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MANDATORY CHILD ABUSE AND NEGLECT REPORTING BEHAVIORS AMONG REGISTERED NURSES IN NEW MEXICO: A STATEWIDE COMPARATIVE STUDY

Ingrid Ann Wilson
University of New Mexico - Main Campus

Ingrid Ann Wilson
Candidate

University of New Mexico, College of Nursing
Department

This dissertation is approved, and it is acceptable in quality and form for publication:

Approved by the Dissertation Committee:

Jongwon Lee, Ph.D., RN, Chair

Elizabeth Dickson, Ph.D., RN

Jui-Ying Feng, Ph.D., RN

Ralph Klotzbaugh, Ph.D., RN, FNP-BC

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By

INGRID ANN WILSON

B.S. Nursing, University of Texas El Paso, 1997

M.S. Nursing, University of Texas El Paso, 2013

DISSERTATION

Submitted in Partial Fulfillment of the
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DEDICATION

This dissertation is dedicated to my children, Jacob, and Joshua. You are my purpose, and I will always cherish you. I also dedicate this research to the children in New Mexico and also in the world. You matter.

ACKNOWLEDGEMENTS

This dissertation would not have been possible without the work efforts and knowledge of the dissertation committee. Please accept my heartfelt gratitude for all your time and guidance. Your research work sets the bar high.

Dr. Lee, your leadership as committee chair throughout this process is valued beyond words. You are a true friend and mentor. Your wisdom and expertise in this research (and all the other research you have done) are remembered and continued in the same manner you taught the concepts to me, i.e., with a personal obligation to uphold to research standards that reflect the highest level of moral integrity. Dr. Feng, I thank you for allowing me to learn from your studies on child abuse and neglect. I have appreciated every moment of your time in this process. Your research on children was the launching point for this study. Thank you for the CARIS and for allowing me to share it with the nurses in New Mexico. Your work for children is disseminating throughout the world. Dr. Dickson, thank you for your time and advice. Your research is very important to New Mexico, and I referred to it often during this study as a pattern to align with. Dr. Klotzbaugh, it is of no coincidence that you were on this committee. Your knowledge on rural health and marginalized groups is vital. Your research on cues to action was very applicable in this study and I learned much from you. Thank you for your time.

Lastly, I would like to thank my life partner, Bryan. I would not be able to accomplish any of this without your support. Most importantly, I thank my heavenly Father who makes all things possible.

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ABSTRACT

Child abuse and/or neglect (CAN) is a global problem. Although nurses are mandated CAN reporters, a lack of reporting has been an issue. New Mexico (NM) is faced with higher child poverty and CAN-related substance-abuse compared to other U.S. states. This quantitative study aimed to explore factors influencing intended/actual CAN reporting behaviors among NM registered nurses (RN)s, examine relationships of these factors, and compare differences in reporting behaviors between rural and urban locations. A survey to a sample of RNs (*N*=146) showed factors associated with CAN

reporting intended behaviors were work status (r=.21, p < .05), cues to action (r=.20, p <.05), and perceived behavioral control (PBC) (r=.20, p < .05). PBC (β =.21, p<.05) had the most dominant effect in the hierarchical linear regressions. There were no significant differences in reporting behaviors between the combined metropolitan and non-metropolitan locations. CAN-focused training can increase RN perceived control with mandated reporting.

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CHAPTER 1: INTRODUCTION

The abuse and neglect of children is a serious problem that impacts communities and populations all over the world. Connected with basic human rights and international health concerns, child abuse and/or neglect (CAN) includes issues related to child exploitation, the lack of essential necessities, and the physical, sexual, and/or emotional abuse that result in potential and actual harm (or death) to children (Centers for Disease Control and Prevention [CDC], 2022a; World Health Organization [WHO], 2022, 2023). To prevent and reduce further CAN occurrences, many countries (e.g., the U.S., Australia, Taiwan, etc.) have initiated mandatory CAN reporting legislations, which require childcare professionals (e.g., doctors, nurses, teachers) to report suspected cases of CAN (Child Welfare Information Gateway, 2021; Matthews & Bross, 2008; Matthews, 2016; Petersen et al., 2014; WHO, 2022). Nurses, in particular, are strategic stakeholders in preventing CAN, as they are situated in work settings (such as schools, pediatric units, emergency room settings, and health clinics) that provide ideal opportunities to identify and prevent CAN if and when necessary. However, no reporting or underreporting of CAN has been identified as an issue among nurses, and other childcare professionals. Importantly, research indicates at least one-fifth of mandated nurse reporters have not reported CAN despite CAN having been suspected (Alter et al., 2012; Fraser et al., 2010; H. Lee & Kim, 2018). This dissertation study explores mandatory CAN reporting behaviors among registered nurses (RNs) in New Mexico (NM). This first chapter provides the background to the research problem, the research aims, a preliminary overview of the context of the study, and the significance of the study.

Background and Significance of the Problem

The definition of CAN is commonly associated with four abuse categories: (1) physical (e.g., head injury, abdominal injury, cigarette burns), (2) emotional (e.g., intimidating threats of violence), (3) sexual (e.g., sexual relations, sex trafficking), and (4) neglect (e.g., failure to provide medical treatment for bone fractures) (CDC, 2022a; Leeb & Leeb & National Center for Injury Prevention and Control [USNCIPC], 2008; Pekarsky, 2020; WHO, 2022). The abuse and/or neglect of children can be serious (including violent behaviors) such as those actions (or the lack thereof) on the part of a parent or caretaker that can and do result in death (Child Abuse Prevention and Treatment Act [CAPTA] of 1974, 2010, §5102; CDC, 2022a, WHO, 2022). Accordingly, CAN continues to be a major issue internationally, despite united efforts to intervene in it (e.g., mandatory CAN reporting laws) (CDC, 2022a; UNICEF, n.d.; WHO, 2022, 2023).

The ramifications associated with CAN are complex and substantial. Globally, nearly 75% of children (aged 2–4) are psychologically and/or physically maltreated according to the World Health Organization [WHO] (2022). These percentages of CAN victims translate into huge numbers. For example, evidence shows that approximately one billion children (aged 2–17 years) worldwide experienced some form of violence in 2016 (Hillis et al., 2016). In the U.S., the number of CAN cases have remained consistent and there are more than 1,700 CAN-related child deaths annually (U.S. Department of Health and Human Services [USDHHS], 2020, 2021). High trends persist globally, especially for children living in high poverty and children under the age of one (CDC, 2022b; UNICEF, 2020a; WHO, 2023).

The overall impact of CAN on humankind is tremendous. For those individuals who have experienced incidents of CAN, the impact can be life-long, affecting multiple aspects of health (e.g., heart disease, cancer, chronic lung disease, depression, suicide, obesity, and risk-taking behaviors: CDC, 2023; Felitti et al., 1998; WHO, 2022). Correspondingly, CAN contributes considerably to healthcare costs and diminished work productivity (Petersen et al., 2018; WHO, 2022). A combined lifetime expenses connected with CAN were estimated at approximately $428 billion for the U.S. in 2015 (Petersen et al., 2018).

It is important to also acknowledge that, fundamentally, CAN in and of itself is a complicated phenomenon, influenced by a wide domain of individual, cultural, and social issues (Feng & Levine, 2005). For example, social values sway how children should be raised and what constitutes CAN (Feng, 2003). Moreover, while different cultures generate social norms that influence how CAN is perceived, factors such as religion, identified gender, and personal experience also influence how CAN is individually interpreted (Feng, 2003). Correspondingly, mandated reporting behaviors among nurses have been linked to a variety of psychosocial factors associated with CAN reporting, which have included attitudes, perceived control over reporting, subjective norms, and lack of knowledge in CAN reporting (Feng & Levine, 2005). These different factors may play an important role in how CAN is reported and accordingly, CAN reporting outcomes (Wilson & Lee, 2021).

Contextual factors are also correlated with CAN reporting (e.g., laws and geographical location: Wilson & Lee, 2021). For example, CAN laws vary from country to country and also within the U.S. (Child Welfare Information Gateway, 2021;

Matthews 2016; Petersen et al., 2014; WHO, 2022). Healthcare professionals working in the U.S. are mandated by legislation (e.g., the Child Abuse Prevention and Treatment Act [CAPTA], 1974, 2010, §5102) to report CAN. Importantly, in the U.S., the specifics of CAN laws vary across state lines and U.S. territories, which can influence how CAN is identified and reported (Child Welfare Information Gateway, 2021). As such, the understanding of CAN laws in the U.S. can vary, as state regulations are adopted by state agencies and then applied to individual cases (Child Welfare Information Gateway, 2021). That said, other geographical variables could also influence CAN reporting outcomes (e.g., the rural and urban location of reporters: Francis et al., 2014; Fraser et al., 2010). Fraser et al. (2010) reported that Australian nurses who worked in rural locations were less likely to report CAN than nurses working in metropolitan areas. However, more research on how the rural location of mandated nurse reporters influence CAN reporting is needed.

Apart from the previously mentioned issues, a crucial point for understanding CAN reporting is that although it is legally mandated for nurses to report CAN instances in all 50 U.S. states, there is a lack in evidence how this legal mandate for healthcare professionals is being enforced by the states. Specifically, a research gap exists with regards to nurses' mandatory CAN reporting behaviors (Feng, 2003; Wekerle, 2013; Petersen et al., 2014; Wilson & Lee, 2021). Importantly, inconsistencies of CAN reporting among nurses can potentially influence (and also hinder) their capacity to develop child prevention strategies, particularly for those children who are most vulnerable to becoming victims to CAN (Finkelhor et al., 2013, Green, 2020; Petersen et al., 2014; Sigad et al., 2019). To provide a greater understanding regarding the

lack/inconsistency of CAN reporting among nurses, an assessment of the relationships between these aforementioned determinants and CAN reporting behaviors is needed. Such research on CAN requires a sophisticated and broad perspective that includes, for example, a rigorous evaluation of whether CAN reporting is culturally accepted and the environment in which this reporting takes place (e.g., within and across individual states in the U.S.) (Petersen et al., 2014). It is with consideration of this view that a statewide perspective was chosen for this project and the state of NM was used as the research setting for this project examining the CAN reporting behaviors among RNs.

There is a specific need for CAN related research in NM because NM is a largely rural state, with higher CAN risk factors and CAN rates when compared to national averages (Rural Health Information Hub [RHIH], 2023c; USDHHS, 2020, 2021). Evidence shows there are more children living in poverty, higher trends of CAN incidence, and higher CAN victims compared to U.S. national rates (NMI-BIS, 2022). There are also higher CAN-related risk factors in NM. For example, the NM percentage of CAN victims under the care of a caregiver with alcohol use was nearly two times higher than national averages in 2019 (USDHHS, 2021). Moreover, the poverty rate for children in NM has persistently ranged approximately 30% higher than overall U.S. child poverty age of one nearly doubled the national average (e.g., 48.4/1,000 compared to the national average of 25.7/1,000) (USDHHS, 2021).

As is mandated in all U.S. states, NM law mandates CAN reporting for nurses, among other childcare professionals (NM Children, Youth & Families Department [NMCYFD], n.d.). However, current information is not available regarding the number of RNs who report CAN and their degree of compliance with CAN reporting laws (K.

Hardy, NMCYFD Public Records Custodian, personal email communication, May 2, 2020). Adding to this problem, NM is predominantly a rural state, with nurses reporting from both urban and rural locations (RHIH, 2023c). The lack of reporting and compliance information represents a major knowledge gap that requires further research, especially considering that NM is a state with significantly higher CAN risk factors (discussed in more detail in chapter two). Therefore, an investigative study design was chosen to shed light on which factors have contributed to the higher-than-average rates of CAN incidents in NM, and whether there should be nurse-focused intervention strategies (e.g., training, support) and/or changes in NM CAN reporting laws and policies (e.g., how mandatory reporting is enforced) to protect NM children more effectively from harm.

Purpose of the Study

The purpose of this research was to (1) explore factors influencing CAN reporting behaviors among RNs living in NM, (2) examine the relationships of these factors with intention to report CAN and actual behaviors of CAN reporting, and (3) compare differences in CAN reporting intention and behaviors between RNs working in rural and urban areas.

Research Questions

The following research questions were explored to address the aims of this research:

1. What are the factors (e.g., sociocultural, demographic, psychosocial attributes) influencing CAN reporting intention and behaviors among RNs living in NM?
2. Are there any significant relationships between these factors and CAN reporting intention and behaviors among RNs in NM?

3. Are there any significant differences in CAN reporting intention and behaviors between RNs working in rural areas and RNs working in urban areas in NM?

The long-term objective of this project was to provide health care providers, including nurses, with in-depth information that can be used to develop intervention strategies (e.g., training programs) that can maximize their CAN reporting behaviors. Ultimately, these interventions may lead to improved health outcomes by increasing NM children's protection from ongoing abuse and neglect.

Definitions of Key Terms

The following definitions of terms were applied to this study (in the context of CAN):

- Attitude: Attitude is a "person's general feeling about child abuse, which consists of four elements: (1) attitude toward child abuse itself, (2) attitude about child discipline, (3) attitudinal response to abusive parents and abused children, and (4) attitude toward professional responsibility of reporting suspected child abuse" (Feng, 2003, p. 7).
- Child: A child is a human under 18 years of age (unless exceptions apply under law) (Justia US Law, 2018).
- Child abuse and/or neglect (CAN): The definition of CAN is based on the U.S. Child Abuse and Prevention Act of 1974 and "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 Abuse Prevention and Treatment Act of 1974, 2010, §5102).

- Cues to Action: Cues to action are obvious internal and/or external forms of information/communication that encourage, trigger, and/or motivate an individual to practice optimal behavior (Coe et al., 2012, Klotzbaugh & Spencer, 2015, Hartley et al., 2018).
- Metropolitan area: A metropolitan area contains one or more central counties with urbanized areas that uses county as a geographic unit as defined by the U.S. Office of Management and Budget (OMB) (Ingram & Franco, 2013; National Center for Health Statistics [NCHS], 2017; RHIH, 2023a).
- Metropolitan county: Metropolitan counties are “large central metro counties in MSA (metropolitan statistical areas) with a population of one million that: 1) contain the entire population of the largest principal city of the MSA, or 2) are completely contained within the largest principal city of the MSA, or 3) contain at least 250,000 residents of any principal city in the MSA” (NCHS, 2017, para. 8). There are four metropolitan categories: large central metro, large fringe metro, medium metro, and small metro (Ingram & Franco, 2013; NCHS, 2017).
    1. Large central metro: "Counties in MSAs with a population of one million or more that: (a) Contain the entire population of the largest principal city of the MSA, or (b) Have their entire population contained in the largest principal city of the MSA, or (c) Contain at least 250,000 inhabitants of any principal city of the MSA” (NCHS, 2017, para. 8).

2. Large fringe metro: "Counties in MSAs of one million or more population that did not qualify as large central metro counties" (NCHS, 2017, para. 8).
3. Medium metro: "Counties in MSAs of populations of 250,000 to 999,999 population" (NCHS, 2017, para. 8).
4. Small metro: "Counties in MSAs of populations less than 250,000" (NCHS, 2017, para. 8).

- Non-metropolitan: A non-metropolitan county is "outside the boundaries of metropolitan area" (as defined by the U.S. OMB) (RHIH, 2022, para. 12). Non-metropolitan areas are subdivided into two types, micropolitan areas and noncore counties (Ingram & Franco, 2013, NCHS, 2017).
    1. Micropolitan—"Counties in micropolitan statistical areas" (Ingram & Franco, 2013, p. 2).
    2. Noncore—"Nonmetropolitan counties that did not qualify as micropolitan" (Ingram & Franco, 2013. p. 2).
- Perceived Behavioral Control: Perceived behavioral control is the "nurses' perception of the control they have over the reporting of suspected child abuse" (Feng, 2003, p. 70).
- Poverty: The definition of poverty was applied to this study as it is explained by the USDHHS (Federal Register: National Archives, 2021). Poverty is based on poverty thresholds, which are determined by family size, age of family members, and income, and are adjusted to match inflation rates. Poverty indicates that the total family income is less than

the poverty threshold (i.e., income is insufficient to meet needs: U.S. Census Bureau, 2020) (Federal Register: National Archives, 2021; U.S. Census Bureau, 2020).

- Registered nurse (RN): A RN is an individual who is educated and licensed to practice registered nursing as stipulated by the regulating bodies of Boards of Nursing, with responsibilities including (but not limited to) the initial physical assessment and initiation of the patient's care plan, and care (NM Board of Nursing [NMBON], 2021).
- Rural: Rural locations consist of "all territory, population, and housing units located outside of urbanized areas and urban clusters" (Coburn et al., 2007, p. 4).
- Subjective Norms: Subjective norms refer to social pressure on whether an individual should or should not report CAN (Feng, 2003).
- Urban: "Urbanized areas include populations of at least 50,000, and urban clusters include populations between 2,500 and 50,000" that uses census block or block groups, as defined by the U.S. Census Bureau (Coburn et al., 2007, p. 4).

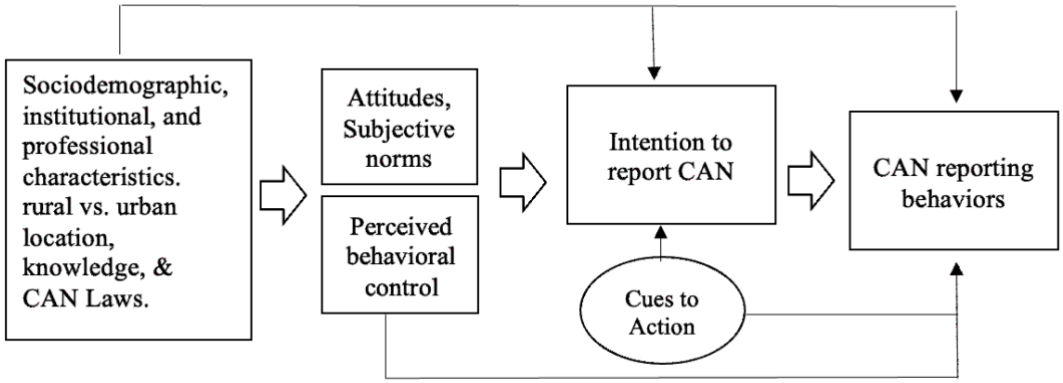
Overview of the Theoretical Framework

This dissertation research was guided by an extended version of Ajzen's (1991, p. 182) Theory of Planned Behavior (TPB), which integrates the component of "cues to action" from the Health Belief Model (HBM) (HBM: Rosenstock, 1974, p. 334; Becker, 1974, p. 416). Figure 1.1 illustrates this extended version of the TPB. The TPB was chosen as a framework in this project because it has been widely used to explain different

types of health behavior, including CAN reporting behavior, across different racial, ethnic, and professional groups (Ben Natan et al., 2012; Chan et al., 2019; Feng & Levine, 2005; H. Lee & J. Kim, 2018).

Figure 1.1

Conceptual Model for the Proposed Research



Note. The figure above demonstrates the extended version of the TPB (Ajzen, 1991) integrated with the “cues to action" component from the HBM (Becker, 1974; Gerend & Shepherd, 2012; Hartley et al., 2018; Rosenstock, 1960, 1966, 1974). A circle represents the variable from the HBM. Squares represent variables from the TPB. Arrows represent the relationships between the variables.

The TPB is originally based on the expectancy-value model, which encompasses a person’s expectations, motivation, and goals (Ajzen, 1991). By itself, the TPB is an extension of the Theory of Reasoned Action and examines the relationships between intended behaviors and attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991). The TPB assumes that a person’s behavioral intentions determine actual behavior (e.g., CAN reporting) (Ajzen, 1991; Lee & Carvallo, 2015). Attitudes are the favorable or unfavorable degrees of psychological inclinations towards objects or

circumstances (Ajzen, 1991; J. Lee, 2007). Subjective norms are the outside pressures that influence intended behavior (Ajzen, 1991). Perceived behavioral control is the individual perception of control that influences intended behavior and can independently influence intention and also actual behavior (Ajzen, 1991). Although the TPB does not explicitly outline how background factors influence behavioral intentions, the TPB sets the stage to demonstrate how an array of background factors, such as individual personality, personal values, demographics (e.g., education, age, gender, education), media, and additional information/communication sources, can influence attitudes, beliefs, behavior intentions, and actual behavior (Ajzen, 2011). Consistent with this approach, this study incorporated a series of external factors into the model to explore their influence on mandatory CAN reporting intention and behaviors among RNs living in NM. These external factors are sociodemographic characteristics, institutional characteristics, professional characteristics, rural/urban location, and CAN laws (Wilson & Lee, 2021.

Integration of Cues to Action with the TPB

From a theoretical perspective, the TPB and the HBM share basic similarities as both derive from the value-expectancy theory that encompasses a person's level of motivation, outcome expectation, and goals (Ajzen, 1991; Gerend & Shepherd, 2012; Hartley et al., 2018; Poss, 2001; Rosenstock, 1960). Both the TPB and HBM have been used extensively in research to predict and/or explain health behavior (e.g., Feng & Levine, 2005; Gerend & Shepherd, 2012; Klotzbaugh & Spencer, 2015). Importantly, the HBM integrates a necessary triggering component (i.e., "cues to action") into its model to explain an individual's behavior (Gerend & Shepherd, 2012; Hatley et al., 2018;

Rosenstock, 1960, 1966, 1974). “Cues to action” refer to stimuli that trigger the decision-making process (Rosenstock, 1974, p. 334). That is, cues are internal and external types of communication incentives that motivate an individual to change or commit to change to appropriate behavior (Gerend & Shepherd, 2012; Rosenstock, 1960, 1966, 1974). Examples of these stimuli include perceived illness symptoms (e.g., feeling pain), the persuasion of friends or physicians, and the advice from supervisors, etc. (Gerend & Shepherd, 2012; Hartley et al, 2018; Poss, 2001; Rosenstock, 1966). At this point it is important to highlight that in many cases, nurses have relied on cues to action (e.g., advice from physicians) to determine whether they should or should not report CAN. As such, cues to action could ultimately facilitate reporters’ actual reporting of CAN, and therefore it is important to incorporate the concept of “cues to action” into the TPB framework. Consistent with the research aims, this information on cues to action can provide additional perspectives on how such internal and/or external forms of communication signal/remind/facilitate the CAN reporter (e.g., RNs) to engage in ideal CAN reporting (Gerend & Shepherd, 2012; Rosenstock, 1960; Poss, 2001).

Context of the Study

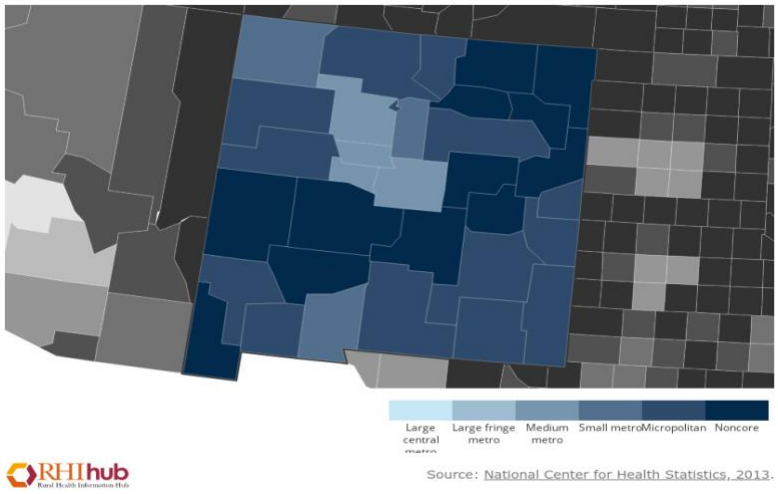
Sociodemographic and Regional Characteristics New Mexico (NM)

The setting for this study was the southwestern U.S. state of NM, which is bordered by Texas, Arizona, Colorado, and Mexico. Covering approximately 121,356 square miles of area, NM contains 33 counties, and has a population of over 2,000,000 people (RHIH, 2023b). To describe the geographical areas (e.g., counties) of NM, the researcher used the National Center for Health Statistics (NCHS) 2017 data systems urban-rural classification scheme for classification of counties because this

classification groups geographical areas by counties (RHIH, 2023a, c). Based on these guidelines, the majority (26/33) of counties (78.8 %) in NM are considered non-metropolitan (Ingram & Franco, 2013; NCHS, 2017; RHIH, 2023c). See Figure 1.2.

