.3991/ijet.v15i09.11517

National Association of School Nurse and American Nurses Association. (2017). School nursing: Scope and standards of practice (3rd ed.): American Nurses Association

National Association of School Nurses (2017). Definition of School Nursing. https://www.nasn.org/nans/about-nasn/about

Nease, D., Burton, D., Cutrona, S., Edmundson, L., Krist, A., Laws, M., & Tamez, M. (2018). "Our lab is the community": Defining essential supporting infrastructure in engagement research. *Journal of Clinical and Translational Science*, 2(4), 228-233. https://doi:10.1017/cts.2018.325

Newton, A.W. (2016). Child maltreatment: a review of key literature in 2015. *Current Opinion in Pediatrics*, 28(3), 395-399. https://doi.org/10.1097/MOP.0000000000000362

Norman, R. E., Byambaa, M., De, R., Butchart, A., Scott, J., & Vos, T. (2012). The long-term health consequences of child physical abuse, emotional abuse, and neglect: a systematic review and meta-analysis. *PLos Medicine*, 9(11), e1001349. https://doi.org/10.1371/journal.pmed.1001349

Nouman, H., Alfandari, R., Enosh, G., Doley, L., & Daskal-Weichhendler, H. (2020). Mandatory reporting between legal requirements and personal interpretations: Community healthcare professionals' reporting of child maltreatment. *Child Abuse & Neglect*, 101, 104261. https://doi.org/10.1016/j.chiabu.2019.104261

Nursing Continuing Education Requirements by State

(2021). https://www.incrediblehealth.com/blog/ceu-requirements/

Paavilainen, E., & Flinck, A. (2014). The effectiveness of methods designed to identify child maltreatment in social and health care: a systematic review protocol. JBI Database of Systematic Reviews & Implementation Reports, 12(1), 90-100. https://doi-org.exproxy.library.und.edu/10.11124/jbisrir-2014-953

Penalties for Failure to Report and False Reporting of Child Abuse and Neglect.

(2019). https://www.childwelfare.gov/pubpdfs/report.pdf

Perkins, A. (2018, March/April). The red flags of child abuse. *Nursing made Incredibly Easy,* https://doi.org/35--41. 10.1097/01.NME.000052946.76483.6

Persada, S. F., Ivanovski, J., Miraja, B.A., Nadlifatin, R., Mufidah, I., Jacky Chin, & Redi, A.A.N.P. (2020). Investigating generation Z' intention to use learners' generated content for learning activity: A Theory of Planned Behavior Approach. *International Journal of Emereging Technologies in Learning*, 15(4), 179-194. https://doi.org/10.3991/ijet.v15i04.11665

Peitrantonio, A.M., Wright, E., Gibson, K.N., Aldred, T., Jacobson, D., & Niec, A. (2013). Mandatory reporting of child abuse and neglect: crafting a positive process for health professionals and caregivers. *Child Abuse & Neglect*, 37(2-3), 102-109. https://doi.org/10.1016/j.chiabu.2021.12.007

Puls, H.T., Bettenhausen, J.L., Markham, J. L., Walker, J.M., Drake, B., Kyler, K.E., Queen, M.A., & Hall, M. (2019). Urban-Rural Residence and Child Physical Abuse

Hospitalizations: A National Incidence Study. *The Journal of Pediatrics*, 205, 230-235.e2. https://doi.org/10/1016/j.jpeds.2018.09.071

Rahmidel, T., Morowatisharifabad, M.A., Saleh-Abargouei, A., Mirzaei, M., & Fallahzadeh, H. (2019). Evaluation of an education program based on the theory of planned behavior for salt intake in individuals at risk of hypertension. *Health Education Research*, 34(3), 268-278. https://doi.org/10.1093.her/cyz007

Ramon, S., Holdgate, A., & Torrens, R. (2012). Are our frontline clinicians equipped with the ability and confidence to address child abuse and neglect? Child Abuse Review, 21(2), 114-130. https://doi.org/10.1002/car.1180

Ramos, M.M., Fullerton, L., Sapien, R., Greenberg, C., & Bauer-Creegan, J. (2014). Rural-Urban disparities in school nursing: Implications for continuing education and rural school health. *Journal of Rural Health*, 30(3), 265-274. https://doi.org/10.1111/jrh.12058

Resnik D. B. (2008). Social Benefits of Human Subjects Research. *Journal of clinical research best practices*, *4*(11), 1–7.