Figure 1. 2

NM County Metropolitan Classification

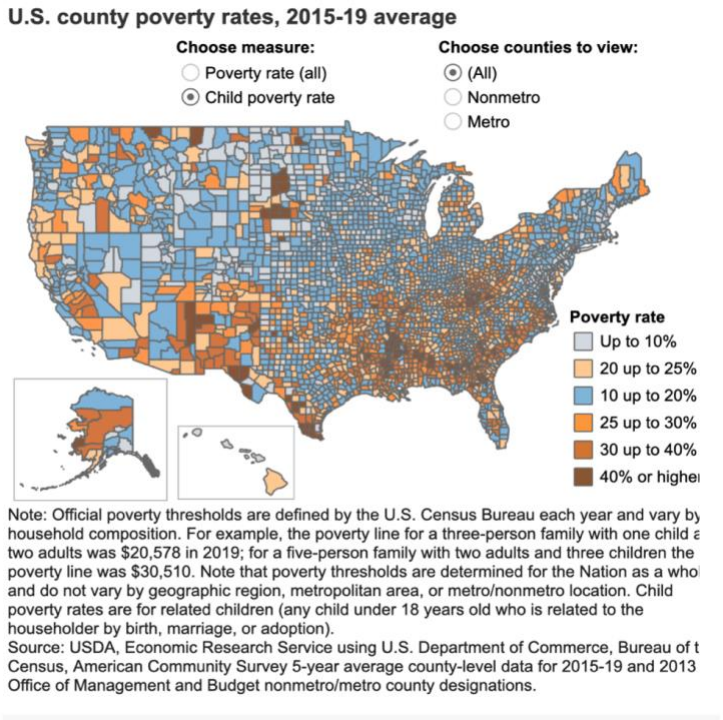


Note. Source: Rural Health Information Hub [RHIH] (2023c).

Regarding NM population demographics, 82% of the state identifies as White, 2.6% African American, 1.8% Asian, 10.9% American Indian or Alaska Native, and 0.2% Native Hawaiian or Pacific Islander (U.S. Census Bureau, 2019). Nearly half (49.3%) of the population identifies as Hispanic or Latino (U.S. Census Bureau, 2019). About a quarter (22.7%) of the state's population consists of children under the age of 18 (U.S. Census Bureau, 2019). Also, NM (along with six other U.S. states) is a state that includes several counties with some of the highest (e.g., higher than 40%) overall child poverty levels in the U.S. (U.S. Department of Agriculture [USDA], 2021). Figure 1.3 illustrates the comparison of child poverty rates among non-metro counties in NM compared to other U.S. counties.

Figure 1.3

Child Poverty Rates in the U.S. 2015-2019



Note. Source: U.S. Department of Agriculture [USDA] (2021).

In terms of healthcare, there are 10 critical access hospitals, 15 rural health clinics, 106 federally qualified Health Centers, and 21 short-term hospitals located outside urban areas (RHIH, 2023b). New Mexico also ranks highest for rates in teen pregnancies and was one of three states (including Arkansas and Oklahoma) with the highest birth rates (e.g., 43/1,000) among adolescents in 2013 (Dickson, 2017; Kost et al., 2017).

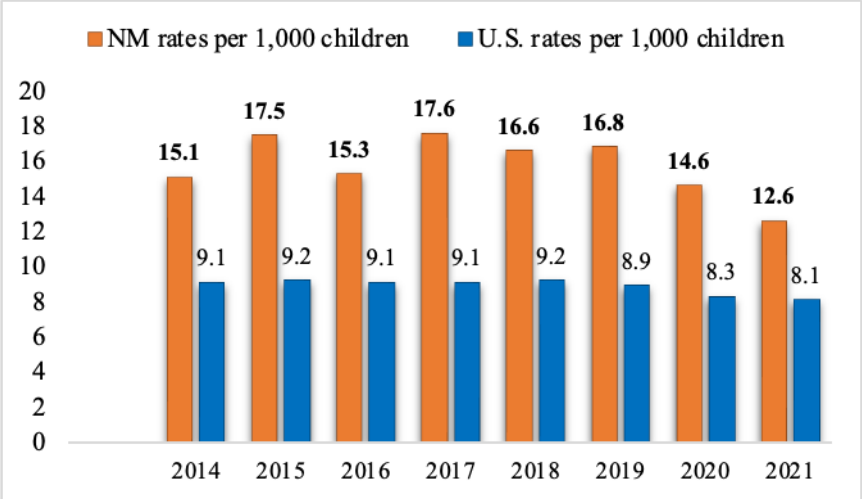
Child Abuse and Neglect in NM

The New Mexico Children Youth and Families Department (NMCYFD, n.d.) houses a statewide central intake/child abuse hotline where suspected or known cases of CAN may be reported. The NMCYFD (2022) publicly maintains its 360 Annual Report

each fiscal year. The U.S. Department of Health and Human Services (USDHHS) also collects CAN data annually from states. The rates of substantiated CAN cases in NM have consistently nearly doubled the national rates of CAN (USDHHS, 2022). See Figure 1.4. Figure 1.5 outlines the NM CAN rates by county.

Figure 1.4

Rates of CAN in NM Compared to U.S. Rates



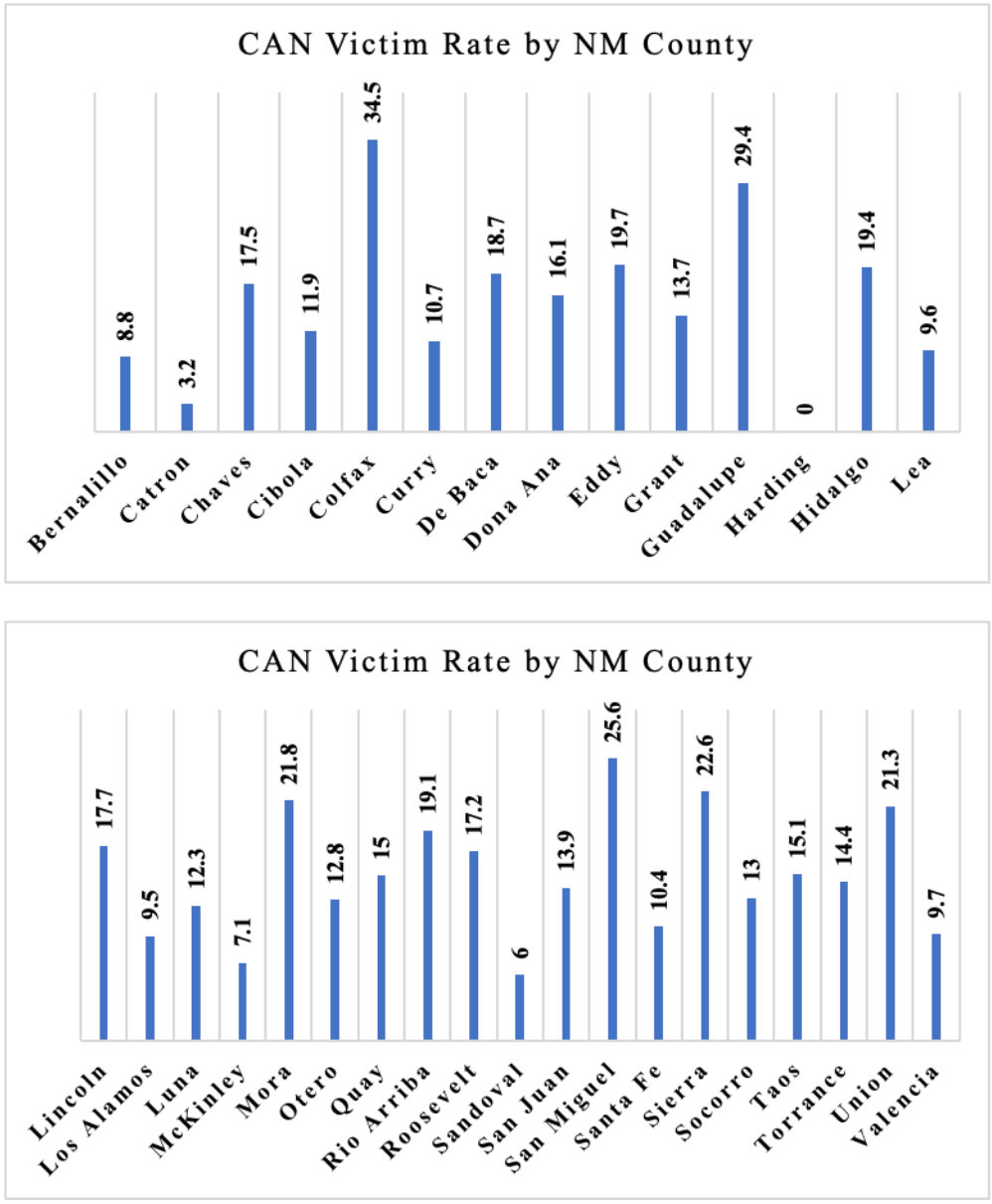
Note. Source: USDHHS (2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022).

Reporting of CAN in NM

Child abuse allegations must be substantiated with evidence to determine whether a child has been the victim of CAN (NMCYFD, n.d.). The NMCYFD (2021) received 39,324 reports of CAN and there were 19,015 completed investigations. The NM counties with the highest CAN rates from June 2020-June 2021 were (1) Colfax County ranked with the highest CAN rate (34.5/1,000); (2) Guadalupe County ranked with the second highest CAN rate (29.4/1,000); and (3) Sierra County ranked with the third highest CAN rate (22.6/1,000). See Figure 1.5.

Figure 1.5

NM CAN Victim Rate by County: June 2020-June 2021



Note. Source: NMCYFD (2022).

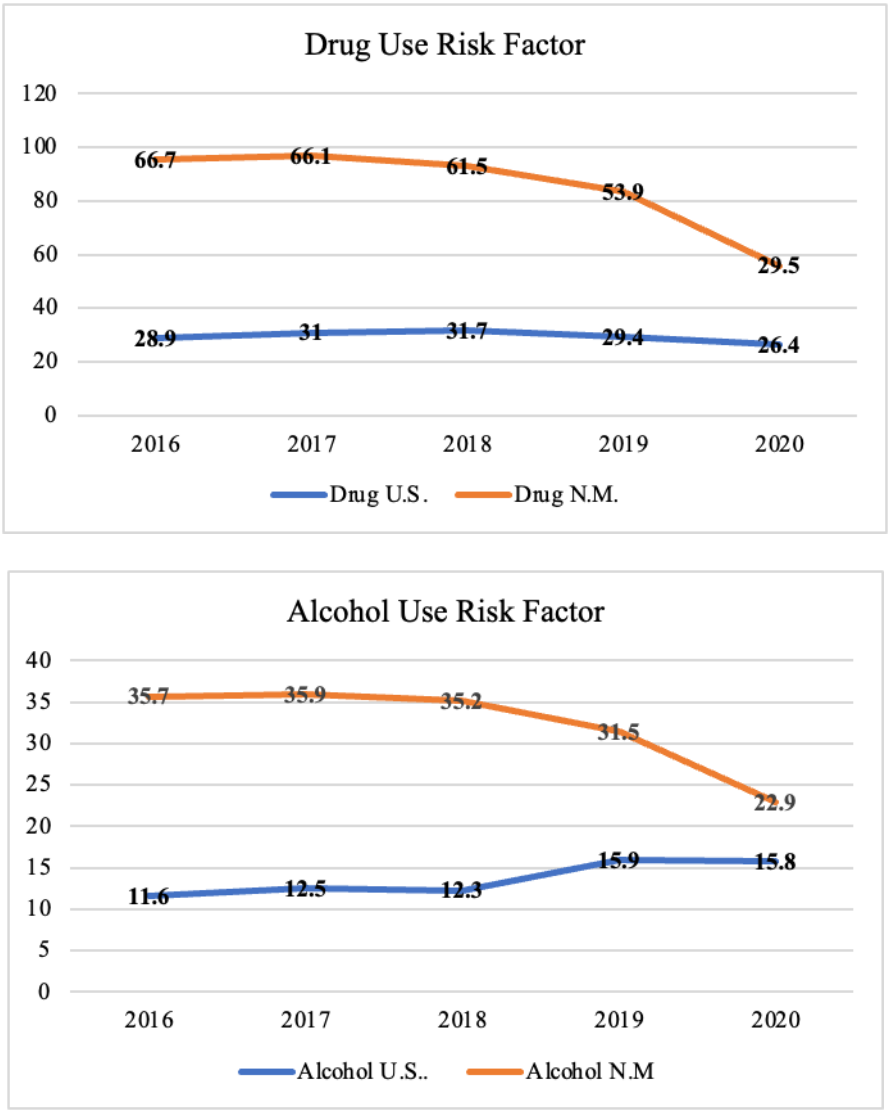
CAN Risk Factors in NM. Along with higher CAN rates, NM also has major risk factors for CAN, such as caregivers with substance use disorders, and community settings lending to disadvantaged environments for care providers of children. A few of these risk factors are presented briefly in the next section of this first chapter and in more

detail in the second chapter of this desertion. More specifics on actual numbers and types of CAN in NM are addressed in detail in later sections of this dissertation also.

Substance Use. Evidence shows caregiver substance use is a risk factor for CAN and caregivers who experience a substance use disorder are more likely to abuse children under their care (CDC, 2022b). In NM, the percentage of CAN victims who are cared for by a caregiver who used alcohol has been nearly three times higher than national averages. For example, between 2016 and 2018, about 35% of CAN victims in NM had a caregiver with a record of alcohol abuse. These percentages are nearly three times the national rate of 11.6% -12.5% during the same period (USDHHS, 2017, 2018, 2019, 2020, 2021). The percentages of CAN victims with a caregiver with a drug use risk factor have also been higher than national averages. For example, the U.S. national percentage of victims who had a caregiver who used drugs ranged from 28.9% to 30.7% from 2016-2019; while in NM these percentages at times more than doubled the national average (53.9%-66.7%) (USDHHS, 2017, 2018, 2019, 2020, 2021; see Figure 1.6 for comparisons).

Figure 1.6

CAN Victims with Caregiver Drug & Alcohol Use Risk Factors in NM and the U.S.



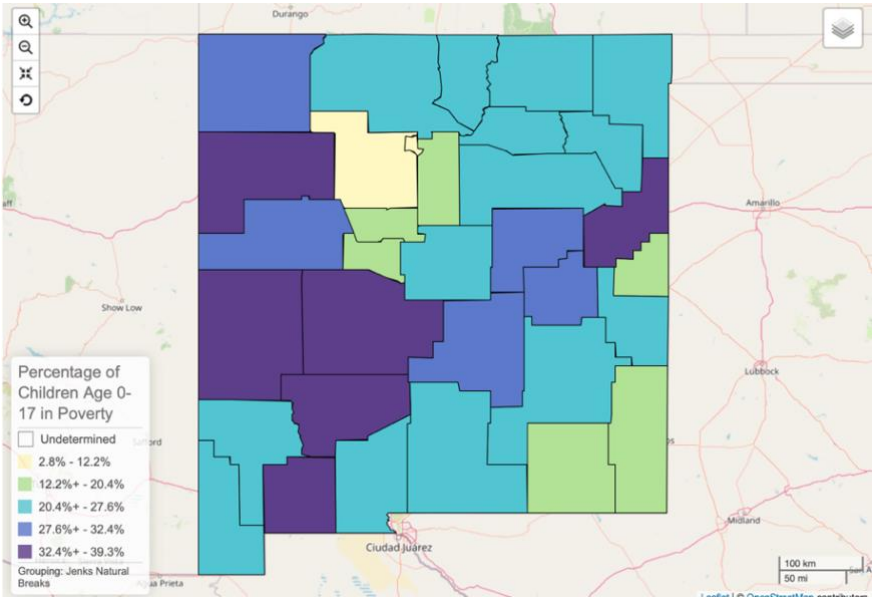
Note. Source: USDHHS (2017, 2018, 2019, 2020, 2021).

Socioeconomic Status. The U.S. Census Bureau (2019) reported that roughly one-fifth (18.2%) of all New Mexicans are below the poverty level, which is nearly double the national average of 10.5%. At the same time, poverty rates for children in NM have yet consistently been about 30% higher than the national child poverty rate (New Mexico's Indicator-Based Information System [NMI-BIS], 2022). In 2020,

approximately one-quarter of children in NM under the age of 18 lived in poverty; the rate of child poverty in NM at 21.6% compared to the national rate of 15.7% (NMI-BIS, 2022). In 2020, McKinley county in NM ranked highest for child poverty (39.3%), Socorro county ranked second highest (38.1%), and Catron county ranked third highest (36.4 %) (NMI-BIS, 2022). See Figure 1.7. It is important to also point out that U.S. counties with higher poverty concentrations have been associated with higher child fatalities (Farrel et al., 2017). See Figure 1.7.

Figure 1.7

NM Counties with 2020 Child Poverty Rates



Note. Poverty percentages for children under the age of 18 in NM shown by county for 2020. Source: New Mexico's Indicator-Based Information System [NMI-BIS] (2022).

***Rural Environment and/or Social Isolation*.** As mentioned earlier, New Mexico (NM) is a largely rural state. The majority (26/33) of NM counties are identified as non-metropolitan (RHIH, 2023c). Only seven of the 33 counties in NM (i.e., Bernalillo, Dona Ana, San Juan, Sandoval, Santa Fe, Torrance, and Valencia) are metropolitan (RHIH,

2023c). Here also, it is important to point out that evidence has shown that rural location has contributed to increased CAN rates (Maguire-Jack & Kim, 2021). This finding suggests that geographic locations should be considered when exploring factors influencing CAN incidents (Maguire-Jack & Kim, 2021).

Table 1.1 combines the CAN rates, rural urban classification, and child poverty rates. Note how the three NM counties ranked with the highest CAN rates from June 2020-June 2021 (Colfax, Guadalupe, and Sierra) are also classified non-metropolitan. The three NM counties with the highest child poverty rates were also classified non-metropolitan: (1) McKinley County with a poverty rate of 39.3%, (2) Socorro County with the second highest poverty rate of 38.1%, and (3) Catron County with the third highest child poverty rate of 36.45 (NMI-BIS, 2022).

Significance of the Study

This study's research is significant from three different perspectives. First, this was the first study to explore factors influencing nurses' mandatory reporting behaviors of CAN at a statewide level in NM. Second, this is also the first study aimed to determine whether there is a geographic difference in nurses' intentions to report CAN and actual CAN reporting behaviors by comparing rural and urban counties in NM. Third, the findings of this study have the potential to contribute to future development and implementation of interventions (e.g., training programs) that can maximize mandatory CAN reporting behaviors among nurses and other childcare professionals.

Table 1.1

NM CAN Rates, CAN Cases, Metro/Non-Metro Classification, and Child Poverty Rates

NM County	Metro/Non-Metro Classification	Poverty Rates in 2020	CAN Victim Rate	Substantiated CAN Cases: June 2020-June 2021
Bernalillo	Metropolitan	17%	8.8	1,565
Catron	Non-Metropolitan	36.4%	3.2	2
Chaves	Non-Metropolitan	26.2%	17.5	363
Cibola	Non-Metropolitan	32.4%	11.9	90
Colfax	Non-Metropolitan	25.2%	34.5	109
Curry	Non-Metropolitan	19.4%	10.7	162
De Baca	Non-Metropolitan	29.2%	18.7	9
Dona Ana	Metropolitan	27.3%	16.1	1,035
Eddy	Non-Metropolitan	14.2%	19.7	306
Grant	Non-Metropolitan	26.2%	13.7	99
Guadalupe	Non-Metropolitan	28.9%	29.4	33
Harding	Non-Metropolitan	23.7%	0.0	0
Hidalgo	Non-Metropolitan	26.3%	19.4	27
Lea	Non-Metropolitan	14.2%	9..6	202
Lincoln	Non-Metropolitan	28.6%	17.7	76
Los Alamos	Non-Metropolitan	2.8%	9.5	44
Luna	Non-Metropolitan	34.6%	12.3	91
McKinley	Non-Metropolitan	39.3%	7.1	177
Mora	Non-Metropolitan	26.1%	21.8	25
Otero	Non-Metropolitan	24.7%	12.8	226
Quay	Non-Metropolitan	34.9%	15.0	33
Rio Arriba	Non-Metropolitan	27.1%	19.1	211
Roosevelt	Non-Metropolitan	24.1%	17.2	45
Sandoval	Metropolitan	12.2%	6.0	229
San Juan	Metropolitan	29.7%	13.9	578
San Miguel	Non-Metropolitan	25.5%	25.6	195
Santa Fe	Metropolitan	17.4%	10.4	347
Sierra	Non-Metropolitan	33.5%	22.6	48
Socorro	Non-Metropolitan	38.1%	13.0	65
Taos	Non-Metropolitan	26.6%	15.1	113
Torrance	Metropolitan	27.6%	14.4	63
Union	Non-Metropolitan	27.2%	21.3	22
Valencia	Metropolitan	20.4%	9.7	218

Note. NM CAN rates calculated per 1,000 (NMCYFD, 2022, NMI-BIS, 2022; RHIH, 2023c).

Factors Influencing Nurses' CAN Reporting Behaviors in NM

This project is significant, given that it is the first study that explores factors influencing nurses' intention to report CAN and actual CAN reporting behaviors in NM, where children are exposed to high caregiver CAN abuse risk factors (e.g., substance abuse and low socioeconomic status) and where there are higher than average CAN incidence rates reported (USDHHS, 2021). Evidence shows multiple factors can account for nurses' lack of CAN reporting. Specifically, nurses' negative attitudes toward CAN reporting have influenced under-reporting or lack of reporting of CAN (Chan et al., 2019; Leite et al., 2016; Ben Natan et al., 2012; Rolim et al., 2014). In contrast, positive attitudes among nurses toward CAN reporting have increased the probability of reporting CAN (Chan et al., 2019; Fraser et al., 2010). Additionally, other factors have influenced CAN reporting behaviors, such as a lack of perceived behavioral control (the amount of confidence an individual has in reporting CAN), subjective norms (individual perceptions of other views toward reporting CAN), and deficiencies in knowledge regarding CAN and reporting laws (Feng et al., 2005; Feng et al., 2012; Fraser et al., 2010; H. Lee & Kim, 2018). Importantly, increased knowledge of CAN has influenced attitudes and perceived control towards reporting CAN, that is, reporters who have views that others feel CAN reporting is necessary have demonstrated increased intentions to report CAN (Feng & Levine, 2005; H. Lee & Kim, 2018). It is noteworthy to mention also that evidence shows reporters with CAN training are more likely to report CAN (Fraser et al., 2010; H. Lee & Kim, 2018). Furthermore, external determinants such as professional/institutional characteristics (e.g., support, mentoring, and level of education)

have been linked to CAN reporting behaviors (Al Saif et al., 2018; Francis et al., 2014; I. Lee & Kim, 2018; Schols et al., 2013).

Importantly (of the findings generated on the previous discussed factors), a majority of the data related to nurses' CAN reporting was collected outside the U.S. (e.g., Asia, Saudi Arabia, and Sweden) where nursing roles and CAN laws may differ, and therefore may not be applicable to understanding the reporting barriers that U.S. nurses encounter (Al Saif et al., 2018; Feng & Levine, 2005; Leite et al., 2016). Furthermore, to the best of the researcher's knowledge, RN-focused studies on CAN reporting behaviors have not been conducted at a statewide level where (a) the majority of populations are underserved minority populations, (b) rural states, (c) most are living in poverty, etc. This lack of evidence is a major barrier to understanding the role of determinants influencing CAN reporting outcomes in the U.S.

Rural and Urban Differences in Nurses' CAN Reporting Behaviors

Secondly, this research is significant because it will provide information on whether there is a difference in CAN reporting behavior between rural nurses and urban nurses. To date, there is a dearth of evidence exploring the relationship between reporter location (e.g., rural versus urban). Francis et al. (2014) reported that rural-located mandated reporters expressed reluctances to report CAN due to issues of proximity and a lack of anonymity. This finding suggests that another set of factors (e.g., rural geographic locations) can influence CAN reporting behaviors. In another study, working in an Australian metropolitan area increased the likelihood of reporting CAN (Fraser et al., 2010). To ensure that rural-located nurses report CAN incidents when CAN is suspected, a greater understanding of the relationship between the comprehensive set of reporting

determinants and CAN reporting is critical. In a predominately rural state, this data will provide childcare professionals, including nurses, with in-depth insight on how to develop intervention strategies that are tailored to the unique need of rural nurses and aim to maximize CAN reporting among this group.

Future Development and Implementation of Interventions and Policy Changes

Lastly, this project is significant, given that the findings of this project have the potential to serve as a theoretical foundation upon which to develop a training program vital for nurses in NM where CAN risks, and incidence rates are very high. Evidence shows mandated nurse reporters are more likely to report CAN with training (Al-Saif et al., 2018; Feng & Levine, 2005). However, U.S. CAN training programs lack scientific foundation and evaluative frameworks (Petersen et al., 2014). For example, despite the availability of theoretical models to guide research, many CAN studies that have examined factors connected with CAN have not used these models to guide their research (Petersen et al., 2014; Wilson & Lee, 2021). Furthermore, although there are CAN prevention interventions (e.g., CAN training programs) in the U.S., there are gaps in evidence regarding how these programs were applied and/or how to improve them (Petersen et al., 2014). Without this evidence base, such CAN intervention programs may have limited usefulness in helping nurses comply with state CAN laws, and nurses' ability to prevent CAN incidences. This project is significant because it will be guided by an established theoretical framework (i.e., the TPB). This project is also significant because it will incorporate cues to action with the TPB, which can aid in understanding motives for behavior(s) such as CAN reporting.

In addition, this project will help generate NM statewide information on nurses' views and levels of knowledge of CAN definitions and laws, as well as CAN reporting procedures. In reality, CAN laws and definitions, and reporting procedures, are ambiguous, and therefore subject to individual interpretation, which potentially creates a substantial disagreement among CAN reporting professionals on what constitutes CAN (Petersen et al., 2014). In addition, nurses are often hesitant to report CAN because of ill-defined regulations in reporting and have expressed a need for clearer guidelines in CAN reporting policies (Davidov et al., 2014; Leite et al., 2016). Importantly, CAN reporting professionals prefer not to report in order to avoid making inappropriate judgments (Al Saif et al., 2018). This study is significant because it will provide scientific evidence to assist with high-level policy changes such as clearer CAN definitions and reporting laws.

Chapter 1: Summary

Child abuse and neglect (CAN) is a global problem. Across the U.S., CAN trends continue to be an issue, and New Mexico (NM) faces its fair share of obstacles related to CAN. The factors influencing CAN rates in NM have not been explored or clearly defined. At the same time, the risks for CAN in NM also are higher (i.e., a mostly rural state with high rates of children in poverty, along with high substance abuse risk factors). Although CAN reporting is mandatory in NM for nurses, the role of nurses' mandatory reporting behaviors is little known. This quantitative study seeks to provide a theoretically based statewide assessment of potential factors that are associated with CAN reporting among nurses employed in a primarily rural state by providing a comparison of mandatory reporting behaviors of registered nurses in rural and urban areas. With this knowledge, the potential exists for professional nursing organizations to

advocate for training and for state boards of nursing or nursing accrediting bodies to consider alternatives for ensuring nurses who practice in NM to engage in CAN reporting.

CHAPTER 2: LITERATURE REVIEW

There are many obstacles regarding CAN research due to the differing kinds of CAN, varying mandated reporting laws, differing CAN definitions, ethical/legal considerations associated with obtaining child data, and the types of research (e.g., retrospective and/or surveys of self-reporting) associated with the abuse and neglect of children (International Society for the Prevention of Child Abuse and Neglect [ISPCAN], 2021; WHO, 2022). Taking these challenges into account, this chapter begins with a description of the prevalence of CAN globally and regionally, and the recent trends of numbers of children who are exposed to violence (specifically the different types of CAN). Among other things, there will be a discussion on the definitions of the different types of CAN and CAN laws (particularly in relation to laws on mandatory CAN reporting) globally, in the U.S., and in NM. In conjunction with the previously stated information, this chapter will incorporate a review of literature with particular regard to issues related to mandated CAN reporting (especially with respect to nurses), coupled with a description of the theoretical framework(s) that were used to guide this research.

Prevalence of CAN and Trends of Child Violence and Maltreatment

Children all over the world from a variety of backgrounds and populations suffer from violence (involving abuse and/or neglect). However, data are inconsistent and lacking (e.g., prevalence studies that measure across CAN types, perpetrators, and locations of CAN) (Hillis et al., 2016; U.S. Citizenship and Immigration Services, 2020). Importantly, not all countries publicly maintain child abuse registries (U.S. Citizenship and Immigration Services, 2020). Even with this lack in data, researchers and government agencies share a consensus that violence against children (i.e., CAN) is a

substantial intercontinental problem (CDC, 2022a; Hillis et al., 2016; Murray et al., 2014; WHO, 2022, 2023). A systematic review to estimate global prevalence-based studies of violence (e.g., physical, emotional, and/or sexual abuse) against children by Hillis et al. (2016) that examined reports (*n*=38) from 96 countries showed that over one billion children (aged 2–17) in the world experienced some form of violence. The literature also showed that severe types of violence were more prominent in certain parts of the world. For example, about 64% of children in Asia, 56% of children in Northern America, and 50% of children in Africa have been victims of severe types of violence (Hillis et al., 2016).

The World Health Organization (WHO, 2022) estimates that currently an overwhelming majority (about 75%) of children in the world (approximately 300 million) aged 2–4 is physically and/or psychologically abused on a regular basis. Correspondingly, UNICEF (formerly called the United Nations International Children's Emergency Fund) (2023d) reports that at this point, about two out of three children in a major portion of the world are the victims of violent discipline. In particular regards to some locations of the world (e.g., parts of Africa), most and/or nearly all children (80%–100%) ages 1–14 are currently subjected to mentally aggressive behavior and/or physical penalties (UNICEF, 2023d). In conjunction with this, in some countries such as those in Sub-Saharan Africa, about one-third (29%) of children (ages 5–17) are victims to types of labor that are potentially damaging to child development and health (UNICEF, 2023a). Global prevalence of adolescent deaths has also been more pronounced in some parts of the world. For example, about 6% of adolescents live in the Middle East and North

Africa; yet nearly three-quarters (70%) of teen deaths (ages 15–19) due to violence have occurred in these Middle East and North African locations (UNICEF, 2015).

Child sexual abuse is another significant matter of concern with children globally. In relation to sexual abuse, it is noteworthy that a majority of the research on sexual abuse has focused on girls, while the prevalence of sexual abuse against male children has not been established (UNICEF, 2020a). Some may argue that statistics are reflective of this given circumstance, and equal research is needed in order to present factual data. With this in view, surveys from one-third of the world's countries show that 5% of women indicated having been sexually abused (UNICEF, 2023c). This number is significantly higher in some places (e.g., up to 25% in Trinidad and Tobago: UNICEF, 2023c). In particular regards to research focusing on children, evidence has shown that about one-half of all the sexual assaults in the world has targeted towards girls younger than 16 (Pereznieto et al., 2014). The WHO (2022) reports that about one of five women and one of 13 men have admitted being victims of sexual abuse during the ages of 1–17. Furthermore, the *World Health Report on Violence against Children* reported about 1.8 million children have been abused through prostitution and/or pornography and approximately 1.2 million children have been victims of trafficking (Pinheiro, 2006; Murray et al., 2014). Adding to the complexity and broad scope of types of sexual abuse, according to UNICEF (2023b), there are about 200 million girls/women in the world today who have experienced some type of female genital mutilation and/or cutting (data incorporated from 31 surveyed countries).

CAN in the U.S.

In the U.S., the nationally funded National Child Abuse and Neglect Data System (NCANDS) annually gathers data on CAN (USDHHS, 2021). These data are submitted voluntarily from 52 states (for conciseness, the District of Columbia and Puerto Rico will be referred to as 'states' despite legal status) and are examined by the Children's Bureau in the Administration on Children, Youth and Families (ACYF) and the Administration for Children and Families (ACF) within the U.S. Department of Health and Human Services (USDHHS, 2021). The *Child Maltreatment 2019* report by the USDHHS (2021) offers U.S. statistics from the federal fiscal year and it is presented in the following section. Child fatalities in this data set are calculated per 100,000 children and child abuse rates are calculated per 1,000 children (USDHHS, 2021).

In 2019, there were over 7.8 million U.S. children who received Child Protective Services (CPS) referrals (USDHHS, 2021). About 3,476,000 children received a CPS investigation or alternative response (USDHHS, 2021). Of them, about 656,000 children were identified as CAN victims; 142,056 children received foster-care services; and there were about 1,840 CAN-related deaths in 2019 (USDHHS, 2021). Overall, in the U.S. in 2019 47.2/1,000 children received a CPS investigation or alternative response (with a slight trend 3.5% increase from 2015-2019). For the years 2015–2019, U.S. actual CAN victimization rates (per 1,000) were 9.2, 9.1, 9.1, 9.2, and 8.9 respectively. CAN-related fatalities for the U.S. were 1,603 children in 2015, 1,708 children in 2016, 1,677 children in 2017, 1,751 in 2018, and 1,809 in 2019 (USDHHS, 2021).

The USDHHS (2021) reports that most child victims are victims of one type of abuse. In 2019, 15.5% of abused children were victims of multiple types of abuse. The most common type of abuse was "neglect only" (74.9%), followed by "physical abuse

only" (17.5%) (USDHHS, 2021, p. 47). In 2019, 51 states reported data on "sexual abuse only", 9.3% of total U.S. CAN cases, and 46 states reported data on "psychological maltreatment only", which accounted for 2.3% of total CAN cases (USDHHS, 2021, p. 47). There were 439 "sex-trafficking only" reported cases from 21 U.S. states, which accounted for 0.1% of the total U.S. CAN abuse cases (USDHHS, 2021, p. 47).

Children under the age of one are victimized the most and accounted for more than a quarter (25.7%) of U.S. CAN cases (USDHHS, 2021). The U.S. data show that girls were victimized more than boys (9.4/1,000 compared to 8.4/1,000). In relation to CAN cases reported by race/ethnicity, in 2019 the rate of victimization for African American children was 13.8/1,000; for American Indian or Alaska Native children, 14.8/1,000; for Asian children, 1.7/1,000; for Hispanic children, 8.1/1,000; for children of multiple races, 11.0/1,000; for Pacific Islander children, 10.7/1,000; and for White children, 7.8/1,000 (USDHHS, 2021).

Child fatality rates for 2015–2019 in the U.S. were 2.23, 2.33, 2.31, 2.41, and 2.50 per 100,000 children, respectively (USDHHS, 2021). Nearly half (45.4%) of the child fatalities in 2019 occurred to children younger than one year of age, with overall child fatality rates for children younger than one at 22.94 per 100,000 (USDHHS, 2021). Child fatality cases linked with a drug use risk factor were 19.4 per 100,000; child fatality cases linked with an alcohol risk factor were 5.8/100,000 (USDHHS, 2021). Children of the male gender had a higher fatality rate than children of female gender (i.e., 2.98/100, 000 compared to 2.20/100,000) (USDHHS, 2021). African American children suffered nearly 2.9 times more fatalities (5.06/100,000) than White children (2.18/100,000) and 3.17 times more fatalities than Hispanic children (1.89/100,000) (USDHHS, 2021). In

2019, of the child maltreatment types, neglect was the cause for most (72.9%) of the child fatalities in the U.S.; medical neglect accounted for 7.8% of fatalities; physical abuse 44.4%; sexual abuse 0.9%; psychological abuse 0.9%; and other types of abuse accounted for 7.9% of CAN fatalities (USDHHS, 2021).

CAN in NM

In general, NM's CAN percentages have consistently trended higher than national CAN percentages. The victim rates of CAN from previous years (2015–2019) were 17.4/1,000 in 2015, 15.2/1,000 in 2016, 17.6/1,000 in 2017, 16.7/1,000 in 2018, and 16.9/1,000 in 2019 (compared to the national averages of 9.2/1,000, 9.1/1,000, 9.1/1,000, 9.2/1,000, and 8.9/1,000 respectively) (USDHHS, 2021). Overall, there was a small percentage change in total CAN cases for NM (e.g., -7.8%) over the years 2015-2019 and the national percentage change was -3.95% respectively (USDHHS, 2021). See Table 2.1. Total CAN cases for NM in 2019 were 8,025, in 2018 were 8,024; 8,577 in 2017; 7,526 in 2016; and 8,701 in 2015 (USDHHS, 2021). Nationally, total CAN cases in 2019 were 656,243, in 2018 were 677,529; 673,756 in 2017; 671,176 in 2016; and 683,221 in 2015 (USDHHS, 2021).

The proportion of NM children who were victims of multiple types of CAN in 2019 was 24.4 per 1,000, significantly higher compared to the national rate of 15.5 per 1,000 (USDHHS, 2021). Regarding the specific single types of abuse reported in 2019, neglect was the most commonly reported type of CAN in NM. The total number of actual substantiated cases reported: of "medical neglect only" was 67 of 8,025 cases in 2019 (0.83% of total CAN cases in NM); of "neglect only" was 4,747 of 8,025 cases (59.16% of total CAN cases); of "physical abuse only" was 429 of 8,025 cases (5.35% of total NM CAN cases); of "psychological maltreatment only" was 40 of 8,025 cases (0.50% of total

NM CAN cases); and of "sexual abuse only" was 111 of 8,025 cases (1.38% of total NM CAN cases) (USDHHS, 2021, p. 48). There were no sex-trafficking cases reported in NM in 2019 (USDHHS, 2021).

Table 2.1

CAN Percentage Changes (Years 2015–2019) in the U.S. and NM

Year	Total NM CAN Cases	Total U.S. CAN Cases	NM Percentage Change	U.S. Percentage Change
2015	N=8,701	N=683,221		
2016	N=7,526	N=671,176	-13.5	-1.77
2017	N=8,577	N=673,630	13.96	0.37
2018	N=8,024	N=677,464	-6.45	0.57
2019	N=8,025	N=656,243	0.01 (total percent change -7.8)	-3.13 (total percent change -3.95)

Note: Statistics of CAN percentages taken from the USDHHS (2021).

Child abuse and/or neglect-related child fatalities in NM have also trended higher than national fatalities. In 2019, the overall rate of CAN fatalities in NM was 2.49/100,000, while the national rate was 2.39/100,000 (USDHHS, 2021). Specifically, there were seven child fatalities in NM in 2014, 14 in 2015, 11 in 2016, 16 in 2017,12 in 2018, and 11 in 2019 respectively (USDHHS, 2021).

In 2019, the rate for CAN victims under the age of one was 48.4/1,000, which nearly doubled the national average rate of 25.7/1,000 (USDHHS, 2021). NM's CAN rates for children in other age groups are also much higher than the national average rates. In 2019, for example, for NM children who were one year of age, the rate was 21.0/1,000 (national rate: 11.5/1,000), two years of age 18.6/1,000 (national rate: 10.7/1,000), three years of age 17.8/1,000 (national rate: 10.0/1,000), and four years of age 17.6/1,000 (national rate: 9.5/1,000) (USDHHS, 2021). Rates based on gender are

also higher in NM. In 2019, the boy victimization rate was 16.4/1,000 (national rate: 8.4/1,000), while the girl victimization rate was 17.2/1,000 (national rate: 9.4/1,000) (USDHHS, 2021).

There are additional significant disparities regarding race/ethnicity for CAN rates in NM versus the U.S. For example, the rate of victimization for African American children who live in NM was 28.9/1,000 (more than double the national rate of 13.8/1,000), more than double for Hispanic children with NM CAN rates of 16.5/1,000 (national rate: 8.1/1,000), for Pacific Islander children 19.6/1,000 (close to two times the national rate of 10.7/1,000), for Asian children higher at 3.1/1,000 (national rate: 1.7/1,000), and for White children also CAN rates were higher at 13.5/1,000 (national rate: 7.8/1,000) (USDHHS, 2021). At the same time, rates for other races/ethnicities were similar to the national rates. For example, CAN rates for American Indian or Alaska Native children were 16.0/1,000 (national rate: 14.8/1,000, and for children of multiple races 11.5/1,000 (national rate: 11.0/1,000) (USDHHS, 2021).

In NM, the percentage of abuse victims under the care of a caregiver who used alcohol are significantly higher than national averages. Victims with a caregiver who had an alcohol use risk factor accounted for 35.7 % in 2016, 35.9% in 2017, 35.2% in 2018, and 31.5 in 2019, nearly tripling the national rates of 11.6%, 12.5%, 12.3% and 15.9% respectively (rates calculated per 1,000; USDHHS, 2021). At the same time, the percentage of CAN victims with a caregiver with a drug use risk factor have been much higher than national averages. The U.S. national percentage of victims who had a caregiver who used drugs was 28.9% in 2016, 31% in 2017, 30.7% in 2018, and 29.4% in 2019, respectively; while in NM these percentages were more than double the national

averages at 66.7%, 66.1%, 61.5%, and 53.9% respectively (calculated per 1,000; USDHHS 2021).

Classification and Types of CAN

The analysis of CAN data is dependent on operable definitions and/or criteria of terms used to describe CAN. These criteria have been inconsistent across the different groups, establishments, and laws associated with CAN, such as CPS, medical personnel, legal support, differing state laws, etc. (Leeb & U.S. National Center for Injury Prevention and Control [USNCIPC], 2008; WHO, 2023). The definition of CAN typically incorporates four major types of abuse: physical, emotional, sexual, and neglect (CDC, 2022a, WHO, 2023). That said, CAN is often combined with additional forms of violence, for example, intimate partner violence, community violence, etc. (CDC, 2022b; Fortson et al., 2016, WHO, 2023). As a result, a universal definition for public health purposes on what constitutes the totality of CAN is still lacking (Leeb & USNCIPC, 2008; WHO, 2023).

The current research will adopt the CAN classifications/definitions stipulated by the CDC's report, *Child Maltreatment Surveillance Uniform Definitions for Public Health, and Recommended Data Elements* (Leeb & USNCIPC, 2008, CDC, 2022a). This report provides definitions on the types of CAN and includes recommended guidelines for CAN surveillance and research (Leeb & USNCIPC, 2008). In this report, CAN is grouped by acts of commission (e.g., physical, sexual, and psychological abuse) and acts of omission (e.g., neglect). Acts of commission are intended harmful acts towards children, although these acts can sometimes be unintentional (e.g., hitting results in concussion or bone fracture). Acts of omission include issues like failing to provide for a

child or to protect a child from harm (Leeb & USNCIPC, 2008). Types of abuse can overlap and/or multiple types of CAN may happen to individual children (Felitti et al., 1998; Pekarsky, 2020). It is important to mention also that the U.S. CAPTA (1974), which was amended in 2010 through the CAPTA Reauthorization Act of 2010 (P.L. 111–320), is a U.S. federal law and includes the different types of CAN (Child Welfare Information Gateway, 2019). However, individual U.S. states provide their own definitions of CAN (Children's Bureau, 2013; Child Welfare Information Gateway, n.d.).

Acts of Commission

Physical Abuse

Physical abuse is defined as the "intentional use of physical force against a child that results in, or has the potential to result in, physical injury" (Leeb & USNCIPC, 2008, p. 14). Examples of this type of abuse include intentional infliction of actual physical harm to a child, such as shaking, dropping, striking, biting, strangling, poisoning, and burning (e.g., with cigarettes) (Leeb & USNCIPC, 2008). Physical abuse is the most common cause of serious head injury in infants, and abdominal injury is the most common type of abuse in toddlers (Pekarsky, 2020). Physical abuse is not always easily visible and can lead to permanent disability and even death. Other assessment findings of physical abuse can include a caregiver's unwillingness and/or inability to provide a history of a child's injury, caregiver's reports that are inconsistent with a child's injury, a caregiver's postponement in seeking medical care, and child injuries that are not typical (Pekarsky, 2020).

Psychological and/or Emotional Abuse

Psychological abuse is the "intentional caregiver behavior (i.e., act of commission) that conveys to a child that he/she is worthless, flawed, unloved, unwanted, endangered, or valued only in meeting another's needs" (Leeb & USNCIPC, 2008, p. 16). Emotional abuse is the infliction of harm to a child through caregiver words and/or behavior, or the omission of emotional support (Pekarsky, 2020). Typically, this type of abuse results from chronic recurring negative patterns between a caregiver and a child. However, it can also be caused by an acute psychological trigger that inflicts on the caregivers, such as a divorce (Kairys et al., 2002). Emotional abuse includes disparaging a child's abilities and accomplishments, intimidating and/or terrorizing a child, exploitation, inappropriate threats, encouraging immoral behaviors, forced isolation, and a caregiver's rejection of the child (Leeb & USNCIPC, 2008; Pekarsky, 2020).

Sexual Abuse

Sexual abuse as "any completed or attempted (non-completed) sexual act, sexual contact with, or exploitation (i.e., noncontact sexual interaction) of a child by a caregiver" (Leeb & USNCIPC, 2008, p. 14). The sexual abuse of children is a complex issue and how it is defined may vary across professionals. Additionally, the differences in CAN laws and definitions of sexual abuse involve a wide range of actions, which can make its measurement difficult and inaccurate (Murray et al., 2014). Children's sexual abuse is generally understood as those acts committed against children for the adult's gratification, which include different types of intercourse, molestation (e.g., using hands, mouth, and objects into or around genital areas), perpetrator genital exposure, exposing a child to sexually explicit material, forcing a child into sexual acts with other

children, and/or forced participation in sexual productions (Leeb & USNCIPC, 2008; Pekarsky, 2020). Sexual abuse can also include sexually abusive contact, which includes intentional touching (either in direct contact or through clothing) of genitals, inner thigh, breast, groin, and/or buttocks (Leeb & USNCIPC, 2008). Non-contact sexual abuse can include voyeurism, filming, *quid pro quo*, prostitution, and sexual trafficking (Leeb & USNCIPC, 2008).

Acts of Omission

Child Neglect

Neglect is the "failure by a caregiver to meet a child's basic physical, emotional, medical/dental, or educational needs—or combination thereof" (Leeb & USNCIPC, 2008, p. 17). Examples of types of child neglect include:

Physical neglect. The failure to satisfactorily afford nutrition, hygiene, shelter, or clothing (Leeb & USNCIPC, 2008).

1. Emotional Neglect. A lack of appropriate mental health care or other issues like a lack of emotional support (Barnett et al., 1993; Leeb & USNCIPC, 2008).
2. Medical/dental neglect. The failure to satisfactorily afford appropriate medical, vision, or dental care (Leeb & USNCIPC, 2008).
3. Educational neglect. The failure to satisfactorily provide suitable education (Leeb & USNCIPC, 2008)
4. Failure to supervise. Occurs when a caregiver fails to make sure a child is within and outside the home based on a child's emotional and physical development (Barnett et al., 1993; Leeb & USNCIPC, 2008).

5. Exposure to violent elements. Occurs when a caregiver deliberately fails to protect a child from violence in the home and/or neighborhood (Kairys et al., 2002; Leeb & USNCIPC, 2008).

Risk Factors for CAN

Risk factors for CAN correspond to individual characteristics of caregivers and/or children that can increase the likelihood of CAN taking place. Examples of these risk factors include caregiver characteristics (e.g., drug and/or alcohol abuse disorders), child demographics (e.g., being less than one year of age), and a child's environment (e.g., economic status) among others (CDC, 2022b; Farrell et al., 2017). Risk factors for CAN have been more pronounced in certain geographic locations (e.g., some U.S. states: Farrell et al., 2017; USDHHS, 2020, 2021, 2022). In addition, risk factors may not always be the cause of CAN. For example, contributing to the complexity of CAN are CAN disparities among child populations, which are associated with CAN risk factors (CDC, 2022b). These characteristics and disparities are outlined and described in the following section.

Children's Characteristics

Special needs children are also at higher risk for abuse (Van Horne et al., 2015). For example, the risk for medical neglect is three to six times more likely to occur to children with birth defects and disabilities (e.g., cleft palate, Down syndrome) compared to children without birth defects (Van Horne et al., 2015). Similarly, children with learning disabilities, can have conduct disorders, and speech/language disorders are also at a higher risk for all types of CAN (Spencer et al., 2005).

Research shows that younger children (i.e., under the age of one) are more likely to be victimized (USDHHS, 2020, 2021, 2022). In the U.S., of the 1,790 child fatalities

that took place in 2018, nearly one-fifth (22.77%) were under the age of one (USDHHS, 2019). Babies who are born premature are also more likely to be abused in the first year of life (Rogers & Nurse, 2019).