Risse, C., Walsh Dotson, J., Smart, D., & Brinker, D. Rural Nursing and Evaluation of Pediatric Outreach Program *Online Journal of Rural Nursing and Health Care,* 16(2) http://dx.doi.org/10.14574/ojrnhc.v16i2.411

Robert Wood Johnson Foundation. (2013). *School Nurse Shortage May Imperil Some Children, RWJF Scholars Warn*. https://www.rwjf.org/en/library/articles-and-news/2013/12/School-Nurse-Shortage-May-Imperil-Some-Children.html

Rogers, J.W., Fleming, M., Tipton, J., Ward, A., Garey, K.W., & Pitman, E.P. (2017). Investigating inpatient medication administration using the theory of planned behavior. *American Journal of Health-System Pharmacy,* 74(4), 2065-2070. https://doi.org/10.2146/ajhp160502

Ross, N., Gilbert, R., Torres, S., Dugas, K., Jefferies, P., McDonald, S., Savage, S., & Ungar, M. (2020). Adverse childhood experiences: Assessing the impact on physical and psychosocial health in adulthood and the mitigating role of resilience. *Child Abuse & Neglect*, 103. https://doi.org/10.1016/j.chiabu.2020.104440

Rothstein, R., & Olympia, R. (2020). School nurses on the front lines of healthcare: the approach to maintaining student health and wellness during COVID-19 school closures. *NASN School Nurse* https://doi.org/10.1177/194260X20936612

Rural Information Hub: Child abuse. (2020). https://www.ruralhealthinfo.org/

Rural-Urban Commuting Area Codes(2020). https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/

Salami, S., & Alhalal, E. (2020). Nurses' intention to report child abuse in Saudi Arabia: A cross-sectional study. *Child Abuse & Neglect*, 106, N.PAG. https://doi.org/10.1016/j.chiabu.2020.104514

Savell, S. (2005). Child sexual abuse: are health care providers looking the other way? *Journal of Forensic Nursing*, 1(2), 78-85. https://doi.org/10.1097/01263942-200506000-00007

Schmidt, S., & Natanson, H. (2020). With kids stuck at home, ER doctors see more severe cases of child abuse. The Washington Post. https://www.washingtonpost.com/

Schnieder, K.H. (2017). Psychometric Evaluation of a New Instrument to Evaluate School Nurses' Perceptions on Concussion Care Management. Journal of School Nursing, 33(5), 364-373. https://doi.org/10.1177/1059840516686842

Scoglio A.A.J., Kraus S.W., Saczynski J, Jooma S, & Molnar, B.E. Systematic Review of Risk and Protective Factors for Revictimization After Child Sexual Abuse. *Trauma Violence Abuse*. 2019. https://doi.org/10.1177/1524838018823274

Sege R, Stephens A. Child Physical Abuse Did Not Increase During the Pandemic. *JAMA Pediatr.* 2022;176(4):338–340. https://doi-org/10.1001/jamapediatrics.2021.5476

Sekhar, D.L., Kraschnewski, J.L., Stukey, H., Witt, P.D., Francis, E.B., Morre, G.A., Morgan, P.L., & Noll, J.G. (2018, November). Opportunities and challenges in screening for childhood sexual abuse. *Child Abuse & Neglect, 85*(), 156-163. https://doi.org/10.1016/j.chiabu.2017.07.019

Sharma, S., Wong, D., Schomberg, J., Knudsen-Robbins, C., Gibbs, D., Berkowitz, C., & Heyming, T. (2021). COVID-19: Differences in sentinel injury and child abuse reporting during a pandemic. *Child abuse & neglect*, *116*(Pt 2), 104990. https://doi.org/10.1016/j.chiabu.2021.104990

Smeekens, A.E., Broekhuijsen-van Henten, DM., Sittig, JS., Russel, IM., Ten Cate, OT., Turner, NM., & van de Putte, EM. (2011). Successful e-learning programme on the detection of child abuse in Emergency Departments: a randomized controlled trial. *Archives of Disease in Childhood*, 96(4). https://doi-org/10/1136/adc.2010.190801

Smith, B., Li, Q., Wang, K., & Smith, A.M. (2021). A national study of child maltreatment reporting at the county level: Interactions among race/ethnicity, rurality, and poverty.