Although girls are victimized more than boys, boys have a higher fatality rate than girls in the U.S. (USDHHS, 2021). Girls, in particular, are more susceptible to violence, exploitation, and sexual abuse during periods of military conflict (WHO, 2022). In addition, identifying as or being identified as lesbian, gay, bisexual, or transgender is also associated with increased likelihood for abuse of children (WHO, 2022).

There are disparities in CAN that are associated with a child's race and/or ethnicity. For example, African American children account for approximately 16% of the U.S. population of children (Commission to Eliminate Child Abuse and Neglect Fatalities, 2016). Yet, in the U.S., the rate of child fatalities for African American children was more than double (5.48 per 100,000) the fatality rate for White children (1.94 per 100,000) and more than triple the fatality rate of Hispanic children (1.63 per 100,000) (USDHHS, 2020).

Socioeconomic Status and Situated Environment

CAN rates also vary by geographical location. For example, some U.S. states have higher CAN rates than others, with NM CAN rates nearly double national CAN rates (USDHHS, 2020, 2021, 2022). Similarly, data from the San Antonio, Texas Metropolitan Health District (2010) identified some zip codes in San Antonio as having had three times more CAN cases than other zip codes in the city (Casey Family Programs, 2015).

Children living in rural locations may face additional challenges influencing CAN. Evidence shows a relationship between social isolation and violence (Elliott et al.,

2005). For example, children who were less socially isolated had caregivers who were more involved in their care (Elliott et al., 2005) and were less exposed to CAN (Gracia & Musitu, 2003). In addition, Sedlak et al. (2010) reported that U.S. children living in rural locations were abused 1.7 times more than children in large urban locations.

Evidence shows that children living in high-poverty areas are three times more likely to experience abuse compared to children living in low-poverty areas (Farrell et al., 2017). Similarly, whether a family is experiencing financial distress or not is also associated with higher incidences of CAN. For example, Berger et al. (2015) reported that home-foreclosures were associated with increased CPS intervention.

Bearing in mind the links associated with poverty and CAN, it was found that the resulting poverty as a result of the COVID-19 pandemic (e.g., due to job loss) could have increased the number of children living in monetarily poor households by 142 million (i.e., 582 million up to 715 million) by the end of 2020 (UNICEF, 2020a). Additionally, reports from UNICEF (2020a) suggest that COVID-19 can also reduce or disrupt the delivery of health care services (UNICEF, 2020a). Reduced immunizations and antenatal care, for example, could result in an additional two million deaths for children under the age of five (Roberton et al., 2020). In effect, conservative estimates show that, even with minor reductions in health care coverage (e.g., 9.8%–18.5% decrease in health care coverage), over a quarter of a million (e.g., 253,500) additional child deaths could occur for 118 low-middle income countries (Roberton et al., 2020).

Other factors, such as community settings, have also placed children at higher risks of CAN (Child Welfare Information Gateway, n.d.; Maguire-Jack & Font, 2017). For example, parents who are poor and live in poor neighborhoods have been more likely

to neglect their children (Maguire-Jack & Font, 2017). Even non-poor parents who live in high-poverty neighborhoods are more likely to neglect their children (Maguire-Jack & Font, 2017). Evidence also shows an association between the geographic closeness to mental health and substance abuse services and caregivers' self-reported neglect behaviors towards children (Maguire-Jack & Klein, 2015). In addition, research suggests that city rates of drug use are associated with increased physical abuse of children (Freisthler et al., 2017).

Family structure and/or dysfunction can also contribute to CAN. For example, military families who face deployment face additional stressors that increase the likelihood of CAN (National Child Traumatic Stress Network [NCTSN], n.d.). A study of army families, for example, found that child maltreatment increased up to 42% during periods of deployment (Gibbs et al., 2007; NCTSN, n.d.). Divorce and parent stress are also associated with increased risks for CAN (Tucker & Rodriguez, 2014). Evidence also shows that CAN occurs in 30–60% of families that experience spousal abuse (Child Welfare Information Gateway, n.d.). In a California study of 850,184, there were increased rates of observed CAN reported to CPS for very young mothers (aged 15–19) who themselves had a history of CAN (Child Welfare Information Gateway, n.d.; Putnam-Hornstein et al., 2015).

Pandemic, Natural Disaster, and Other Crisis Situations

During times of crisis (e.g., natural disasters), there is an increased risk of violence, and increased violence is linked with CAN (Seddighi et al., 2019). A recent systematic review revealed that during times of crisis, violence exposure, caregiver substance abuse, poverty, and child labor were linked with increased child violence (Seddighi et al., 2019). In particular, evidence shows that after times of crises, girls were

at increased risk of sexual abuse and boys were at higher risk of physical abuse (Seddighi et al., 2019).

Pandemic situations are also associated with CAN. For example, there have been increased rates of CAN since the onset of the COVID-19 pandemic. In a U.K. study, abusive head trauma cases increased by 1,493% (compared to rates in the previous three years) between the months of March and April of 2020, during the period of COVID-19 self-isolation (Sidpra et al., 2020). The COVID-19 pandemic also contributed to job loss, which is another significant factor associated with CAN (Lawson et al., 2020). For example, parents with a history of abusing their children and who reported depression as the result of losing their jobs during the COVID-19 pandemic were then more likely to inflict abuse on their children (Lawson et al., 2020). Of significance in this study, the odds for abuse towards children who had been previously maltreated increased by 112 times for psychological abuse and 20 times for physical abuse during the pandemic (Lawson et al., 2020).

There is also a relationship between natural disasters and behaviors of increased violence. For example, CAN incidence rates have increased in intensity as behavior changes (such as violence towards children) have increased during periods of natural disasters (Cerna-Turoff et al., 2021; Curtis et al., 2000). Curtis et al. (2000) examined CAN reports before and after Hurricanes Hugo and Andrew and the Loma Prieto Earthquake also reporting that CAN reports were significantly higher after Hurricane Hugo and the Loma Prieto Earthquake.

Caregiver Characteristics

Research has shown that caregivers with a history of substance abuse are more likely to abuse children (WHO, 2022). In addition, in the U.S, nearly one fifth of CAN

deaths (19.4%) were associated with a caregiver who displayed a drug abuse risk factor (USDHHS, 2021). For example, in Texas, over half (51%) of child fatalities from 2015-2017 were linked to substance use (TexProtects, 2018). As was mentioned earlier in this chapter, NM has higher substance related CAN rates further substantiating the continued need for research and child protective reforms (USDHHS, 2021).

There are other caregiver factors that can also contribute to CAN. Exposure to maltreatment as a child, having a mental or neurological disorder, and being involved in criminal activity have all been linked to increased CAN (Child Welfare Information Gateway, n.d.; Santhosh, 2016). A review of literature related to CAN published between 1994 to 2015 revealed that CAN perpetrators' factors included age of the perpetrator, preparator family climate, personality, and being a victim of abuse (Santhosh, 2016). The CDC (2022b) adding that caregivers' mental health such as depression can also be associated with risks for CAN.

Cultures and Norms

Boundaries for what constitutes acceptable behavior for corporal punishment also vary across different cultures (Pekarsky, 2020). Feng et al. (2012) reported that parenting privacy was seen as including the right to incorporate certain types of discipline (even potentially abusive discipline). Similarly, female genital mutilation could also be considered by many as abuse. However, it is also culturally acceptable in certain geographic locations (e.g., different regional parts of Africa; Pekarsky, 2020; UNICEF, 2023b). Widespread attitudes, cultural norms, and the media marketing of aggressive behaviors are also potential risk factors for physical abuse (WHO, 2020). As mentioned,

previously, a universal definition of what constitutes as CAN is important for continued research.

Impact of CAN

Physical, Psychosocial, and Mental Health

The impact of CAN is multi-dimensional (Child Welfare Information Gateway, n.d.). There are immediate physical consequences of abuse that lead to pain and physical injury, such as burns, fractures, abdominal trauma, head trauma, bruises, cuts, and death (Gluck, 2015; see discussion on types of CAN). The impact of physical abuse is dependent on the age of the child, the type of injury, and the length/time of the abuse (Gluck, 2015). Along with the immediate physical impact, a variety of long-term health problems connected with CAN include smoking, obesity, substance abuse, and cardiac disease (CDC, 2023; Felitti et al., 1998). Indeed, a substantial amount of research suggests that there are increased risks for multiple long-term and negative health effects as a result of exposure to adverse childhood events (CDC, 2023; Gilbert et al., 2015; Felitti et al., 1998; Merrick et al., 2018).

Those who are impacted by this type of abuse suffer symptoms of anxiety, PTSD, depression, and are also more likely to be involved in risky sexual activities (Homma et al., 2012; Felitti et al., 1998; Murray et al., 2014). In a study of men who had been sexually abused as children, men reported an increased probability for depressive and aggressive behaviors (Easton & Kong, 2017). Importantly, accurate estimates of CAN cases are difficult as many cases go unreported because of feelings of shame, fear, etc., and retrospective studies based on adults' recollections of sexual abuse during childhood may be contaminated by recall bias (Krug et al., 2002; Murray et al., 2014; Paine & Hansen, 2002).

The effects of emotional abuse vary and can result in long-term feelings of low self-esteem, borderline personality, anger, suicidal thoughts, anti-social behaviors, impaired learning, and failure to thrive among others (Kairys et al., 2002). CAN has also been associated with higher levels of social anxiety in later adulthood (Brühl et al., 2019). In addition, childhood abuse has been linked with marital dissatisfaction for victims of CAN (Maneta et al., 2015). Research also shows that child emotional abuse was significantly associated with emotional dysregulation (e.g., depression) and unhealthy eating disorders (Crow et al., 2014). In a systematic review of the child abuse literature, Halpern et al. (2018) examined the relationship between early childhood abuse and the later development of substance abuse disorders. This review revealed that child victims of physical abuse had a much higher risk (74%) for drug abuse later in life (Odd Ratio [OR] = 1.74, 95% confidence interval [CI] = 1.36–2.21).

The effects of CAN on a child's developing brain can be serious and have long-term consequences. Adults who themselves were mistreated as children may experience problems with learning and memory as a decreased volume in the corpus callosum and smaller prefrontal cortex, can affect cognitive function, arousal, and emotional processes (Child Welfare Information Gateway, n.d.; McCrory et al., 2010). Children with learning disabilities, such as attention deficit hyperactivity disorder (ADHD) are also at risk for higher exposure to CAN from their caregivers (Fuller-Thompson & Lewis, 2015).

Cost and Economic Loss

Although CAN impacts children directly, there are also widespread preponderant social and economic consequences linked with CAN (Child Welfare Information Gateway, n.d.). Firstly, CAN's costs to society are massive. Some of these costs, such as

hospital expenses and foster care, can be directly measured, whereas other costs that are indirectly linked to CAN, such as impaired academic performance, are more difficult to measure. Pereznieto et al. (2014) estimated that the overall global cost of CAN is upwards of seven trillion dollars, ranging from 2%–5% of total global gross domestic product (GDP). In this estimate, about $97.6 billion in losses annually can be attributed to losses in work productivity due to loss of education. Losses in work productivity linked with children impacted by armed forces are about $140 million every year (Pereznieto et al., 2014). In the U.S. alone, the overall combined lifetime expense associated with CAN has been estimated to be around $124 billion (Fang et al., 2012).

CAN Regulations, Policies, and Laws

CAN Laws Worldwide

Bearing in mind the generalizability and the diverse behavioral and social norms and perspectives connected with CAN globally, which have created differences in CAN legislation among many countries, the general aim of CAN legislation has been to protect children from experiencing intentional harm and/or neglect (Daro & Benedetti, 2014; Matthews & Bross, 2008). In part, the generalizability of CAN laws can be attributed to varying forms of CAN and the variety of professional groups required to report CAN (Mathews, 2016). Still, notably, the United Nations Human Rights Office of the High Commissioner (1990) Convention on the rights of the child clearly advocated for the inherent rights of children to include the right to legislative protection. According to article 19 of this convention, all affiliated parties are mandated to take any action necessary to protect children. In effect, research supports the need for CAN legislation to protect children and also the need for mandatory CAN reporting, although critics have argued that mandatory CAN reporting is a potential waste of resources due to increases in

unsubstantiated CAN reports (Ainsworth, 2002; Matthews & Bross, 2008; Melton, 2005). Importantly, countries that have initiated mandatory reporting have been influential in preventing CAN. Overall, CAN cases have decreased proportionally, with documented increased rates of substantiated CAN cases (Matthews & Bross, 2008; Petersen et al., 2014).

CAN Laws in the U.S.

The Children's Bureau (CB) (established by the federal government in 1912) to oversee affairs related to the protection of children (National Child Abuse and Neglect Training and Publications Project, 2014). The establishment of the CB demonstrated the federal government's acknowledgment of its role to protect children. Mandatory reporting CAN laws in the U.S. were initiated in the 1960s and were limited to medical professionals (Matthews & Kenny, 2008). Legislation expanded with the initiation of the Child Abuse and Prevention Treatment Act (CAPTA) of 1974, which provided state funding based on CAN law guidelines (Matthews & Kenny, 2008). The government sets minimum standards of the acts and behaviors that define CAN (CAPTA Reauthorization Act of 2010— Public Law [P.L.] 111–320, 42 U.S.C. § 510); Child Welfare Information Gateway, 2019, 2021). These standards, in turn, direct states how to set standards and definitions for CAN, although each state has civil and criminal laws with CAN definitions (Child Welfare Information Gateway, 2019, 2021).

The CAPTA defines the minimum definition for CAN. See the Definitions section (42 U.S.C.A. § 5106g) in Chapter 1. All 50 U.S. states, D.C., and U.S. territories have mandatory CAN reporting laws (Child Welfare Information Gateway, 2019; USDHHS, 2020, 2021, 2022**)**. CAN laws are generalized to meet the needs of the general population. For example, although CAPTA (P.L. 100–294; amended by the CAPTA

Reauthorization Act of 2010, P.L. 111–320) has created general guidelines for states to follow, individual states have their own definitions for CAN (Child Welfare Information Gateway, 2019; USDHHS, 2020, 2021, 2022).

CAN Laws in NM

The NM Child Youth and Family Department [NMCYFD] is the legal agency responsible to investigate and prosecute CAN cases in NM (NMCYFD, n.d.). In NM, every person who knows or has a reasonable suspicion that a child is abused or neglected is legally required to report the matter immediately to the NMCYFD (n.d.). Childcare professionals mandated to report CAN in NM include licensed physicians, residents (interns), law enforcement officers, judges, registered nurses (visiting nurses), teachers, school officials, social workers (who are acting in their official capacity), and members of the clergy (NMCYFD, n.d.). Under NM's Statutes Chapter 32A Children's Code § 32A-4-2, child abuse includes neglect and physical, emotional, and/or sexual abuse (FindLaw, 2021). Physical abuse includes bruising, bleeding, malnutrition, failure to thrive, burns, bone fractures, subdural hematomas, tissue swelling, or death (that includes the absence of a justifiable reason for the condition or death) (NMCYFD, n.d.; FindLaw, 2021). Sexual abuse includes criminal sexual contact, incest or criminal sexual penetration, and sexual exploitation (e.g., allowing or encouraging a child to engage in prostitution or pornographic photographing or filming: FindLaw, 2021; NMCYFD, n.d.). Neglect includes child abandonment, failure to provide a child with proper parental care (including control or subsistence), education, medical care, or other care or control necessary for the child's well-being. Neglect also includes failure to take reasonable steps to protect a child from harm if abuse is known by the child's care provider (FindLaw, 2021). A parent's inability to perform their responsibilities for the child because of

parental incarceration, hospitalization, or physical or mental disorder or incapacity also falls under the category of child neglect (FindLaw, 2021; NMCYFD, n.d.).

Child Protection Reforms

Global efforts to counteract childhood maltreatment have included the development of legislation and government programs (including community/family services) to protect children and ensure children's rights (Hillis et al., 2016; Petersen et al., 2014). These programs have included (Hillis et al., 2016; Petersen et al., 2014) the Centers for Disease Control and Prevention (CDC) (2022a), the Commission to Eliminate Child Abuse and Neglect (2016), Together for Girls (2017), UNICEF (n.d.), United Nations Human Rights Office of the High Commissioner (1990), the U.S. Agency for International Development (USAID) (2020), the U.S. President's Emergency Plan for AIDS relief (U.S. Department of State, n.d.), the World Health Organization (WHO) (2023), and the World Bank (2020).

In the U.S., there are continued needs for improving child protection (e.g., CPS). Child and Family Service Reviews (2015–2016) indicated there were child safety-related issues after CAN reports were made (Children's Bureau, 2021). For example, despite efforts to protect children in their home and/or prevent children from going into (or being removed from) foster-care, children were left in their homes with unaddressed safety concerns in about one quarter (22%) of applicable cases (Children's Bureau, 2021). About a quarter (21%) of children were not placed with all of their siblings in foster-care placement cases (Children's Bureau, 2021). Needs identified included a lack in the availability and payment of childcare services and a lack of childcare services in rural locations (Children's Bureau, 2021). Additional needs include theoretically based

intervention studies to help with a coordinated prevention approach in developing intervention strategies (Petersen et al., 2014).

Issues with CAN Reporting

Despite mandatory reporting laws, CAN reporting practices have been inconsistent. Evidence shows a noteworthy portion (20%–43.4%) of mandated reporters in the world, such as nurses, have failed to report CAN even though CAN was suspected (Alter et al., 2012; Fraser et al., 2010; Feng & Levine, 2005; Petersen et al., 2014; Wekerle, 2013; Wilson & Lee, 2021). In a systematic review of the literature published from 2010–2020 that examined CAN reporting behaviors among childcare professionals, Wilson, and Lee (2021) reported that a variety of issues (e.g., barriers and facilitators) are associated with and/or influencing reporting inconsistencies among nurses. The following section will address barriers to reporting and the subsequent paragraphs will discuss the gaps, strengths, and weaknesses of rigor in previous research to further support the importance of this study.

CAN Laws

A critical component regarding CAN research is connected to CAN laws and the issue of mandatory reporting behaviors, such as the adherence to reporting of CAN by professional nurses (Petersen et al., 2014). A major barrier with reporting CAN has been connected to CAN law, which in and of itself has been problematic. As was discussed in previous sections of this dissertation, policies on mandatory CAN reporting are broad in nature, ambiguous, subject to individual interpretation, and divergent (e.g., in the U.S, laws and CAN definitions have differed by state: Petersen et al., 2014). This unclarity in CAN legalities has created disagreement among CAN reporting professionals on what constitutes CAN (Petersen et al., 2014). Accordingly, mandated reporters (such as nurses)

are hesitant to report CAN because of ill-defined regulations in reporting (Davidov et al., 2014; Leite et al., 2016). Furthermore, evidence shows that reporting professionals prefer not to report in order to avoid making incorrect judgments (Al Saif et al., 2018).

Importantly, mandated reporters themselves have recognized the need for more precise definitions and guidelines and have been vocal about the need for clarification and guidance with regards to the specifics in CAN laws (Kuruppu et al., 2018; Lavigne et al., 2017). Combined with the reporters' desire for more guidance with mandated reporting, the literature also points to a need to inform and clarify to mandated reporters the importance of compliance with CAN laws, especially in regard to the consequences of failing to identify and report CAN (e.g., resulting harm to children and the potential legal ramifications to mandated reporters who do not comply with CAN reporting laws: Kuruppu et al., 2018).

Systemic/Structural Issues

External determinants, such as professional/institutional characteristics (like support and mentoring) have been linked to CAN reporting behaviors (Al Saif et al., 2018; Francis et al., 2014; H. Lee & Kim, 2018; Schols et al., 2013). More specifically, the lack of resources and support systems/collaboration are mentioned in several studies as a barrier to reporting (Lagerberg, 2001; Leite et al., 2016; Schols et al., 2013). For example, a study revealed that a lack of support was associated with unwillingness to report suspected cases of CAN, which resulted in inadequate documentation to support the suspected abuse (Leite et al., 2016). Conversely, administrative support improves reporting. For example, in one study, nurses with regular contact with social services were twice as likely to report CAN, compared to nurses without regular contact (Lagerberg, 2001).

Financial support has also been linked to CAN reporting (Louwers et al., 2012). For example, a Netherlands study revealed that an administration's willingness to utilize a child abuse team to assist professionals with CAN reporting in the ER was limited by a lack of financial support, time limits, and a high staff turn-over (Louwers et al., 2012). Similarly, an Australian study found that resource barriers associated with newly implemented CAN laws that required increased personnel to handle a higher number of CAN reports decreased its reporting (Matthews et al., 2016). Studies have also shown that systemic issues, such as work burden and inadequate reporter protection from retaliating family members, have prevented nurses from reporting CAN (Leite et al., 2016).

Importantly, a lack to proper CAN assessment tools has hindered the documentation of needed reporting evidence. That is, the patient admission assessment instrument has proven to lack critical questions to help identify CAN cases and represents a barrier to correctly identifying CAN (Bradbury-Jones et al., 2013; Kraft & Erickson, 2015). For example, one study revealed that when clients were admitted with diagnoses of parental suicide, domestic violence, and substance abuse disorders, some healthcare workers did not question whether there were dependent children involved, which resulted in misreporting CAN cases (Diderich et al., 2015). The medical neglect of children can be recognized in a variety of ways such as through the lack of needed dental care. In one case, more than half (60%) of public health nurses reported that they did not practice routine dental assessments on children whom they came in contact with, due to lack of dental assessment questions on the admission forms they used (Bradbury-Jones et al., 2013).

Geographic Location

The geographic location or context of nurse reporters (e.g., living and working in rural settings) has contributed to barriers in CAN reporting. However, research on the connection between rural locations specifically with CAN reporting is needed. There is one Australian study which has focused on this relationship which revealed a rural barrier related to CAN reporting was attributed to a lack of reporter anonymity due to the nature of the rural locations (Francis et al., 2014). Due to the small community size, reporting professionals felt that they could be easily recognized as the CAN reporters. This finding suggests that a rural setting can be another factor influencing CAN reporting. Supporting this view, a qualitative study conducted by Schols et al. (2013) revealed that the small distance between a reporters' home location and work location (e.g., nurses' work district) constituted a reporting issue for some public health professionals. These professionals lived in small villages and were concerned about the potential gossip that could result if they were to report a family for CAN (Schols et al., 2013). In a similar fashion, Fraser et al. (2010) found that nurses with metropolitan work experience were more likely to report sexual abuse (OR, 2.39; 95% CI, .528–10.8) compared to nurses employed in rural settings (OR, 2.19; 95% CI, .494–9.76).

Sociocultural and Normative Factors

Research suggests that the reporter's culture and family influence can also sway mandatory CAN reporting (Feng et al., 2005; Feng et al., 2012; Francis et al., 2014). For example, in Asian cultures, CAN is viewed as a family matter that should be resolved within family boundaries (Feng et al., 2012). That said, it is important to mention that in some instances, nurses held negative views of corporal punishment and/or parents who

abused their children, despite traditional perceptions of parenting duties (Feng & Levine, 2005). The literature shows that opinions of abuse also vary according to the situation. For example, some reporters are more likely to report children's exposure to intimate partner violence when a pregnant woman is the victim of the violence (Davidov et al., 2012).

Psychosocial Factors

Attitudes towards reporting have a significant role in reporting outcomes. Specifically, nurses' negative attitudes towards reporting have negatively influenced reporting in the past (Chan et al., 2019; Leite et al., 2016; Rolim et al., 2014). In contrast, positive attitudes among nurses towards reporting CAN have increased the probability of reporting it (Chan et al., 2019; Fraser et al., 2010). Additionally, other factors have influenced CAN reporting behaviors, such as a lack of perceived behavioral control (i.e., the amount of confidence an individual has towards reporting CAN), subjective norms (i.e., individual perceptions of other views towards reporting CAN), and deficiencies in knowledge regarding CAN and reporting laws (Fraser et al., 2010; I. Lee & Kim, 2018). Importantly, increased knowledge influences attitudes and perceived control towards reporting CAN, and reporters who believe that others feel that CAN reporting is necessary have demonstrated increased intentions to report CAN (Feng & Levine, 2005; H. Lee & Kim, 2018).