Children & Youth Services Review, 122, N.PAG. https://doi.org/10.1016/j.childyouth.2021.105925

Smith, B.D., & Pressley, T.D. (2019). Do surprisingly low child maltreatment rates in rural southern counties reflect lower rates of substantiation? *Children and Youth Services Review*, 107. https://loi.org/10.1016/j.childyouth.2019.104493

Smith S, Sim J, Halcomb E. (2019). Nurses' experiences of working in rural hospitals: An integrative review. *Journal of Nursing Management*, 27(3):482-490. https://doi.org/10.1111/jonm.12716.30204275

Splane, B (2021). *Different challenges in urban and rural nursing jobs.* https://www.degreechoices.com/blog/different-challenges-urban-rural-nursing/

Stige, S. H., Halvorsen, J.E., & Solberg, E.T. (2020). Pathways to Understanding – How Adult Survivors of Child Sexual Abuse Came to Understand that they had been Sexually Abused. *Journal of Child Sexual Abuse,* 29(2), 205-221. https://doi.org/10.1080/10538712.2019.1643432

Steinmetz, H., Knappstein, M., Ajzen, leek, Schmidt, P., & Kabst, R. (2016). How effective are behavior change interventions based on the Theory of Planned Behavior? A three-level meta-analysis. *Zeitschrift Fur Psychologie*, 224(3), 216-233. https://doi.org/10.1027/2151-2604/a000255

Sundler, A. J., Whilson, M., Darcy, L., & Larsson, M. (2019). Swedish School Nurses' Experiences of Child Abuse. *The Journal of School Nursing*. https://doi.org/10.1177/1059840519863843

Sweedo, E., Idaikkadar, N., Leemis, R., Dias, T., Radhakrishnan, L., Stein, Z., Chen, M., Agathis, N., & Holland, K. (2020, December). Trends in U.S. emergency department visits related to suspected or confirmed child abuse and neglect among children and adolescents aged <18 years before and during COVID-19 pandemic-United States, January 2019-September 2020. *Morbidity and Mortality Weekly Report 69,* (49), 1841-1847. https://doi.org/10.15585/mmwr.mm6949a1

Tabak, N., Itzhaki, M., Sharon, D., & Barnov, S. (2013). Intentions of nurses and nursing students to tell the whole truth to patients and family members. *Journal of Clinical Nursing*, 22(9-10), 1434-1441. https://doi.org/10.1111/j.1365-2702.2012.04316.x

Tal, R., Tal, K., & Green, O. (2018) Child-Parent Relationship Therapy with Extra-Familial Abused Children, Journal of Child Sexual Abuse, 27(4), 386-402. https://doi.org/10/1080/10538712.2018.1451420

Tapera, R., Mbongwe, B., Mhaka-Mutepfa, M., Lord, A., Phaladze, N.A., & Zetola, N.M. (2020). The theory of planned behavior as a behavior change model for tobacco control strategies among adolescents in Botswana *PLos ONE*, 15(6), 1-13. https://doi.org/10.1371/journal.pone.0233462

The Child Abuse Prevention And Treatment Act. (2018). https://www.acf.hhs.gov/sites/default/files/cb/capta.pdf

The Red Flags of Child Abuse. (2021). *Dakota Nurse Connection*, 74,22-26.

Tingberg, B., Bredlov, B., & Ygge, B.-M. (2008). Nurses' experience in clinical encounters with children experiencing abuse and their parents. Journal of Clinical Nursing, 17(20), 2718-2724. https://doi.org/10.1111/j.1365-2702.2008.02353.x.

Tiyyagura, G. K., Gawel, M., Alphonso, A., Koziel, J., Bilodeau, K., & Bechtel, K. (2017). Barriers and Facilitators to Recognition and Reporting of Child Abuse by Prehospital Providers. *Prehospital emergency care*, *21*(1), 46–53. https://doi.org/10.1080/10903127.2016.1204038

UCI Office of Researh(2021). https://research.uci.edu/compliance/human-research-protections/irb-members/assessing-risks-and-benefits.html

U.S. Department of Agriculture. (2020). https://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx

U.S. Department Of Health & Human Services(2021). https://health.gov/healthypeople/objectives-and-data/browse-objectives/violence-prevention/reduce-child-abuse-and-neglect-deaths-ivp-15

U.S. Department of Health & Human Services (2019). https://www.acf.hhs.gov/cb/research-data-technology/reporting-systems/ncands

U.S. Department Of Health And Human Services, Administration For Children And Families(2010). https://www.acf.hhs.gov/sites/default/files/documents/opre/nis4_report_congress_full_pdf_jan2010.pdf

Vachon, D.D., Krueger, R.F., Rogosch, F.A., & Cicchetti, D. (2015). Assessment of the harmful psychiatric and behavioral effects of different forms of child maltreatment. *JAMA Psychiatry*, 72(11), 1135-1142. https://doi.org/10.1001/jamapsychiatry.2015.1792

Victor-Chmil, J., & Foote, E. (2016). An Interprofessional Simulation for Child Abuse Reporting. *Clinical Simulation in Nursing*, 12(3), 69-73. https://doi-org/10.1016/j.ecns.2015.12.003

Van der Kolk, B.A. (2005). Child abuse & victimization. *Psychiatric Annals*, *35*(5), 374-378.

Walsh, W. & Jones, L. (2015). *Factors that Influence Child Abuse Reporting: A Survey of Child-Serving Professionals.* Durham, NH: Crimes against Children Research Center.

Walsh, W.A., & Mattingly, M.J. (2012). Understanding child abuse in rural and urban America. *University New Hampshire,* http://www.carseyinstitute.unh.edu

Wilcox, J., Miller-Cribbs, J., Kientz, E., Carlson, J., & DeShea, L. (2017). Impact of Simulation on Student Attitudes about Interprofessional Collaboration. *Clinical Simulation in Nursing*, 13(8). https://doi-org/10.1016/j.ecns.2017.04.004

Willgerodt, M.A., Brock, D.M., & Maughan, E.M. (2018). Public School Nursing Practice in the United States. *The Journal of School Nursing, 34*(3), https://www.nasn.org/research/school-nurse-workforce

Wolf, J.P., Freisthler, B., & McCarthy, K.S. (2021). Parenting in poor health: Examining associations between parental health, prescription drug use, and child maltreatment. *Social Science & Medicine*, 277, 113887. https://doi.org/10.1016/j.soscimed.2021.113887

World Health Organization. (2020). *Child Maltreatment*. https://www.who.int/news-room/fact-sheets/detail/child-maltreatment

Yaffe, M.J., Wolfson, C., & Lithwick, M. (2009). Professions show different enquiry strategies for elder abuse detection: Implications for training and interprofessional care, *Journal of Interprofessional Care*, 23(6) https://doi.org/10.3109/13561820902886279

Zeanah, C. H., & Humphreys, K. L. (2018). Child Abuse and Neglect. *Journal of the American Academy of Child and Adolescent Psychiatry*, *57*(9), 637–644. https://doi.org/10.1016/j.jaac.2018.06.007

Zielinski, S., Paradis, H.A., Herendeen, P., & Barbel, P. (2017). The identification of psychosocial risk factors associated with child neglect using the WE-CARE screening tool in a high-risk population. *Journal Pediatric Health Care: Official Publication of National Association of Pediatric Nurse Associates & Practitioners*, 314(4), 470-475. https://doi.org/10.1016/j.pedhc.2016.12.005

Ziller, E., & Milkowski, C. (2020). A century later: Rural public health's enduring challenges and opportunities. American Journal of Public Health, 110(11), 1678-1686. https://doi.org/10.2105/AJPH.2020.305868