Emotions (e.g., reluctance, fear, mistrust) are a crucial factor associated with CAN reporting, and reluctance to report CAN among childcare professionals is commonly documented in the literature. For example, several studies have shown that reporters prefer not to report CAN and avoid making false-positive claims. These

reporters are reluctant to report CAN because of the cultural implications and stigmas associated with falsely labeling individuals as abusers (Sathiadas et al., 2018; Schols et al., 2013). For some mandated CAN reporting professionals, a lack of firm evidence has contributed to the reluctance in reporting (Tiyyagura et al., 2016). Importantly, some studies have revealed that mandated CAN reporters are reluctant to assume the responsibility of reporting and prefer to bestow the responsibility on others (Francis et al., 2014).

Some reporting professionals are fearful of making incorrect judgements, while others fear having to deal with potential litigations that may ensue as a result of reporting (Leite et al., 2016; Sathiadas et al., 2018). Mandatory CAN reporters have even expressed fears for their personal safety because of the potential retaliation from family members (Eisbach & Dreissnack, 2010; Kraft & Eriksson, 2015, Leite et al., 2016), or fear contributing to a family dissolution (Nayda, 2002).

Some mandated reporting professionals have expressed distrust towards government organizations, such as social services, law enforcement, and child protection agencies. Issues contributing to this lack of trust stem from dissatisfaction with the services provided, and prevailing uncertainties in agency performance, such as inadequate follow-up and incorrect responses to CAN reports (Davidov et al., 2012). In contrast, trusted relationships with governing agencies are associated with positive CAN reporting outcomes (Rolim et al., 2014). A certain comfort level with mandatory reporting is also associated with the decision-making process when there is an awareness that correct reporting decisions have been made (Eisbach & Dreissnack, 2010; Nadya, 2002).

Additional descriptions of feelings and emotions related to CAN reporting in the literature include anxiety, annoyance, frustration, anger, guilt, helplessness, emotional strain, dissatisfaction, trauma, insecurity, ambivalence, and uncertainty (Eisbach & Dreissnack, 2010; Feng et al., 2005; Kraft & Eriksson, 2015; Leite et al., 2016; Sathiadas et al., 2018). In some cases of domestic violence, childcare professionals are considered as trusted support systems by family members. Thus, having to assume a role of becoming a mandatory CAN reporter can elicit feelings of role conflict (Francis et al., 2014).

Overwhelmingly, the literature shows that a lack of knowledge is a significant barrier for CAN reporting among childcare professionals. Studies show childcare professionals (up to 87% in one study) had not received child abuse-related training (Feng & Levine, 2005). Accordingly, their knowledge scores on CAN reporting varied widely in the studies reviewed. For example, a study conducted by H. Lee and Kim (2018) revealed that professionals' knowledge scores ranged from 5.33 to 23.31 (in a range of 0–30). Professionals exposed to CAN training are more likely to report CAN (Fraser et al., 2010; H. Lee & Kim, 2018). Accordingly, many nurses perceive deficiencies of knowledge in the processes of reporting and in the identification of CAN cases (Chan et al., 2019; H. Lee & Kim, 2018; Leite et al., 2016; Sathiadas et al., 2018; Schols et al., 2013).

A lack of awareness is another major issue, resulting in under-reporting and failing to report CAN. The percentages of professionals who had never reported CAN, due to their lack of awareness, widely varies. Several studies reveal failures to report even when there are clear indications of CAN (Fraser et al., 2010, I. Lee & Kim, 2018;

Tiyyagura et al., 2016; Wilson & Lee, 2021). On the other hand, several studies reveal concerns of potential over-reporting because of differences in opinions among reporters on the definitions of CAN and inconsistencies in reporters' interpretations of CAN reporting laws (Ho & Gross, 2015; Fraser et al., 2010).

Reporters' personal views associated with CAN reporting might be a potential CAN reporting barrier affecting CAN outcomes associated with a victims' race and/or ethnicity. Hymel et al. (2018) researched if there were disparities in the physician assessment and reporting of abusive head trauma (AHT) cases. In two of the 18 participating sites examined, children from marginalized communities were evaluated reported more for abusive head trauma even though they were considered low-risk for AHT (Hymel et al., 2018). Drake and Reid (2011) similarly did not exclude race as a potential contributor for CAN reporting outcomes in their study evaluating substantiated CPS-reported CAN rates by CAN victims' race.

Childcare Professionals' Characteristics

As mentioned earlier, studies have shown that reporters with CAN training are more likely to report CAN (Fraser et al., 2010; H. Lee & Kim, 2018). Additionally, there are associations between parenting and CAN reporting. Some mandatory CAN reporters who are parents themselves are more likely to report child sexual abuse (Fraser et al., 2010). Gender has also been associated with CAN reporting. Female gender professionals are more concerned about failing to report CAN than males (Al-Saif et al., 2018). Reporting also sometimes varies across race/ethnicity and between groups of professionals (Ben Natan et al., 2012; Raman et al., 2012). For example, Ho et al. (2018) reported that health care providers and mental health clinicians were less likely to report

CAN than other groups of professionals (e.g., teachers). Importantly, in this study, reports from non-professional groups (e.g., family members) were less likely to be substantiated and confirmed as CAN (Ho et al., 2018).

Cues to Action

The literature points to an important variable influencing CAN reporting. This variable is the occurrence of an obvious incentive factor, or communication cue (trigger, signal) for action, which in the past has prompted nurses (and other professionals) to report CAN (Diderich et al., 2015; Rosenstock, 1960; Pabis et al., 2011; Schols et al., 2013; Wilson & Lee, 2021). According to professionals, these triggers to report CAN are internally motivated and based on intuition or a gut feeling (Schols et al., 2013). Some childcare professionals pointed out that their personal sense of duty and conscience prompted them to report CAN in the past (Feng et al., 2012; Font et al., 2016). On the other hand, other CAN reporters, especially nurses, described other cues to report CAN, such as the advice of physicians or others with more knowledge and experience who guided their decisions to report (or not to report) CAN (Francis et al., 2014). In some cases, clear signs of abuse, children asking for help, and a parent's version of an event that is not in alignment with a nurse's assessment have been cues for professional intervention (Kraft & Erickson, 2015; Schols et al., 2013).

CAN Reporting in the U.S. and NM

CAN reporting in the U.S. has not been clearly established, particularly in regard to the number of nurses who actually report CAN. According to the USDHHS (2021) (who collects state data on children who received CPS responses) in 2019, about half (51.1%) of state CPS referrals came from various professional groups (i.e., individuals in contact with the child due to job-related responsibilities, such as teachers, police, nurses,

etc.). Nurses as a childcare professional group were coupled under medical personnel reporting, which includes physicians. Of the various professional groups, educational personnel submitted more CAN reports (21%) compared to other professional groups, followed by law enforcement (19.1%). Medical personnel (which includes nurses) submitted about 11% of CAN reports (USDHHS, 2021). Parents and other relatives, friends and neighbors made about 15.7% of reports and other anonymous/unknown sources contributed to about 15.7% of reports (USDHHS, 2021).

In NM, reports of CAN are made to the child abuse hotline (1-855-333-SAFE [7233] or #SAFE from a cell phone), law enforcement, or to the appropriate tribal identity (NMCYFD, n.d.). Callers who report CAN have the right to remain anonymous. In NM, registered nurses (RNs) are legally required to report CAN (NMCYFD, n.d.). Other legally mandated reporters in NM include licensed physicians, residents or interns, law enforcement officers, judges presiding during a proceeding, schoolteachers, school officials, social workers, and members of the clergy who have information not privileged as a matter of law (NMCYFD, n.d.). According to NMCYFD's (2012–2014) Central Intake Report, the majority of reports come from anonymous sources, followed by school personnel and law enforcement. A very small percentage of CAN reports come from health care professionals, including nurses. For example, there were 10,631 anonymous CAN reports in 2013. Of these, law enforcement made 5,218 reports and school personnel made 4,455 reports (NMCYFD, 2012–2014). In contrast, there were only 1,034 reports from hospitals and another 1,212 from health care professionals. The number of RNs in NM who actually make CAN reports is not available through the CYFD, as the

CYFD in NM does not track reporter affiliation tightly enough to be able to produce an aggregate report of CAN (K. Hardy, personal communication, May 4, 2020).

Areas for Research

CAN reporting in the U.S. has not been clearly established, particularly in regard to the number of nurses who actually report CAN. CAN is an obtuse phenomenon influencing children globally, and the need for more research on this topic is evident. From the literature reviewed, there are several limitations to the current research on nursing CAN reporting. First, most of the data related to nurses' mandatory reporting of CAN was collected outside the U.S. (e.g., Asia, Saudi Arabia, and Sweden) where nursing roles and CAN laws may differ, and therefore may not be applicable to understanding the reporting barriers that nurses encounter in the U.S. (Al Saif et al., 2018; Feng & Levine, 2005; Leite et al., 2016). This research gap and lack of CAN reporting evidence constitute a major barrier to understanding the factors influencing CAN reporting outcomes in the U.S. Second, a majority of the current research regarding factors associated with CAN reporting lacks a theoretical framework. Importantly, most of the existing studies that have utilized theories to examine CAN reporting are based on the Theory of Planned Behavior (TPB) (which will be discussed in detail in the next section) (Christodoulou et al., 2019). Although the theoretical framework used in these studies adds rigor to the research, the TPB does not account for cues to action, which are important triggers CAN reporting. Third, although research shows that mandated nurse reporters are more likely to report CAN with training, the CAN reporting training programs in the U.S. lack scientific foundation and evaluative frameworks (Al-Saif et al., 2018; Feng & Levine, 2005). Without this evidence base, programs may have limited use

in helping nurses comply with state CAN laws, and nurses' ability to prevent CAN cases. Fourth, there appears to be a scarce number of U.S. based studies that examine the factors that may prevent nurses from CAN reporting, such as psychosocial factors, rural location, and cues to action. Finally, a majority of the current research regarding factors associated with decreased CAN reporting has primarily focused on urban areas. Therefore, there is a limited understanding of whether this problem applies to nurses in rural areas or the extent to which this problem is magnified in rural areas.

Theoretical Framework

This dissertation research was guided by Ajzen's (1991) TPB framework, in combination with an additional component from the Health Belief Model (HBM) (HBM: i.e., cues to action: Becker, 1974; Rosenstock, 1974). The HBM which was developed as a framework to examine and guide health promotion strategies. Cues to action are an integral part to the HBM and are those stimuli that trigger appropriate decision-making for health decisions (Rosenstock, 1974). The TPB is based upon an expectancy-value model, which encompasses the motivational components for health behaviors from an individually based perspective (Ajzen, 1991; Lee et al., 2017; Poss, 2001). The TPB has been used extensively to investigate numerous health behaviors amongst various professional and racial/ethnic groups (Feng & Levine, 2005). Importantly, the TPB has successfully been used to examine CAN reporting behaviors of nurses globally (e.g., Taiwan, Israel, Korea, and U.S.: Ben Natan et al., 2012; Feng & Levine, 2005; I. Lee & Kim, 2018; Sebastian, 2014). The following section provides an overview of the TPB, the basic assumptions/limitations of the TPB, and the rationale for using an extended version of the TPB that incorporates the HBM's concept of cues to action.

Theory of Planned Behavior (TPB)

The TPB is based upon the assumption that individual behaviors are based upon planned (i.e., rational, and deliberate) intention (Ajzen, 1991; Christodoulou et al., 2019; Gerend & Shepherd, 2012). The TPB is an extended version of the Theory of Reasoned Action (TRA) (Ajzen, 1991). A core factor in the TRA is a person's intentions to engage in a particular behavior (Ajzen, 1991). Intentions encompass motivational factors and indicate the amount of effort an individual is willing/planning to exert to engage in behavior (Ajzen, 1991). Stronger intentions correspond with the increased likelihood of engaging in a behavior (Ajzen, 1991). The TRA postulates that intentions are the result of attitudes and subjective norms (Ajzen, 1991). Attitudes "refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question" (Ajzen, 1991, p.188). Subjective norms are a "perceived social pressure to perform or not to perform the behavior" (Ajzen, 1991, p. 188). The construct of perceived behavioral control was added later by Ajzen (1991) to the TRA and is unique to the TPB. Perceived behavioral control is "the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles" (Ajzen, 1991, p. 188). In general, the TPB examines the relationships between intended behaviors and attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991). All three constructs (attitudes, perceived behavioral control, and subjective norms) influence intended behavior, which ultimately influences actual behavior (Ajzen, 1991). Perceived behavioral control not only influences intended behavior, which in turn influences actual behavior, but can also independently and directly influence actual behavior (Ajzen, 1991).

Although TPB has been used in the past to investigate CAN reporting, there are limitations to its use, in that the TPB does not consider the role that cues to action can have in influencing the intentions and actual behavior of individuals (Ajzen, 2011). Cues to action are a component to the Health Belief Model and include those needed obvious signals that encourage and/or cause and individual to remember to practice a type of behavior (Gerend & Shepherd, 2012; Rosenstock, 1960). For example, a factor that can trigger a change in health behavior is the advice/recommendation from a physician (Rosenstock, 2005). However, such a triggering component for behavioral action is not included in the TPB (Gerend & Shepherd, 2012).

Cues to Action

Similar to the TPB, the HBM is also based on an expectancy-value model. It was developed around the 1950s and 1960s by social scientists in public health (e.g., Rosenstock, 1960, 1974; Becker, 1974) to explain why people choose to engage in preventive health care or not (Gerend & Shepherd, 2012; Rosenstock, 1974). There are five main components to this model, including perceived susceptibility, perceived benefits, perceived costs, perceived seriousness/threats, and cues to action (Becker, 1974; Rosenstock, 1966). An important component of the HBM is “cues to action” (Rosenstock, 1966, p. 101). Cues to action are the triggers that help initiate a change in behaviors (Rosenstock, 1974). Cues to action can be internal (e.g., perceptions of individual physical state and intuition) or external (e.g., media communication, knowledge of how illness has influenced others, and direct communication interactions with others such as advice from physicians) (Rosenstock, 1974). It is important to note

that in order for action to occur in the HBM, something that instigates the process of action (e.g., cue) must exist (Rosenstock, 1966, 1974, 2005).

Utilization of TPB in Health Care Research

The TPB has been used extensively and successfully in research to examine various types of health behaviors, including HPV vaccine uptake (Gerend & Shepherd, 2012), diabetes self-care (Lee et al., 2017), substance abuse harm reduction interventions (Davis & Rosenberg, 2016), treatment for male perpetrators (Kernsmith & Tolman, 2011), and smoking cessation (Bledsoe, 2006). In a meta-analysis of studies, Godin, and Kok (1996) reported that the applicability of the TPB was successful in predicting health behaviors, in particular, with regard to intention (R^2=.41). Similarly, Armitage and Conner (2001) conducted a systematic review of literature and reported that the TPB was able to account for 27% (behavior) and 39% (intention) of the outcome variance in the 185 studies they reviewed.

The applicability of the TPB to examine nurses' behaviors has been demonstrated in several studies. For example, the TPB was used to examine nurses' use of the electronic health record (Leblanc et al., 2012), care of severe acute respiratory syndrome (SARS) patients (Ko et al., 2004), blood pressure monitoring behaviors of nurses (Nelson et al., 2014), and continuing education for mental health professionals (Casper, 2007). Importantly, Feng and Levine (2005) reported in their review of behavioral theories that the TPB has cross-cultural validity because it includes a culturally based perspective on behavior (i.e., normative beliefs).

Several studies examining CAN reporting behaviors are based on the TPB. For example, Feng and Levine (2005) tested the TPB to examine factors associated with

CAN reporting among Taiwanese nurses and reported that perceived behavioral control was associated with nurses' intentions to report CAN (r=.23). Attitudes were a significant predictor, but perceived behavioral control and subjective norms were not as consistent in predicting CAN (Christodoulou et al., 2019). Another study conducted by Ben Natan et al., (2012) tested the utility of the TPB by examining factors of CAN reporting among professionals in Australia. The model in this study was able to explain 28% (R^2=.28) of the variance in the study. In addition, a study conducted by Chan et al. (2019) in Hong Kong examined nurses' knowledge and attitudes, subjective norms, perceived behavioral control, and intention to report CAN. Based on the TPB, this study revealed that nurses' attitudes towards perpetrator culpability was the strongest predictor in nurses' intentions to report the types of CAN (β = 0.38). The proportion of variance for the regression model was R^2=.10 for neglect, R^2=.16 for physical abuse, R^2 =.9 for emotional abuse, and R^2=.7 for sexual abuse. Overall, all the aforementioned studies support the view that the TPB is a useful framework to explain CAN reporting and more specifically can demonstrate how attitudes, perceived behavioral control, and subjective norms influence nurses' intended CAN reporting behaviors.

Rationale for Adding the Concept of "Cues to Action" into the TPB

Research shows that childcare professionals' decisions to report (or not to report) CAN are influenced or triggered by sources like parents (e.g., when caregiver stories do not match the child's injury), advice from experts (e.g., physicians), or children asking for help (Eisbach & Dreissnack, 2010; Pabis et al., 2011). Importantly, research shows that mandated reporters also rely on the advice of experts in their decisions to report (or not to report) CAN (Francis et al., 2014). Although research has not focused on the role that

cues to action play on influencing CAN reporting outcomes, this variable has been used to illustrate how physicians' recommendations influenced HPV vaccine uptake, and how the media and the advice from healthcare personnel predict influenza vaccination (Chen et al., 2011; Gerend & Shepherd, 2012). Although the TPB does not formally include this important cue to action variable to predict intended and actual behavior, there is ample research that suggest that cues to action are an important variable influencing CAN reporting. Accordingly, the study added cues to action to the TPB, based on the assumption that it should also influence reporting behaviors among nurses.

Application of the Extended TPB as a Research Framework

The application of this TPB framework guided the research methods for this study and was used to illustrate the relationships between the variables included in the model. Based on the extended TPB model, this study will explain the effect of attitudes, perceived behavioral control, and subjective norms on intended and actual CAN reporting behaviors, as well as the effect of perceived behavioral control on actual reporting behaviors. The addition of cues to action to extend the TPB model will provide additional knowledge on an important factor that may influence CAN reporting. This study will also explain how external variables, such as the sociodemographic characteristics, geographical location, and institutional characteristics of nurses, as well as CAN laws can influence attitudes, perceived behavioral control, and subjective norms. More importantly, the study will test whether these variables are likely to predict CAN reporting intentions and actual behaviors with the same or similar strength.

Chapter 2: Summary

Child abuse and/or neglect contributes to major health problems and financial problems in the U.S. and globally. Furthermore, children can experience multiple incidents of CAN and their risk factors are more prevalent in certain parts of the world and also in the United States. Importantly, mandated reporting laws require U.S. nurses (and other childcare professionals) to report suspected CAN cases, but at least one fifth (or more) of mandated nurse reporters have failed to report these cases (I. Lee & Kim, 2018). Evidence shows that there are a myriad of variables influencing CAN reporting. However, a majority of the current research reviewed regarding factors associated with CAN reporting has been generated in non-U.S. countries, is primarily focused on urban areas, and the theoretical basis is underdeveloped. Furthermore, child abuse and neglect reporting training programs in the U.S. lack a scientific foundation and evaluative theoretical frameworks. Without this evidence base, programs may have limited usefulness in helping nurses comply with state CAN laws and nurses' ability to prevent CAN cases. This study provides a theoretically based assessment of potential factors that are associated with CAN reporting among nurses, especially those employed in a primarily rural state. Ultimately, the goal of this project is to provide more in-depth knowledge to the nursing community that can serve as a foundation for the development of specialized CAN training programs to improve CAN reporting.

CHAPTER 3: METHODS

This study aimed to (a) explore factors influencing CAN reporting behaviors among RNs living in NM, (b) examine the relationships of these factors with intention to report CAN and actual behaviors of CAN reporting, and (c) compare differences in CAN reporting intention and behaviors between rural and urban areas. The following chapter describes the methodological approaches used for the dissertation study, including the study design, the sample, setting, measurements, data collection procedures, statistical analysis, protection of human subjects, and the study limitations. To address the aims of this research, the following research questions were formulated and examined:

1. What are the factors (e.g., sociocultural, demographic, psychosocial attributes) influencing CAN reporting intention and behaviors among RNs living in NM?
2. Are there any significant relationships between these factors and CAN reporting intention and behaviors among RNs in NM?
3. Are there any significant differences in CAN reporting intention and behaviors between RNs working in rural areas and RNs working in urban areas in NM?

Research Design and Rationale

The study applied a descriptive, cross-sectional, correlational design to address the aforementioned research questions. This type of study design has been widely applied to examine the direction and strength of relationships across the variables under study (i.e., correlational design) and compare the characteristics and outcomes of the group (or variables) under study from a singular point in time without follow-up (i.e., cross-sectional design) (Lau, 2017; Pallant, 2016; Shadish et al., 2002). Additionally, descriptive studies have been used to describe the characteristics (or distributions) of a

group (or the variables) under study without researcher manipulation (Aggarwal & Ranganathan, 2019; Siedlecki, 2020). This type of design was appropriate for the current dissertation research because it allowed the researcher to explore and describe the phenomena under study, and to examine and compare the relationships across the variables under study. The proposed design was also appropriate given that this dissertation study aimed to collect the data once without a planned follow-up.

Setting and Sample

The study setting was the U.S. state of NM. The intended sample are RNs with current unencumbered RN licenses (18 years or older) who were working (either full or part time) and identified NM as their primary/current state of residence. That is, the study used a randomized sample from the New Mexico Board of Nursing's (NMBON) current listserv of RNs. The study sample size was estimated using G*Power analysis, based on the following parameters: a medium effect size (f^2) of 0.15, alpha .05, power .80, and multiple linear regression with five predictors (Pallant, 2016). Based on this analysis, a minimum sample size of 92 participants was required to complete the study.

A medium effect size was applied for estimates of the study's sample size to confirm that the sample size was sufficiently large enough to detect significant differences in the variables under study (Sullivan & Fein, 2012). A medium effect size is often used as a standard approach when there is no precedent for the anticipated effect size (e.g., a small or large effect size), which is neither too large nor too small. A large effect size requires a very small sample, while a small effect size requires a large sample. Thus, if a study has too few participants (with a large effect size), it potentially lacks statistical power to detect significant differences in the variables under study. Conversely, if a study has too many participants (with a small effect size), it is more likely to detect

significant differences in the variables even when such differences lack any clinical and practical relevance (Wasserstein & Laser, 2016; Madsen et al., 2016).

Prior to sending the survey, response rates on similar health research topics were examined that also incorporated online surveys. Among studies examined, response rates from online surveys have varied widely and have been relatively low (Dillman et al., 2014; Guo et al., 2016; Schaefer & Dillman, 1998). Online survey responses range from 28.1% to 73% (Schaefer & Dillman, 1998, Guo et al., 2016) examined response rates from different modes of health surveys (e.g., paper vs. online), and reported that online survey response rates (with incentives) averaged around 33.7%.

Studies with online surveys that examined factors related with CAN reporting (e.g., attitudes, perceptions, adherence) among health professionals were also explored to determine the typical response rate for such related studies. About one third (average of 27.9%) of survey participants responded to these kinds of online surveys (Beck et al., 2015: 34%; Gershoff et al., 2016: 39% and 10%; Konijnendijk et al., 2016: 31%; and Lavigne et al., 2017: 25.5%). Konijnendijk et al. (2016) used an online survey to examine Dutch professionals' adherence to CAN prevention guidelines and reported response rates of 31% (*n*=328). Similarly, Gershoff et al. (2016) examined staff's attitudes towards child discipline at a general and children's hospital using an online survey and reported similar response rates from a general and pediatric health professional of 39% (*n*=2,580) and 10% (*n*=733), respectively. Lavigne et al. (2017) used an online survey to examine pediatric nurses' perceptions of child abuse and reported response rates of 25.5% (*n*=80). Finally, Beck et al. (2015) also used an online survey to examine medical providers' understanding of sex trafficking and reported a response rate of 34% (*n*=168).

Importantly, online survey response rates from nurses do vary and have been difficult to obtain (Anusiewicz et al., 2021; Hutchinson & Sutherland, 2019). For example, Anusiewicz, et al. (2021) had a response rate of 4.47% among nurses surveyed in their study.

Participants for the current study were oversampled (*n*=307) to account for the potential low online response rates as about one-third of participants typically have responded to online surveys. This oversampling approach was used to help minimize potential sampling errors and achieve the required minimum sample size of 92. The study sample was limited to RNs who were currently working in NM. This criterion was consistent with the goal of this research to focus exclusively on perspectives of RNs living in the state of NM. Registered nurses were the only healthcare providers chosen for the following reasons:

1. RNs comprise the largest group of nurses (72%) and are also the largest group of health care professionals (67%) in NM (U.S. Bureau of Labor Statistics, 2019; New Mexico Health Care Workforce Committee [NMHCWC], 2021).
2. The study assumes that because RNs are the largest group of nurses, they are potentially more likely to encounter CAN cases. Accordingly, they would be able to provide the researcher with more comprehensive information on the proposed research questions.
3. The study assumes that RNs lack the knowledge and awareness on how to report CAN according to other studies reviewed (e.g., compared to physicians) (Feng & Levine, 2005; Sathiadas et al., 2018; Wilson & Lee, 2021). Therefore, research focusing on RNs only is crucial in identifying the

underlying reasons for such lack of knowledge and awareness to determine intervention strategies needed in the future.

4. Registered nurses who are licensed at higher levels may have different perspectives on CAN from those who are not, as their roles and scope of practice differ (NMBON, 2021). Registered nurses who choose to continue their education can also hold higher licenses (e.g., Certified Nurse Practitioners [CNPs], Clinical Nurse Specialists [CNSs], Certified Nurse Midwives [CNMs], and Certified Registered Nurse Anesthetists [CRNAs]) (NMHCWC, 2021). For these reasons, RNs licensed as CNMs, CNPs, CNSs, and/or CRNAs were excluded from this study. Certified Hemodialysis Technicians (CHTs), Medical Assistants (MAs), and Licensed practical nurses (LPNs) were also excluded from this study.
5. Although LPNs can contribute to an initial patient assessment, they do not complete an initial patient admission assessment, and the scope of LPN practice is also at the direction of the RN and/or physician (NMBON, 2022).
6. As this study was designed to examine NM RN perspectives statewide, those RNs who did not currently live in NM were also excluded from this study.

Prior to sending out the survey to the study sample, the study obtained permission from the New Mexico Board of Nursing (NMBON) executive director to use the NM BON RN email listserv (see Appendix B). The official registry received from the NM BON contained contact emails of RNs (*N*=30,476), including separate lists for Advanced Practice Nurses (APRNs) including CNPs (*N*=4,077), CNSs (*f*=87), CRNAs (*N*=607)], CHTs (*N*=439), CHT II (*N*=176); CMAs (*N*=354); and CMA II (*N*=11). As RNs can hold

higher licenses, duplicate RN email addresses which also appeared on the CNP, CNS, and CRNA email lists were first removed from the RN list (*n*=2,924). From the total of eligible RNs (*N*=27, 552), a total of 307 email address were randomly selected using the select random cases function in SPSS and then saved to a separate database to export into REDCap.

Characteristics of RNs in NM

Regarding RN characteristics in NM, according to the U.S. Bureau of Labor Statistics (2019), nearly three quarters (72.2%) of nurses held licenses as RNs in NM in 2019. There were 170 nurse anesthetists, 90 nurse midwives, 1,110 nurse practitioners, and 2,120 licensed practical/vocational nurses in 2019 (U.S. Bureau of Labor Statistics, 2020). To obtain more specific data of nurses in NM, the researcher also used the *New Mexico Health Care Workforce Committee (NMHCWC) 2021 Annual Report* to be able to compare the study's RN sample characteristics with actual NM RN characteristics. This report uses licensing data estimates from licensing boards (e.g., the NMBON), which includes the licensee's date of birth, mailing address, credentials, and name, etc. However, the licensure data does not present the location of the licensee (e.g., RNs can practice in several states, but list NM as their mailing address) and also groups CNSs along with RNs for some of the statistical reports (NMHCWC, 2021). With that in mind, (for RNs and CNSs combined) approximately 15,588 were practicing in state, 5, 862 were non-practicing, and 6, 985 were out of state (NMHCWC, 2021).

Furthermore, RNs/CNSs also comprise the largest percentage (53.9%) of NM health care professionals with licenses in NM (including physicians, advanced practice, nurses, emergency medical technicians, psychiatrists, and dentists). Of those RNs/CNSs practicing in NM, approximately 6.6% are American Indian or Alaska Native, 6.9% are

Pacific Islander or Asian, 3.6% are Black or African American, 82.9% are White (about one third, 34.1% are Hispanic), and 2.7% indicate as "other." The majority of RNs in NM are female (88%, 12, 174 female RNs/CNSs), compared to male (12%, 1,666 male RNs/CNSs) and almost one fifth (18.8%) are older than 34 years of age with a mean age o3f 47.8 (NMHCWC, 2021). Importantly, the current study sample characteristics were similar to the actual NM RN characteristics (NMHCWC, 2021). See Chapter 5 for more detailed comparison.

Almost all (97%) counties in NM experience nursing shortages. That is, in 2020, 32 out of 33 NM counties were below the recommended national benchmark for RNs (CNSs were grouped with the RNs). In effect, 18 counties in NM have severe nursing shortages below recommended benchmark: Chavez (-270), Cibola (-111), Curry (-123), Dona Ana (-747), Eddy (-252), Lea (-442), Luna (-152), McKinley (-358), Otero (-326), Rio Arriba (-225), Roosevelt (-106), San Juan (-406), San Miguel (-117), Sandoval (-564), Santa Fe (-525), Taos (-163), Torrance (-126), and Valencia (-602) (NMHCWC, 2021). With the national benchmark for RNs/CNSs set at 9.43/10,000 population, NM has a total shortage of 6,223 RNs/CNSs (NMHCWC, 2021).

Recruitment

Before recruitment and data collection, the study received approval from the Institutional Review Board (IRB), the UNMHSC Human Research Protection Office [HRPO]. The IRB-approved survey recruitment script was sent via a mass email with the subject title: Child Abuse & Neglect (CAN) Survey. The survey was sent to the first sample (*n*=307) on July 6, 2022, receiving only two survey responses on the first email recruitment. A reminder email was sent ten business days later (excluding invalid emails

and those who had responded already). No survey responses were received with the second reminder emails.

Due to the study's initial low response rate (i.e., 2/302 = .0065%) from the first sample, it was determined that a larger sample size was necessary. For the second round of recruitment emails, to accommodate for the response rate of .0065% (and to help achieve the required sample size of 92), the survey was emailed to 14,154 participants (92/.0065=14,154). For this second survey email, the researcher included a compelling email heading "Need Help: Child Abuse & Neglect (CAN) Survey". With the second larger sample, the researcher was able to obtain a total of 263 responders. An additional 82 responses were received with the reminder email sent (*n*=13,606) August. 28, 2022. As the study had the required response rate, the survey was closed on September 2, 2022, with the final number of surveys totaling 345 responses and a final response rate of 2.44% (calculated 345/14,154=2.437). After cleaning the data (see data cleaning section), the study applied 146 survey responses for the study. See Table 3.1 for recruitment timeline.

The recruitment script which included the study title, a brief description of the need for the study (such as rates of CAN in NM), who would be conducting the survey, researcher contact information, the study purpose, and potential risks were sent to the potential participants in the listserv prior to collecting data. On the recruitment website page, the participants were also provided the information that the survey was entirely voluntary, and that they had the option to discontinue/withdraw from the study at any time without any penalty. In addition, they were informed that the researcher would make every effort to assure the survey was completely anonymous (e.g., no personal

identifying information would be requested) and confidential. Along with this description of the study, the following page contained eligibility-screening survey questions designed to determine whether potential participants were eligible for this study.

Table 3.1

Timeline for Recruitment

Activity	**Date**	**Mailing List**	**Survey Responses**
		n	*n*
Opened First Survey	July 6, 2022	307	2
Reminder Email Sent	July 19, 2022	300	0
Opened Second Survey	August 1, 2022	14,154	263
Reminder Email Sent	August 28, 2022	13,606	80
Closed Survey	September 2, 2022	------	----
Survey Received in Total			345
Surveys Used After Cleaning			146

The researcher determined the eligibility of the study participants by using an online screening tool administered at the beginning of the survey. The inclusion and exclusion criteria were verified/implemented online using the screening tool questions added to REDCap. Participants answered these screening questions prior to beginning the CARIS questions and before they had provided consent for the study. The screening procedures to determine participants' eligibility included preliminary questions relevant to exclusion and inclusion criteria (e.g., RN current license status, participants' most recent license, currently employed in NM). If a potential participant answered "No" to any of the preliminary questions, the screening platform directed participants to a message thanking them for their time, and the screening survey was discontinued. Because mandatory reporting is a legal part of RNs' responsibilities, registered nurses were not excluded based on part-time or full-time status, work location (e.g., health clinic, hospital, emergency room, medical surgical unit), and/or work experience. In

addition, every RN's perspective is useful in identifying the factors that are associated with CAN reporting.

The study applied branching logic to the screening instrument on REDCap (i.e., branched the survey responders via different paths based on survey responses) (Qualtrics ^{XM}, 2022). For example, the screening tool was set up on a separate screen/instrument on REDCap and formatted so that if participants selected the ineligible response (e.g., a higher nursing license), they were directed to a screen that thanked them for their responses and the survey ended. In addition, the questions were arranged in such way that the participants were allowed to proceed to the next question if they meet the eligibility criterion in the previous question, i.e., survey responders were directed to different workflow paths in REDCap based on their survey responses so that participants were not able to proceed with the study if the eligible survey progression responses were not selected. If one or more of the answers disqualified the participant from taking the survey, they were taken to the end-of-survey page. If all the questions were in line with inclusion criteria, they proceeded to the actual questionnaire. See Appendix A for a copy of the screening tool used. No incentives were provided to those who participated in this study.

Once potential participants were identified as eligible to participate in the study, they were directed to the next screen where they were provided additional information (e.g., survey consent, participant rights, etc.) (Dillman et al., 2014). The consent form was arranged in such a way (also by applying branching logic) in REDCap so that the participants were not able to proceed to the next survey questionnaire if the consent was not given. Furthermore, as this type of survey could potentially cause emotional

discomfort to adult survivors of CAN, a website was included (after the consent page) which provided a support link and telephone number to the Albuquerque Family Advocacy Center, should participants feel the need to reach out for support (City of Albuquerque, 2023; CITI Program, 2020). At this stage, participants were also informed again that this survey was entirely voluntary, that they had the options to discontinue/withdraw from the survey at any time without any penalty, and that the survey was completely anonymous and confidential.

Immediately after completing the screening and consent, participants were routed to the actual questionnaire survey. The questions on the questionnaire survey were also set up in such a way that the participant could save their answers, backward-navigate to change the answers, and return to complete the survey at a different time (Dillman et al., 2014). Participants were not required to answer questions to proceed, as Dillman et al. (2014) advised against requiring responses. This is important to consider for the participants, due to the nature of the questions (e.g., CAN), which might be considered difficult for some participants who may have themselves been CAN victims.

Data Collection Procedures

Once approval had been obtained from the UNMHSC IRB, the researcher administered the CARIS questionnaire via REDCap by distribution of a mass email to the participants on NM BON listserv. REDCap is a secure, web-based application designed to support data capture for research studies, providing (1) an intuitive interface for validated data entry, (2) audit trails for tracking data manipulation and export procedures, (3) automated export procedures for seamless data downloads to common statistical packages, and (4) procedures for importing data from external sources (UNMHSC, Clinical & Translational Science Center, 2020). The study used REDCap because the

REDCap system protects participant data and can provide potential researchers the survey responses without identifiers (S. Targownik, Outreach & Education Manager, UNMHSC, Human Research & Protection Office [HRPO], personal email communication, Feb. 14, 2021). Furthermore, REDCap does not log IP addresses.

An online survey method (i.e., via REDCap) to collect the data was chosen for this study because electronic surveys that rely on email contacts have shown to be a dependable and popular means to collect data in the U.S. (Dillman et al., 2014). Electronic surveys are also cost-effective and provide timely results (Dillman et al., 2014). Another advantage is that online surveys can minimize coverage error because they can provide information of groups of survey participants (such as the current study's target population) from diverse locations (e.g., rural vs. urban NM counties and/or public/private health services) (Dillman et al., 2014). Additionally, research shows an increasing majority of households (86.6%) now have Internet access (Johnson, 2021). Internet access is an effective means to reach RNs, especially those working in rural areas, as RNs typically have Internet access from their work locations. Internet access in rural locations should not be an issue either as Internet use is also quite accessible in rural locations. Evidence shows there has been a steady increase in the number of rural healthcare facilities that are using Telehealth (Mehrota et al., 2016). For example, telemedicine for Medicare beneficiaries living in rural areas has increased at an annual rate of 28% (i.e., from 7,015 visits in 2004 to 107,955 visits in 2013) (Mehrotra et al., 2016).

The use of mobile devices is also now popular to use (Flynn et al., 2018). In a cross-sectional study of six health care facilities in southern U.S., Flynn et al. (2018)

found that most nurses own a smartphone (97.7%) and carried a smartphone at work (92.7%). Dillman et al., (2014) also add the importance of including options for mobile users, as about 10% of online surveys are completed using mobile devices (Dillman et al., 2014). To help increase survey response rates, participants had the option of completing the survey using a smartphone.

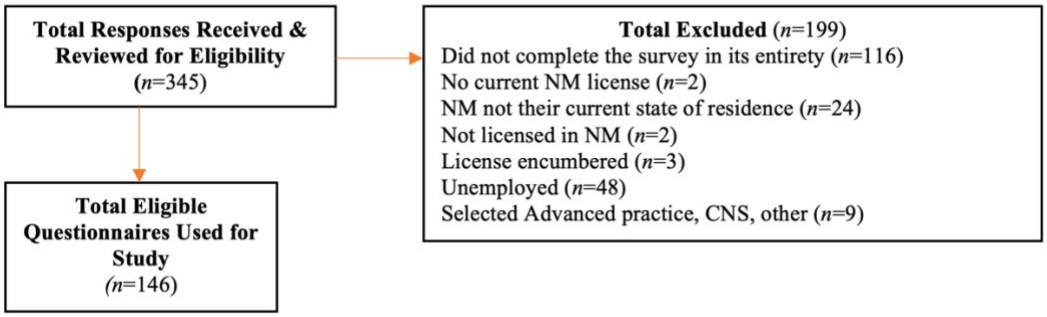
The researcher collected the data between July 2022 and September 2022. The timing of web surveys is generally quite fast, i.e., if participants respond to online email surveys, they will typically respond within the first few days (Dillman et al, 2014; Zheng, 2023). The study time frame was based also on previous health care-related research that used online surveys (Flynn et al., 2018; Toledo et al., 2015). For example, Flynn et al. (2018) collected data (*n*=735) via an online survey for three weeks and reported a response rate of 37%. Toledo et al. (2015) allowed their online survey to remain open for 56 days with response rates of 36.2% after the fourth reminder (*n*=1965). The survey closed 58 days after the initial email.

Dillman et al., (2014) recommended a "five-contact email strategy" to increase response rates. To help minimize selection bias and increase response rate, the researcher sent a total of three personalized email reminders to potential participants (Dillman et al., 2014). These reminder emails were sent during the daytime (with consideration of participant time zones) when participants are more likely to respond (Dillman et al., 2014). The study limited the reminder emails to three reminders due to the increase in electronic communication since the pandemic. Research suggests electronic communication has increased by nearly 50% in some cases and therefore could be considered a nuisance to some (DeFilippis et al, 2022). Furthermore, with the survey and

email reminders, several nurses requested to be removed from the survey email list. Due to these nurse requests and the sensitive topic of the study survey, the survey was closed once the desired sample size was achieved. Of the 345, there were a total of 199 participants who were screened out because they did not complete the survey entirely (i.e., to the end of the survey), they did not list NM as their primary state of residence, they held higher licenses, etc. See Figure 3.1.

Figure 3.1

Screening Process for Eligible Surveys Used for the Study



Note: The total number excluded were excluded for one or more of the listed reasons.

Measurement

Child Abuse Report Intention Scale (CARIS) (Feng, 2003)

The Child Abuse Report Intention Scale (CARIS) questionnaire was used to address the research questions under study. This survey tool was initially developed in English and first implemented for nurses in Taiwan (Feng, 2003). Dr. Feng's (2003) nurse's version of the CARIS contains two major sections. The first sections of the scale include demographics (e.g., previous history of reporting CAN, personal, institutional, and professional characteristics). The second section of the scale includes questions relating to CAN reporting and corresponds to five subscales measuring the four TPB

components (i.e., attitudes, subjective norms, perceived behavioral control, and intention to report CAN) and a section assessing CAN knowledge (Feng, 2003). The current study included additional questions relating to the study purpose (e.g., metropolitan versus nonmetropolitan location) and a "cues to action" questionnaire which are described later in this chapter. Permission to use the CARIS tool was obtained from the author for this dissertation study. See Appendixes C, D.

Importantly, the CARIS is already an established instrument and has been used in several countries like Australia, Israel, and in the U.S. (Fraser et al., 2010; Natan et al., 2012; Sebastian, 2014). I. Lee and Kim (2018) used the CARIS to examine mandatory reporting of pediatric nurses (*n*=116) in Korea. Ben Natan et al., (2012) used the CARIS to examine factors associated with CAN reporting among medical (*n*=42 doctors) and nursing staff (*n*=143 nurses) in Israel. In the U.S., Sebastian (2014) used the CARIS to study pediatric nurses' (*n*=58) knowledge and comfort level with CAN reporting.

Pallant (2016) recommends a Cronbach's alpha of .7 and above. For the CARIS, evidence shows the Cronbach's alpha ranged from .62- .91 for overall instrument reliability (Feng & Wu, 2005). Cronbach's alpha for the intention to report scale ranged from .62-.68; .62 for the perceived behavioral control scale; .85-.85 for the attitudes scale; .85-.91 for the subjective norms scale, and .71- 84 for the knowledge questions (Feng & Wu, 2005). Construct validity for the instrument was also validated (Feng & Wu, 2005). Content validity indices were also satisfactory (89-98%) (Feng & Wu, 2005).

Specific Instrument Characteristics

The instrument used for the study consisted of six domains, Section 1: Demographics which include personal, professional, and institutional questions, Section

2: Attitudes, Section 3: Knowledge, Section 4: Subjective norms and, Section 5: Perceived Behavior Control, and Section 6: Intended Practice (e.g., CAN reporting) behaviors. The study included domain 7: Cues to action included at the end of the questionnaire.

CARIS, Section 1: Demographics and Past History of CAN Reporting.

Section 1 in the CARIS contains 22 closed-ended personal, professional, and institutional types of questioning and history of reporting abuse (including general questions on geographic location by the geographic location of employment) (Feng, 2003; see Appendix D). Additional items were added to examine identified participants' gender identity (questions one and two) and race/ethnicity (question four). Per IRB recommendation, question number eight ("Were you a victim of child abuse?") was eliminated from the demographics section. To examine nurses' history of CAN reporting, a question item was added, "On a scale of 1-7, if you thought a child was being abused today, how likely would you be to report CAN?". This question item was used to examine proxy behavior (i.e., proxy behavior scale) of nurses' actual CAN reporting. Additional items were included to the questions that asked "rank the reasons for not reporting" to reflect the research on CAN reporting behaviors such as personal beliefs in child rearing, lack of support, lack of time due to workload, etc.

To answer research question number three (e.g., to examine differences between rural and urban areas), question 21 required modification with the demographics of NM (e.g., the compass directions of NM). Question number 20 on the original CARIS read as: "Where is the location of your workplace?" with options: North, South, East, West (Feng, 2003, p. 3). Question number 21 was revised, and response options were modified to

include “1). Northeast, 2). Northwest, 3)., Southwest,” and so on. As this study aimed to compare perspectives of RNs from both rural and urban areas in NM, a question (item number 22) was added to identify rural/urban location. Question item number 22 also included a map of the top four county metropolitan classifications (e.g., medium metro, small metro, micropolitan, and noncore) (RHIH, 2023c). For the survey, question 22 read as: “Select one of the four options from the list that includes the county metropolitan classification in which you work”. The responses were color-coded to align with the color coding of the map. To examine poverty rates of RN work location, question number 25 was added that included a map outlining top three poverty areas in NM. Question number 25 asked RNs to select poverty rates (e.g., average, high, very high) of their work location. The responses were color-coded with poverty areas in the map to allow for easy identification. See Appendix F.

CARIS, Sections 2: Theory of Planned Behavior Components and Knowledge. To apply the Theory of Planned Behavior variables (e.g., attitudes, subjective norms, perceived behavioral control, and intentions to report) the second domain of the CARIS instrument applied a series of questions which are further explained in the following paragraphs. This domain of the CARIS also applied a series of 13 questions that assessed nurses’ knowledge of CAN.

For this current study, the concept of attitudes was applied by using the Attitude Total Scale (ATS) on the CARIS (Feng, 2003). Attitude is a “person’s general feeling about child abuse, which consists of four elements: (1) attitude toward child abuse itself, (2) attitude about child discipline, (3) attitudinal response to abusive parents and abused children, and (4) attitude toward professional responsibility of reporting suspected child

abuse" (Feng, 2003, p. 7). There are a total of 18 questions measuring attitudes towards CAN that contain three subcomponents (child rearing, offender punishment, and professional responsibility). In its entirety, total scores can range from 18 to 108 points. The ATS items include attitudes about child rearing beliefs, such as "It is OK for parents to slap their children who talk back" and "Parents have the absolute right to decide the ways they discipline their children" (Feng, 2003; see Appendix D). Participants respond to the attitude's questions using Likert-type scale questions whose scores range from 1 (strongly disagree) to 6 (strongly agree).

The concept of subjective norms was applied in the study by the Subjective Norms Scale (SNS) scores on the CARIS (Feng, 2003). Subjective norms are those perceptions of whether an individual should or should not report CAN that are related to social pressure (Feng, 2003, p. 69). There are two questions measuring subjective norms, which examine views on CAN reporting from people the participant feels are important. They are measured using a Likert-type scale ranging from 1 (Definitely No) to 5 (Definitely Yes) regarding opinions of important and respected individuals regarding abuse. Items measuring subjective norms include "Do most people who are important to you think you should report suspected child abuse?" and "Do most people whose opinion you respect think you should report suspected child abuse?" (Feng, 2003; see Appendix D). In its entirety, the subjective norms section has two questions, which can range from 2 to 10 points.

The study applied the concept of perceived behavioral control by using the Perceived Behavioral Control Scale (PBCS) scores on the CARIS. Perceived behavioral control is "nurses' perception of control they have over the reporting of suspected child

abuse" (Feng, 2003, p. 70). There are eight items assessing a person's perceived behavioral control on a 5-point Likert scale ranging from 1 (Definitely no) to 5 (Definitely yes). Items include "I believe I have a lot of control over reporting suspected child abuse" and "I have higher priorities in clinical than child abuse. This affects my decision to become involved or not in reporting child abuse." (Feng, 2003, see Appendix D). The sum scores could range from 8 to 40. Higher scores indicate more perceived behavioral control.

This study applied nurses' intended practice behaviors to report CAN in the CARIS using the Intended Practice Behavior Scale (IPBS) which consists of eight case studies (i.e., hypothetical scenarios) that are speculative regarding intention to report CAN. These scenarios are measured by using six Likert scale with response options such as 1 (not at all serious) to 10 (extremely serious) and 1 (almost certainly would not report) to 10 (almost certainly would report) (Feng, 2003). The total intended practice behavior scores could range from 80-640 for the total scenario scores combined.

These speculative cases of CAN (e.g., emotional abuse, physical abuse) include varying degrees of severity that are intended to examine nurses' intention to report CAN if they were in such a situation (Feng, 2003). Intention to report CAN items include "Based on the information you have, how serious is this incident?" and "How likely would you be to report this case?" (see Appendix D). Nurses rate their intended practice behavior using scales that range from 1 (not at all serious) to 10 (extremely serious) or 1 (definitely not required to report) to 10 (definitely required to report), and so on (Feng, 2003; see Appendix D). The sum of scores could range from 8 to 80 for the combined questions of intended practice behaviors with the separate case scenarios with high scores

reflecting that a case was either more serious or more likely to report, and so forth. For example, for the IPBS question item number six (IPBS-6) “How likely would you be to report this case?” the combined intention to report CAN scores can range from 8-80 (Feng, 2003; see Appendix D).

For the current study, the researcher applied nurses’ knowledge of CAN by using 13 questions from the CARIS with the options 1 (true), 2 (false), or 3 (don’t know) assessing CAN knowledge. The CAN Knowledge questions (KQ) section is intended to assess nurses’ knowledge of CAN (Feng, 2003). These questions included items such as “Nurses are mandated by law to report child abuse” and “A sexually abused child may have a normal physical examination” (CARIS, p. 6). The total sum knowledge scores could range from 13 to 39 (Feng, 2003; see Appendix D). Higher scores on correct answers indicate higher knowledge of CAN. See Table 3.4 for summary of these CARIS question discussed and the associating scales for measurement.

This study included an additional component—the Cues to Action Scale (CTAS)—to the CARIS. Cues to action are cues (e.g., obvious strategies or information) that encourage, trigger, or motivate an individual to engage in CAN reporting (Coe et al., 2012; Hartley et al., 2018; Shahrabani et al., 2009). This Cues to Action component was placed after the second section of the CARIS survey questionnaire. The current study applied the component of Cues to Action (i.e., to report CAN) by scoring these items using a Likert-type scale (i.e., CTAS) ranging from 1 (strongly disagree) to 6 (strongly agree). See Table 3.4. Types of questions used include items, such as “Recommendations in mass media prompts me to report CAN” and “I would attempt to initiate a CAN report only if another nurse stated they would file a complaint against my license” (Chen et al.,

2011; Klotzbaugh & Spencer, 2015). The total sum of scores for the six Likert-type questions can range from 6 to 36. There is one “yes” or “no” response-type question included in this section also.

The Cues to Action questions are adapted/revised from previous research designed to examine triggers that prompted an individual to engage in ideal behavior (Chen et al., 2011; Coe et al., 2012; Gerend & Shepherd, 2012; Klotzbaugh & Spencer, 2015; McClenahan et al., 2007). For example, Coe et al. (2012) used cues to action to examine if the experience of sharing one's relatives’ illnesses influenced individuals to get the H1N1 influenza vaccine (Cronbach’s α =.98). Chen et al. (2011) used cues to action to examine predictors for caregiver vaccination with a Cronbach’s α of 0.82. Klotzbaugh and Spencer (2015) used Magnet Chief Nursing Officers’ cues to action initiating lesbian, gay, bisexual, or transgender (LGBT)-specific policies (Cronbach’s α=.815). The cues to action questions were also adapted based on research on cues that have triggered nurses to report CAN (e.g., physician recommendation, moral obligation, etc.) (Diderich et al., 2015; Rosenstock, 1960; Pabis et al., 2011; Schols et al., 2013). See Appendix E for the supporting evidence to the Cues to Action survey questions. Changes made to the CARIS were approved by the author of the CARIS (i.e., Dr. Feng) and the final instrument was approved by the IRB prior to study implementation. See Appendixes F (final CARIS copy approved by IRB used for survey and G (IRB approval letter).

This was a cross-sectionional study. Accordingly, the relationship of future behavior with intention cannot be measured. The study applied the proxy behavior scale as a dependent variable (see question number 11: Appendix F). This question asked: “On a scale of 1-7, if you thought a child was being abused today, how likely would you be to

report CAN". The Proxy Behavior Scale (PBS) could range from 1 to 7 with "1" being extremely unlikely and "7" being extremely unlikely.

Reliability and Validity

Prior to sending out the survey the instrument was evaluated for content validity. The evaluation was accomplished by creating a Content Validity Form (See Appendix H) that included the TPB variables, Knowledge, and Cues to Action question items (Lee, 2007). The form (Lee, 2007) was emailed to six professional experts (a family health nurse practitioner; a social worker; a NICU/pediatrics nurse; a medical surgical nurse, and an L&D nurse, and nursing program director). Most responses by the panel were satisfactory (e.g., assessed at a level 3 and showed the CARIS questions covered CAN content) with indices at 100%. See Table 3.2.

Table 3.2

Content Validity Index for Major Study Variables

Theory Construct Variable	***M***	**CVI***	**IRA^**
Subjective Norms	3.0	1.0	1.0
Perceived Behavioral Control	3.0	1.0	1.0
Attitudes	2.98	1.0	1.0
Intended Practice Behaviors	2.94	1.0	1.0
Knowledge	2.90	1.0	1.0
Cues to Action	3.0	1.0	1.0
Total (TPB, Knowledge and Cues Constructs)	2.99	1.0	1.0

Note: CVI = Number of reviewers (*N*=6) giving 2 or 3 / Reviewers panel size; ^IRA = Agreement / Number of agreements + disagreements (reviewer panel size).

Revision Process of the Instrument

After the survey was closed, the survey was further also examined for internal consistency (i.e., Cronbach's alpha) using the 146 survey responses. Cronbach's alpha scores were low for some question items. These items were examined in the analysis and removed to increase question reliability scores (including those questions that were not correlated to each other). The study applied 14 questions for Attitudes (Attitudes Total Scale [ATS]), two questions for Subjective Norms (Subjective Norms Scale [SNS]), and six questions for or Perceived Behavioral Control (Perceived Behavioral Control scale [PBCS]). The Intended Practice Behaviors section with the eight case scenario questions were highly reliable with overall Cronbach's alpha of .92. The study applied five question items to measure Cues to Action (Cues to Action scale [CTAS] and 13 questions to measure knowledge of CAN (Knowledge questions [KQ]). See Table 3.3 for the final instrument used in the study and the instrument-specific reliability scores and ranges.

Table 3.3

Final Instrument Measures Used in Study

Measurement	Exact Measures Used in Study		
	Cronbach's α	**Questions *n***	**Score Range**
Attitudes Total Scale (ATS)	.68	14	14-84
Subcategories:			
Childbearing belief and discipline	.80	6	6-36
Punishment and culpability of offenders	.78	4	4-24
Professional responsibility	.73	4	4-24
Knowledge Questions (KQ)	.57	13 (true/false/don't know)	Number of correct responses
Subjective Norms Scale (SNS)	.93	2	2-10
Perceived Behavioral Control Scale (PBCS)	.80	6	6-30
Intended Practice Behavior Scale (IPBS)	.92	8	80-640
Question Item Six (IPBS-6)	.65	8	8-80
Cues to Action Scale (CTAS)	.66	5	5-30
Proxy Behavior Scale (PBS)	n/a	1	1-7

Note. Listed here are the actual measures used in the study after checking for internal consistency. Negatively worded items in the questions were reversed. Included in the ATS are the subcategories of 1) attitudes towards child rearing with α=.8, 2) attitudes towards abusers (item 5 was removed) and 3) attitudes of professional responsibility (items 3, 5, & 7 removed). For the PBCS, items 3 and 4 were removed. For CTAS as a whole, question item 1 was removed to improve Cronbach's alpha scores. IPBS-6 is the question item number six from the IPBS: "How likely would you be to report this case?" (Feng, 2003).

Data Analysis

For the current study, the independent variables were the TPB components (i.e., attitudes, subjective norms, and perceived behavioral control), knowledge, and cues to action scales. The participant score ranges averaged in the intentions scale were the primary dependent variable including the proxy behavior. See Table 3.3.

To conduct the analysis, significance was set at .05. The data was entered into and analyzed using the SPSS statistical software program (version 28.0). Descriptive statistics were conducted to examine the distribution of the study variables (e.g., Mean [*M*], standard deviation [*SD*], frequencies, outliers, and missing cases) and identify any violation of the assumptions underlying the statistical analysis techniques that were used to address the research questions (e.g., normality, linearity, multicollinearity). For the Likert-type scales, averages (or sums) of all items in each subscale in the CARIS (e.g., attitudes) were computed and used for data analysis.

Data Preparation, Cleaning, and Screening

The researcher coded, screened, and cleaned the data prior to analysis. Visual inspection of the entire data set was performed to identify any incomplete and/or inaccurate data entry. A total of 345 participants responded to the survey; 199 of them were considered non-valid (e.g., did not complete the consent, or stopped in the middle of the survey, etc.), leaving a remainder of the 146 valid surveys for the study. Of the valid survey responses, only a few participants did not respond to all the questions. Missing values were left as missing, unless a participant did not answer 20% or more of a question (e.g., ATS, IPBS) and missed a response (e.g., if a respondent did not answer if they knew someone who was a CAN victim) needed for the analysis, in which case they

were excluded from that analysis. The researcher also ran the statistics with and without missing values to determine if there was a significant difference between the two data sets.

Research Question One: What are the Factors Associated with CAN Reporting Intention and Behaviors among RNs Living in NM?

To address research question one, the study applied a series of Pearson's correlations to determine any significant bivariate relationships of the Intended Practice Behavior Scale (IPBS), the IPBS-6, and Proxy Behavior Scale (PBS) with the three TPB components (i.e., Attitudes Total Scale [ATS], Subjective Norms Scale [SNS], Perceived Behavioral Control Scale [PBCS]), knowledge (KS), Cues to Action scale (CTAS) and continuous/binary demographic variables. For ordinal levels of measurement (e.g., current nursing degree), Spearman Rank Order (Spearman Rho) correlations were also used.

Research Question Two: What are the effects of these factors on CAN reporting intention and behaviors among RNs in NM?

To answer research question number two the study applied a series of two separate standard and hierarchical linear regressions to determine the effect of the independent variables on the dependent variables. The independent variables included: the three TPB components (i.e., the ATS, SNS, PBCS), CTAS, and KQ. The dependent variables included the IPBS and PBS. The study also applied analysis using the IPBS-6 as an outcome variable. For the standard multiple linear regressions all variables were entered into the model at the same time. For the hierarchical multiple linear regressions, the order of the independent variables was based upon the TPB and entered into SPSS as

blocks (i.e., examined in accordance with their predictive ability while controlling for covariates) (Pallant, 2016).

Research Question Three: Are there significant differences in CAN reporting intention and behaviors between RNs working in rural areas and RNs working urban areas in NM?

To answer research question number three, one-way analysis of variance (ANOVA) was used to examine the differences in the outcome variables between the RNs working in rural areas (e.g., nonmetropolitan) and those working in urban (e.g., metropolitan) areas in NM. The dependent/outcome variables were the continuous variables IPBS and PBS. The study also applied analysis using the IPBS-6 as an outcome variable. See Chapter 4 for the results.

Ethical Issues & Data Management

Before collecting data, the study received approval from the Institutional Review Board (IRB), the UNMHSC Human Research Protection Office [HRPO]. Since data collection was done through online survey method, this was a minimally invasive research study with low risk of harm to the participants. Prior to beginning the survey, all participants were provided on a preliminary screen the purpose and risks of the survey (e.g., recruitment script). Per the University of New Mexico Health Sciences Center (UNMHSC) Human Research and Protection Protocol, a survey consent agreement was required from participants (S. Targownik, Outreach & Education Manager, UNMHSC, Human Research & Protection Office [HRPO], personal communication, Feb. 14, 2021). As a precaution against potential emotional risk, the consent included information about the nature of the material covered and that the survey was anonymous and could be

discontinued at any time. The REDCap survey included information regarding where professional help can be obtained by providing information to a CAN support center (e.g., Family Advocacy Center). The survey was anonymous, and participants were informed they could withdraw from the survey at any time. The survey was set up so that participants could choose to skip questions. Due to the sensitive information on the survey, the researcher also limited the email reminders to two attempts being also mindful of the long-lasting psychological effects of COVID when sending out the surveys. For example, the researcher did not send repeat reminders (e.g., stopped the survey) for those RNs who had attempted the survey but did not complete it on their first attempt and/or who had automatic email replies stating they were out of the office and/or taking personal leave.

Remote desktop access was available on the researcher's laptop. The researcher's laptop computer was passcode-encrypted (i.e., required passcode and fingerprint to access) and was kept in a locked room in the researcher's home. Data collected did not include any personal identifying information from the participants (e.g., name, email address, Internet Protocol [IP] address). Access to the data was limited to the chair and the researcher. In addition, data exported from the REDCap survey website was maintained in an encrypted file on a password-protected computer in the researcher's home office. See Table 3.4 for study timeline details.

Table 3.4

Timeline for the Study

Activity	Month					
	1	2	3	4	5	6-9
Open survey	x					
Send invitation email	x					
Send reminders at 7–10-day intervals	x	x	x			
Close survey		x	x			
Import data			x	x		
Enter/verify/clean data				x		
Perform data analysis				x	x	x
Prepare report/summary of findings				x	x	x

Chapter 3: Summary

This chapter described the descriptive, cross-sectional, correlational study design used for the current study. The methodological and analytical approaches chosen for this dissertation study are relevant and appropriate and this study can be replicated by other interested researchers. The researcher followed ethical principles to answer the research questions and also examined empirical sources to assure best research practices were followed. The study strengths and limitations were also described in this chapter. This chapter presented a new model that integrated the "cues to action" construct with the TPB that has applicability to future research on CAN reporting behaviors among childcare professionals. As a theoretically-based starting point for possible changes in mandatory CAN reporting policies, this study stands to support nurses with their reporting responsibilities. This research ultimately can facilitate in the processes to decrease future CAN incidents such as the development of CAN reporting intervention strategies for nurses in NM that may be applicable to other nurses nationwide.

CHAPTER 4: RESULTS

The purpose of the study was to (a) explore factors influencing CAN reporting behaviors among RNs living in NM, (b) examine the relationships of these factors with intention to report CAN and actual behaviors of CAN reporting, and (c) compare differences in CAN reporting intention and behaviors between rural and urban areas. The results of the study are described in the following chapter including: (1) the characteristics of the study sample (e.g., 146 NM RNs), (2) descriptive statistics (e.g., RN's attitudes, subjective norms, perceived behavioral control, RN's knowledge of CAN, cues to action, intentions to report CAN, and demographic variables), (3) CAN reporting practices among the study sample, (4) the results of correlation, multiple and hierarchical linear regressions, (5) study limitations and strengths, and (6) a summary of this chapter.

Study Sample Characteristics

Of the 146 RN participants in the study sample, more than half (63.4%) of the participants identified as white; about one-fifth (18.6%) identified as Hispanic/Latino a/x. One hundred and thirty-three (91%) reported female sex; and 13 (8.9%) responders reported male sex. The sample was relatively middle-aged (M=48.69, SD=13.16); 62.3% (n=91) were married, and 75.7% (n= 109) had children. More than three-fourths (77.4%, n=113) of the sample lived in metropolitan counties and about half (52.4%, n=76) reported that the county poverty level they lived in was about average. Approximately half (51.4%, n=74) of the participants worked as staff nurses and most (78.1%, n=114) stated they worked full time. See Tables 4.1 and 4.2 for more detailed information about the study sample characteristics. Table 4.3 summarizes the descriptive statistics of major variables.

Table 4.1

Sample Characteristics (Personal)

Personal Characteristics	**Frequency** *n*	**Percentage** %
Gender		
Man	13	8.9
Woman	131	89.7
Other	2	1.4
Sex		
Female	133	91
Male	13	8.9
Marital status		
Yes	91	62.3
No	55	37.7
Children		
Yes	109	75.7
No	35	24.3
Race/Ethnicity		
Hispanic or Latino a/x	27	18.6
White	92	63.4
Other	26	17.9
Religion		
Christianity	56	39.4
Catholicism	29	20.4
Other	19	13.4
None	38	26.8

Note. For the current study, participants answered the following question for race/ethnicity: Please indicate the racial or ethnic groups with which you most identify (Check all that apply): African American/Black; Asian American/Asian; Hispanic/Latino a/x; Middle Eastern; North African; Native American/Alaskan Native; Native Hawaiian/ Hawaiian/ Another Pacific Islander; White; Mixed/More than one race/ethnic group; Prefer not to answer.

Table 4.2

Sample Characteristics (Professional)

Professional Characteristics	**Frequency** *n*	**Percentage** %
Work status		
Part-time	30	20.8
Full-time	114	78.1
County		
Medium Metro	77	52.7
Small Metro	36	24.7
Micropolitan	28	19.2
Noncore	5	3.4
Work Location		
North	27	19.7
South	39	29.5
Central	71	51.8
Poverty		
About Average	76	52.4
Higher than Average	69	47.6
Education		
Associates	23	15.8
Baccalaureate	81	55.5
Masters	32	21.9
Doctorate	10	6.8
Position		
Staff Nurse	74	51.4
Nurse Administrator	23	16
Nurse Educator	14	9.7
School Nurse	6	4.2
Other	27	18.8
Specialty		
Maternal Child	38	27
Emergency/Critical & Urgent Care	31	22
Psychiatric	6	4.3
Medical Surgical/Oncology	23	16.3
Public, Community Health	29	20.6
Other	14	9.9

Note. Metropolitan variables were collapsed to include medium and small metro counties and nonmetropolitan to include micropolitan and non-core counties per dissertation definitions in chapter one. “Other” categories for specialty included areas such as case management, quality control, and sexual assault nurse examiner.

Table 4.3

Descriptive Statistics of the Main Study Variables

Variable	Mean	*SD*
Attitudes Total Scale (ATS)	52.2	9.37
Subjective Norms Scale (SNS)	9.57	1.12
Perceived Behavioral Control (PBCS)	23.91	4.31
Knowledge (KQ)	10.54	1.92
Cues to Action (CTAS)	19.16	6.02
Intended Practice Behavior Scale (IPBS)	7.69	1.04
Proxy Behavior Scale (PBS)	6.61	1.14
IPBS-6	66.52	9.12

Table 4.4

Descriptive Statistics of the Demographic Study Variables

Variable	Mean	*SD*
Number of Children	2.33	1.04
Hours of CAN Instruction Received	4.65	7.24
Number of Patients Seen Every Day	13.35	20.27
Years as an RN	17.33	13.73
Age	48.69	13.16

Sample CAN Reporting Practices

About half (*n*=71, 49.7%) of the RNs surveyed reported “no” to the survey question, ‘In your work, have you ever made a report of suspected child abuse?’. A small number (*n*=19, 13.1 %) stated they had not reported although it was suspected. The three reasons selected the most for not reporting were: feeling uncertain about the evidence (*n*=16, 11%), a lack of trust in legal authority (*n*=10, 6.8%), and a lack of support from peers and/or administration (*n*=8, 5.5%). About two-thirds (60.7%) had never received formal CAN training (*n*=88); 39.3% (*n*=57) had received CAN training at their places of work; and 37.3% felt the CAN training they received in nursing school was adequate (*n*=55). See Table 4.5 for summary of the study participants CAN reporting practices.

Table 4.5

Sample CAN Reporting Practices

Characteristic	Frequency *n*	Percentage %
History of Reporting CAN		
Yes	72	50.3
No	71	49.7
CAN not Reported although Suspected.		
Yes	19	13.1
No	126	86.9
Top Reasons for not Reporting CAN*		
Feeling uncertain about the evidence	16	11
Lack of trust in legal authority	10	6.8
Lack of support	8	5.5
CAN Training Received in School		
Inadequate	34	23.3
Minimal	57	39
Adequate	55	37.3
Received formal CAN instruction at work institution		
Yes	57	39.3
No	88	60.7
Know Someone Who was Abused		
Yes	127	88.2
No	17	11.8
Has a doctor or other health care provider ever recommended that you report CAN?		
Yes	49	33.6
No	97	66.4

Note. Listed are the three top-most selected reasons for the survey question which asked participants to rank reasons for not reporting CAN. The last question in the table served as the study variable for CAN reporting Proxy Behavior Scale (PBS).

Sample Knowledge of CAN

In the sample, survey knowledge scores averaged around 10.54 out of 13 correct (M=10.54, SD=1.92). Most (95.1%) of the sample knew they were mandated to report. A little less than half (46.5%) were not aware that failure to report CAN could result in

fines. See Table 4.6 of nurses' knowledge scores on the Knowledge Question (KQ) section with 13 questions.

Table 4.6

Study Sample Scores to the CAN Knowledge Questions (KQ)

Knowledge Question Item	Percentage Correct
1. Nurses are mandated by law to report suspected child abuse.	95.1
2. A professional must have physical evidence of child abuse before reporting the case to Child Protective Services.	90.3
3. Most sexual abuse of children involves physical force.	70.8
4. Children who have been abused usually tell someone soon after the abuse.	93.1
5. Professionals who report a case of suspected child abuse can be sued if the case is not substantiated in court.	78.5
6. Bruises that circumscribe the neck are usually associated with accidental trauma.	90.3
7. In most cases of child abuse and neglect, children are not removed from their parents' home.	67.4
8. In most cases, children who are sexually abused are abused by strangers.	97.2
9. Most sexual abuse of children includes intercourse.	69.4
10. Many runaway children and adolescents have been abused before running away.	79.9
11. A sexually abused child may have a normal physical examination.	81.9
12. Failure on the part of a health professional to report suspected child abuse or neglect can result in paying a fine.	46.5
13. Child abuse and neglect rarely occur among middle- or high social economic class.	93.8

Note. In the study, those response that were left blank were counted as incorrect. The overall score was M=10.54, SD=1.92, with an 81% score overall for the entire sample.

Findings of the Study

To address the aims of this dissertation study, a series of following parametric analyses were conducted: Correlations, multiple and hierarchical linear regressions. The following variables were included in these analyses: Demographic variables, the Theory of Planned Behavior (TPB) components (i.e., attitudes total scale [ATS], subjective

norms scale [SNS], perceived behavioral control scale [PBCS], intended practice behaviors scale [IPBS]), the knowledge questions (KQ), cues to action scale (CTAS), geographic location (i.e., metropolitan vs. non-metropolitan) of the participants, and the proxy behavior scale (PBS) (i.e., On a scale of 1-7, if you thought a child was being abused today, how likely would you be to report CAN?).

Research Question One: Factors Associated with CAN Reporting Intention and Behavior

To address Research Question One, Pearson's correlations were conducted to identify any factors that were significantly related to CAN reporting intended practice behavior (IPBS), IPBS-6, and the proxy behavior (PBS). Bivariate (zero-order) correlations of the IPBS, IPBS-6, and PBS with demographic variables, knowledge (KQ), attitudes (ATS), subjective norms (SNS), perceived control (PBCS), and cues to action (CTAS) were examined. Prior to applying Pearson's correlations, violations of assumptions were assessed (e.g., normality, linearity, and homoscedasticity) (Pallant, 2016).

The results of analyses showed that the IPBS positively correlated with full time work status (r=.21, p < .05), with CTAS (r=.20, p <.05), with the PBCS (r=.20, p < .05) and with the PBS (r=.20, p < .05). The proxy behavior (PBS) correlated weakly with marriage status (r=.18, p < .05), with SNS (r=.23, p < .05), and with attitudes of professional responsibility (r=.20, p < .05). Age correlated with the ATS (r=.23, p< .05), negatively with the attitudes regarding punishment of abusers (r=-.25, p< .05), and positively with PBCS (r=.20, p< .05). More detail discussion on relationships are in chapter five. See Table 4.7.

Table 4.7

Correlations with Dependent Variables

Variable		1	2	3	4	5	6	7	8	9	10
1.	Age										
2.	Marriage	-.21*									
3.	Work Status	-.15	-.12								
4.	CTAS	-.09	-.01	.17							
5.	KQ	-.02	-.002	-.02	-.06						
6.	ATS	-.23*	.22*	.05	-.04	-.12					
7.	SNS	-.19*	.12	-.09	-.03	.002	.32**				
8.	PBCS	.20*	.04	-.05	-.08	.40**	-.05	.14			
9.	IPBS	-.04	-.02	.21*	.20*	-.05	-.09	.12	.20*		
10.	PBS	-.08	.18*	.07	.070	.005	.15	.23**	.03	.20*	

Note. * $p < .05$, ** $p < .01$ (2-tailed). Work status coded as "0" for part-time and "1" for full-time status. Marriage was coded "0" for unmarried (which included divorced, widowed, etc.) and "1" for married.

The study also examined the relationships using only the intentions practice behavior question item six (IPBS-6), i.e., the intention to report CAN. The results of analyses showed that the IPBS-6 also positively correlated with full time work status (r=.18, p < .05), with ATS (r=.21, p <.05), with the PBCS (r=.24, p < .05), and with the PBS (r=.20, p < .05). There was a small positive relationship with knowing someone who was abused (r=.18, p < .05).

Research Question Two: Effect of Determinants on CAN Reporting Intention and Behaviors

To address research question two, a series of multiple and hierarchical linear regressions and logistic regressions were conducted. The IPBS (M=7.69, SD=1.04) and PBS (M=6.61, SD=1.14) were used as dependent variables. Prior to analyzing and/or interpreting the results, the researcher checked for assumptions of multicollinearity, outliers, normality, linearity, homoscedasticity, and independence of residuals, as is recommended by Pallant (2016).

In the first model (A) of the standard multiple linear regressions, all the variables were entered at the same time, i.e., the determinant of intention in the TPB model (i.e., ATS [M=52.17, SD=9.37], SNS [M=9.57, SD=1.12], PBCS [M=23.91, SD=4.31]), and CTAS (M=19.16, SD=6.02) were used as independent variables and the IPBS (M=7.69, SD=1.04) was used as the dependent variable. The first model was statistically significant, F (4,109) =3.07, p<.05, R^2=.10. The results show that the CTAS was the strongest predictor influencing the outcome variable (i.e., IPBS), followed by the PBCS, β=.22, p<.05; β=.21, p<.05. The second model applied a hierarchical linear regression to assess the predicative ability of the four predictors used in the first standard regression

model (ATS, SNS, CTAS, PBCS) after controlling for the influence of age. Age (*M*=48.69, *SD*=13.16) was entered at Step 1. Then the determinants of intention in the TPB model (i.e., ATS, PBCS, SNS) and the CTAS were entered at Step 2 to determine whether the model remained significant even after controlling for the effect of age. The results of analysis (i.e., total model variance) revealed that the model (B) remained statistically significant, F (5,108) = 2.48, $p< .05$, $R^2= .10$, explaining 10% of the variance. The study also applied a hierarchical linear regression by controlling for both age and work status. This model (C) explained 14% of the total variance and was significant, F (6,107) = 2.81, $p< .05$, $R^2= .14$. The variables that were significant in the hierarchical linear regression were the PBCS, β =.21, $p<.05$, work status, β =.19, $p<.05$, and CTAS, β =.19, $p<.05$. See Table 4.8.

In the next Model (D), of the standard multiple linear regressions, all the variables were entered at the same time, i.e., the determinant of intention in the TPB model (i.e., ATS, SNS, PBCS), and CTAS were used as independent variables and the proxy behavior scale (i.e., the PBS) (*M*=6.61, *SD*=1.14) was used as the dependent variable. The Model D was not statistically significant, F (4,114) =1.99, $p=ns$, $R^2=.07$. The results show that the SNS was the only predictor influencing the outcome variable (i.e., PBS), $\beta=.21$, $p<.05$. The study also applied the hierarchical linear regression with the proxy behavior (PBS) as a dependent variable. In this Model E, the ATS, SNS, PBCS and CTAS were entered at Step 1, and the IPBS was entered at Step 2. Overall, the model did not fit the data well either, F (5,108) =2.17, p =.06, $R^2=.09$. The SNS was the only close predictor influencing the proxy behavior (β =.21, $p=.05$). See Table 4.9.

Table 4.8

Models with the Dependent Variable of IPBS

	Variable	*B*	*β*	*t*	*p*	*F*	*p*	R^2
Model A	(Constant)	4.72		4.63	0.00	3.07	.02	.10
	ATS	0.01	0.06	0.66	0.51			
	SNS	0.07	0.08	0.78	0.44			
	PBCS	0.05	0.21	2.26	0.03			
	CTAS	0.04	0.22	2.34	0.02			
Model B	(Constant)	7.89		20.92	0.00	0.21	.64	.00
	Age	-0.00	-0.04	-0.46	0.64			
	(Constant)	4.94		4.31	0.00	2.48	.04	.10
	Age	-0.00	-0.04	-0.43	0.67			
	ATS	0.01	0.06	0.59	0.56			
	SNS	0.06	0.07	0.69	0.49			
	PBCS	0.05	0.22	2.29	0.02			
	CTAS	0.04	0.22	2.34	0.02			
Model C	(Constant)	7.33		16.52	0.00	2.46	0.01	0.04
	Age	-0.00	-0.01	-0.13	0.9			
	Work status	0.52	0.20	2.17	0.03			
	(Constant)	4.39		3.78	0.00	2.81	0.01	0.14
	Age	-0.00	-0.01	-0.12	0.90			
	Work status	0.48	0.19	2.03	0.05			
	ATS	0.01	0.05	0.51	0.61			
	SNS	0.09	0.09	0.94	0.35			
	PBCS	0.05	0.21	2.29	0.02			
	CTAS	0.03	0.19	2.05	0.04			

Table 4.9

Model with the Dependent Variable PBS

	Variable	*B*	*β*	*t*	*p*	*F*	*p*	R^2
Model D	(Constant)	3.8		3.40	0.00	1.99	.10	.07
	ATS	0.01	0.08	0.82	0.42			
	SNS	0.21	0.21	2.15	0.03			
	PBCS	0.00	0.01	0.05	0.96			
	CTAS	0.01	.07	0.78	0.44			
Model E	(Constant)	3.80		3.33	0.01	1.91	.12	.07
	ATS	0.01	0.08	-0.80	0.43			
	SNS	0.21	0.21	2.10	0.04			
	PBCS	0.00	0.01	0.05	0.96			
	CTAS	0.01	0.07	0.76	0.45			
	(Constant)	2.92		2.40	0.02	2.17	.06	.09
	ATS	0.01	0.70	0.69	0.49			
	SNS	0.20	0.20	1.99	0.05			
	PBCS	-0.01	-0.03	-0.32	0.75			
	CTAS	0.01	0.03	0.36	0.72			
	IPBS	0.19	0.17	1.76	0.08			

In the next Model (F), the study applied standard multiple linear regressions with the ATS, SNS, PBCS, CTAS as the independent variables and the intended practice behavior question number six (IPBS-6) (M=66.52, SD=9.12) as the dependent variable. The results of analysis (i.e., total model variance) revealed that Model F was statistically significant, F (4,118) = 3.41, p< .05, R^2= .11, explaining 11% of the variance. The PBCS was the strongest predictor influencing the outcome variable (i.e., IPBS-6), β=.25, p<.05, followed by the ATS, β=.21, p<.05.

The study also applied a hierarchical linear regression with the dependent variable IPBS-6 by controlling for knowing someone who was abused and work status. This Model (G) explained 16% of the total variance and was significant, F (6,118) = 3.43, p<

.05, R^2= .16. The variables that were significant in the hierarchical linear regression were the PBCS, β =.23, p<.05, ATS β =.18, p<.05, and work status, β =.18, p<.05. See Table 4.10.

Table 4.10

Model with the Dependent Variable IPBS-6

Variable	*B*	*β*	*t*	*p*	*F*	*p*	R^2
Model F (Constant)	40.39		4.63	0.00	3.41	0.01	0.11
ATS	0.20	0.21	2.19	0.03			
SNS	0.21	0.26	0.27	0.79			
PBCS	0.53	0.25	2.78	0.01			
CTAS	0.06	0.04	0.41	0.68			
Model G (Constant)	59.19		21.60	0.00	3.84	0.00	0.02
Do you know anyone who has been abused?	4.80	0.17	1.90	0.06			
Work Status	3.91	0.18	1.94	0.05			
(Constant)	34.85		3.94	0.00	3.43	0.01	0.16
Do you know anyone who has been abused?	3.50	0.12	1.40	0.17			
Work Status	4.10	0.18	2.07	0.04			
ATS	0.78	0.18	1.97	0.05			
SNS	0.47	0.58	0.62	0.545			
PBCS	0.48	0.23	2.53	0.01			
CTAS	0..00	0.02	0.02	0.98			

Research Question Three: Difference in CAN Reporting Intention Behaviors Between Location

To answer research question three, analyses of variance (ANOVAs) were used to examine the differences in the outcome variables between the RNs working in rural areas (e.g., nonmetropolitan) and those working in urban (e.g., metropolitan) areas in NM. The dependent/outcome variables are the intention to report CAN (IPBS), and the proxy behavior (PBS). The study also examined poverty levels (e.g., average, higher than average) as the dependent variable. There were no differences for the dependent variables of IPBS and PBS based on reporter location or poverty level.

The study also examined differences in the outcome variables between the RNs working in rural areas (e.g., nonmetropolitan) and those working in urban (e.g., metropolitan) areas in NM with the dependent outcome variable of the intention reporting behavior question item number six (IPBS-6). There was a significant difference between the IPBS-6 and rural/urban location means, F (3, 137) =3.94, p<.05. The analysis showed that the non-core location (M=53.0, SD=5.72) had a significantly lower mean than any other NM regions (micropolitan, M=68.93, SD=9.19, small metropolitan M=65.65, SD=7.31, and medium metropolitan, M=66.73, SD=9.41).

Limitations

One limitation of this study was the use of a cross-sectional design. However, the value of using a cross-sectional design was that a large number of data could be collected in a short period of time. A second limitation is that data collection relied upon self-reporting. Self-reporting could yield responses that represent what the individual thinks should be the answer instead (i.e., social desirability) of what the reality of behavior is (i.e., response bias). Selection bias may also have been an issue because the study randomly selected the emails from the NM BON listserv. There also may have been the possibility that only individuals who were engaged/interested in CAN reporting, consented to participate and therefore, associations may be difficult to identify. There also is the issue of generalizability. Since the sample was comprised of only of NM nurses, the results may not be generalizable to the general population of RNs in the U.S. and other regions.

To address the aforementioned threats to validity associated with this type of research design, this study (a) clearly outlined the execution of this study, (b) based the

research design on a validated TPB framework, (c) used very specific, evidence-based theoretical constructs, (d) applied clearly defined inclusion and exclusion criteria, (e) used adequate power, (f) used an established instrument (e.g., CARIS) to assure reporting consistency (Feng & Levine, 2005), and (d) applied sophisticated advanced parametric statistical analyses such as hierarchical linear regressions to control for potential confounding effects (Lau, 2017; Shadish et al., 2002).

Chapter 4: Summary

Chapter four reported the results of the pilot study. Overall, the results of the study were meaningful. Of significance, the RNs in the current NM study lacked consistency in their CAN reporting. The CAN knowledge scores were relatively satisfactory overall, but a about half of the RNs in the study sample were not aware of some reporting aspects of the law. Along with other CAN reporting theoretically based research, the current study's findings corroborate the TPB as a framework for CAN reporting. That is, work status, perceived behavioral control and cues-to-action are significant predictors influencing intended practice behaviors to report CAN among NM RNs. These factors remained significant even after controlling for the effect of demographic variables (e.g., age). As the additional component of the CTAS was a significant predictor in the model (showing its effect on the IPBS), the metrics show promise of predicted intended practice behavior and this finding warrants continued research.

CHAPTER 5: DISCUSSION

The purpose of the study was to (a) explore factors influencing CAN reporting behaviors among RNs living in NM, (b) examine the relationships of these factors with intention to report CAN and actual behaviors of CAN reporting, and (c) compare differences in CAN reporting intention and behaviors between rural and urban areas. This chapter discusses the study procedures, the results of the study presented in Chapter 4, the supporting literature, the implications of the findings for research and practice, the future directions, recommendations, and the strengths and limitations of the study. In particular, the main discussions of this chapter are guided by an extended version of the Theory of Planned Behavior (TPB) proposed in this study. See Chapter 1 and Figure 1.1.

Factors Associated with Intended Practice Behaviors and CAN Reporting

Age, Work Status, and Marriage

In the current study, the ages of RNs in the sample ranged from 22 to 79 (M=48.69, SD=13.16). Age significantly correlated with several factors in the study like negative CAN attitudes. Attitudes are positive or negative feelings that an individual may experience in their day-to-day dealings and work productions (Ajzen, 1991, J. Lee et al., 2015). Specifically in the study, the more the increased age the less strongly the attitude regarding the punishment of abusers (r=-.25, p<.05). This study findings show there may be age-related and/or generational trends when it comes to CAN reporting. On the other hand, the aging nursing workforce could also be the object of age-related biases leading to stereotypical attitudes towards older nurses (Duquesne University, 2020). In turn, CAN training should include age considerations (Chan, 2022, Duquesne University, 2020).

An interesting study finding was that nurses who worked full-time were more likely to report CAN (r=.21, p<.05). Of interest, the work status of nurses was also a significant predictor to intended practice behavior (β=.19, p<.05). This finding may indicate that those vested in their professional nursing role (or perhaps like being a nurse) may demonstrate more ideal CAN reporting behaviors but more research in this is needed. For example, nurses who work part-time or in academia may have less interaction with hospital settings where CAN is more frequently experienced and CAN training should consider nurse work settings.

There were also some unique findings in the study that related to marital status. For example, marriage significantly influenced proxy behavior (i.e., actual CAN reporting behavior) (r=.18, p<.05), also positively correlated with the subcategory of attitudes of professional responsibility (r=.2, p<.05). Feng (2003) reported that marriage correlated with CAN in-service training among nurses in Taiwan (r=.09, p<.01). These significant relationships are unique, yet important to mention. Although more research is needed, these findings may show that those RNs who have support systems/family and/or are happy may be more likely to engage in activities that support CAN awareness and in turn also engage in ideal reporting of CAN. Mainly, this finding points to that when it comes to mandated CAN reporting, a focus on future interventions should be on findings methods to support and keep families in NM together. It is also interesting that in the study that having children (e.g., being a parent) was not associated with behavior intentions as has been seen in similar CAN research studies (e.g., Fraser et al., 2010). Perhaps it is the support component of marriage that is important in this case. As the perceived behavioral control component had a significant relationship with the intended

practice behaviors, maybe those who feel more supported (e.g., through marriage) also therefore feel they have more perceptions of control.

Federal and State Policies

The CAN reporting practices in the current study showed inconsistencies. Vague CAN policies can contribute to inconsistencies in CAN reporting (Feng, 2003). Feng (2003) has conducted a significant amount of research on mandated CAN reporting among nurses in Taiwan and reported that CAN definitions and laws were vague in Taiwan. In the U.S., the Child Abuse Prevention and Treatment Act (CAPTA) was established to provide state fundings. The CAPTA requires states to follow 27 provisions (e.g., mandatory CAN reporting, etc.) (Child Information Gateway, 2019a). As such, the current federal CAN laws in the U.S. are also general in nature. Importantly, the Child Welfare League of America [CWLA] conducted a national survey on U.S. states compliance with the 27 CAPTA provisions (Sciamanna, 2020). From the survey findings, the CWLA (2020) reported that zero of the 50 U.S. states are following all of the 27 provisions (Sciamanna, 2020). That said, there are overall issues also with the current child safety infrastructures in NM. Case in point, the NMCYFD versus Kevin S. Settlement (where fourteen children claimed the CYFD did not do enough to help them), outlines the major deficiencies in the NM child protection infrastructure (Disability Rights NM, 2022). This further demonstrates the reform that is needed on all levels of child safety.

Knowledge and CAN Education

The knowledge questions (KQ) scores obtained from the study sample were adequate (an overall 81% score), but about half the nurses in the sample did not know

there were legal repercussions if CAN was not reported. In effect, the lack of knowledge on CAN laws and mandated reporting is indicated in the research globally showing the scope of the issue (e.g., Taiwan, Korea, Israel, parts of Europe, Sri Lanka, Japan, U.K., Brazil, U.S) (Wilson & Lee, 2021). As was mentioned in the previous section, CAN federal and state policies are problematic. Importantly, in the current study, knowledge positively correlated with a history of reporting CAN (r=.20, p<.05), with those who had received formal institutional CAN instruction (i.e., on the job training) (r=.23, p<.05), and with perceived behavioral control (r=.40, p<.01). The KQ overall did not have a significant relationship with the dependent variables of intended practice behavior and the proxy behavior. Feng (2003) reported a relationship with knowledge and intended practice behaviors (albeit not strong) and attributed the weakness of the relationship to the possible question constructs of the knowledge questions and recommended more attention to this section on the CARIS be considered in future research.

The importance of CAN training for nurses is evident in the literature and also in the current study. These findings show that an exemplary pattern of behavior cannot be expected if that pattern of behavior is not correctly modeled/instructed first. Importantly, several U.S. states have passed legislature requiring nurses to complete CAN training in order to renew the nursing license (e.g., Pennsylvania) (Department of Human Services: Pennsylvania, 2023). There is no such requirement in NM despite the challenges nurses and children face in NM.

Attitudes

RNs in the study overall had negative attitudes towards CAN. Attitudes are positive or negative feelings that an individual may experience in their day-to-day dealings and work productions (J. Lee et al., 2015, Ajzen, 1991). Scores on attitudes

towards child-rearing belief and discipline ranged from 8 to 36 (M=30.38, SD=5.45). Attitudes towards punishment of offenders ranged from 4-24 (M=18.15, SD=4.69) and most nurses in the study also had positive attitudes towards professional responsibility, with the score range of 4-24 (M=22.47, SD=2.89).

A significant relationship found in the current study was that RNs who were more likely to punish abusers were more likely to report CAN (r=.19, p<.05). The relationship between attitudes and practice behaviors can be complicated. For example, J. Lee et al., (2015) explain that there are affective and cognitive aspects associated with attitudes. Correspondingly, it is noteworthy that some RNs in the current study did not trust legal authority and this mistrust was a reason for not reporting suspected CAN. The attitude of mistrust associated with CAN reporting and government is supported in other literature and points to the complexity of CAN (Davidov et al., 2012). Perhaps follow-up with the CAN reporter regarding the child's status from child protection agencies could enable a trusting relationship between nurses and governing agencies (Davidov et al., 2012).

Subjective Norms

In the TPB, subjective norms and attitudes separately or in combination can facilitate how much (or little) an individual wants to commit to performing behaviors (J. Lee et al., 2015). Subjective norms is a social construct and are the conscious thoughts and feelings of what others think that can also influence behavior (Feng, 2003). The scores for subjective norms in the study were high and ranged from 2 to 10, M=9.57, SD=.94. In this study, higher subjective norms (SNS) correlated with higher actual CAN reporting (PBS) (r=.23, p<.01) and also with attitudes towards punishment of abusers (r=.33, p<.01). This study finding shows that social influences have an association on an

individual's attitudes towards CAN and actual reporting behavior (e.g., to make a CAN report).

Perceived Behavioral Control

Overall, in the study sample, the perceived behavioral control scores (PBCS) were not high. Scores ranged from 10-30 with a M=23.92, SD=4.3. Perceived behavioral control is the nurse's sense of control over situations (Feng, 2003). In the current study, nurses perceived behavioral control correlated with a past history of reporting CAN (i.e., those who stated they had made a CAN report) (r=.24, p<.05). Ajzen (1991) advises against using past behavior in the TPB, but the relationship is mentioned to show correlations of behavior. There also was a negative correlation with perceived behavioral control and not reporting CAN although it was suspected (r=-.19, p<.05). These findings point to how important a person's perceptions of control are when it comes to CAN reporting and CAN training programs should include methods to increase nurse's perceptions of control (e.g., virtual simulated training) in regard CAN reporting. Importantly in the study, the hours of institutional CAN education positively correlated with the PBCS (r=.25, p<.05). Again, this shows that on the job CAN training help improve a nurses' perception of control, further adding to the importance of CAN training.

Cues to Action

Cues to action are incentive factors that facilitate action (e.g., CAN reporting) that are both internally and externally motivated (Klotzbaugh & Spencer, 2015; Rosenstock, 1960). Klotzbaugh and Spencer (2015) explain cues to action as both personal (e.g., religiosity, biological sex) and institutional (external to an individual like policies and training) motivators that can be perceived in degrees. Compared to the TPB's subjective

norms (when an individual's behavior may be affected by what others think of them), cues to action are those more noticeable triggers for action, that an action needs to occur--like a physician writing orders for RNs to complete a task. As a further comparison, subjective norms might be those perceptions of what the nurse feels others (e.g., colleagues, doctor) think about their performance during a code and this feeling then motivates them to start cardiopulmonary resuscitation (CPR). On the other hand, cues to action are those clear manifestations that get action to occur (e.g., like ventricular fibrillation on a cardiac monitor which for the nurse is a cue to act).

In the study, the cues to act correlated the intended practice behavior (r=.20, p<.05). This shows that nurses intend to report CAN more if they receive direction. Interestingly, the nurses in the study were experienced nurses showing that even experienced nurses need guidance/direction in regard to reporting CAN. In the current study, relationships with the individual cues to action question items were examined with the IPBS and PBS. Interestingly, the cues to action number one question ('I would attempt to initiate a CAN report only if another nurse stated they would file a complaint against my license') correlated with the proxy behavior scale PBS (r=.19, p <.05). This cues to action question item one was based on Klotzbaugh and Spencer's (2015) research. It is possible with this cue to action, the 'cost versus benefit' analysis implication applied to CAN reporting applies. In other words, individuals may be more inclined to do something if it matters (or costs) something to them personally. This suggests that if there is a mandated policy to report CAN this reporting perhaps needs to be traced. That is, CAN reporting could and maybe should be enforced because RNs in the study stated they would report if they were in fear of losing their license. These findings also suggest

negative incentives with CAN reporting, i.e., knowing there is a rule, doesn't necessarily mean it is going to be followed and nurses should be held accountable regarding compliance with mandated reporting laws. All this said, RNs should clearly be made aware, that CAN tracking is kept anonymous, especially from abusers, as a lack of reporter anonymity has been a barrier to reporting CAN (Francis et al., 2014).

Another cue to action factor associated with intended practice behaviors (IPBS) was cues to action question number five ('I would report CAN because of my own personal experience with CAN') (r=.19, p<.05). This question item was based on research from McClenahan et al. (2007). This finding implies that RNs intend to report CAN if the cue to act is internally received and that we should consider how we frame educational materials. For example, virtual simulated training allows the learner to see things through someone else's perspective; therefore, a virtually simulated scenario of CAN could be an effective means to increase awareness and internally motivate to act.

Intended Practice Behaviors

A key component to the TPB is the intended behavior and the higher the intention the more likely the behavior. Mainly, intentions show to what extent a person is willing to do something (Ajzen, 1991). For the intended behaviors on how likely to report CAN (the IPBS-6), the sample score was, M=66.52, SD=9.12 out of a possible 80 points. For the intended behaviors on whether the law required them to report these CAN case, the sample had also a similar average, M=66.03, SD=8.30 out of a possible 80 points.

For the individual CAN case studies in the CARIS (that showed overall intended CAN reporting behaviors), extreme abuse received higher intended practice behaviors. For example, the case vignette number three (parent had sexual intercourse with child) had the highest score, M=52.50 (SD=5.54) out of a possible 80 points. The intentions

case number seven ('parents ridicule and criticize the child whenever the child does not do well in the exams') had the lowest intended practice score, *M*=34.13 out of possible 80 points, *SD*=12.41. This finding shows that nurses are more willing to report if the CAN is severe, and less willing to report if the CAN is less severe (or maybe difficult to determine). For those cases of CAN that may be more difficult to determine, an alternative to reporting may be something to consider. For example, Ohio has implemented Child Assessment Centers that have a multidisciplinary team that are experts in CAN assessment and nurses can refer children and families to them for support (Center for Safety and Healing, n.d.). As RNs were more likely to report severe and perhaps obvious cases of abuse also further supports the need for CAN-focused (and if possible, on the job) training.

Proxy Behavior

An overall good indicator of the sample's proxy behavior, a majority (78.3%) of nurses in the study said they were extremely likely to report CAN. On the other end, five RNs stated they were highly unlikely to report if they suspected CAN today. This was a very small percentage, but this finding is worth mentioning as it relates to the nursing code of ethics and as such the nurse has the responsibility to protect and advocate for the safety of the patient (American Nurses Association [ANA], 2023).

Effect of Determinants on CAN Reporting Intention and Behaviors

Overall, the Theory of Planned Behavior (TPB) worked as a framework for the study and showed that the TPB components are able to predict intended practice behaviors. The model that explained the highest variance, controlled for the effects of age and work status, F (6,107) = 2.81, $p < .05$, $R^2 = .14$. The variables that were significant in the hierarchical linear regression were the PBCS ($\beta = .21$), work status ($\beta = .19$), and

CTAS (β =.19). The perceived behavioral control scale (PBCS) had the most dominant effect on intended practice behaviors. As J. Lee et al., (2015) explain, the TPB model components that have the most influence in intended practice behaviors (in this case CAN reporting) are important because these provide guidance for intervention strategies that promote ideal behavior. Correspondingly, the predictability of the PBCS in this study is important because it shows where interventions strategies should be focused. Ajzen (1991) stresses perceived behavioral control is founded on an individual's past experiences. The predictability effect of the predictor (e.g., perceived behavioral control) on CAN reporting intentions should be considered from the belief perspective. Increasing perceived control shows to a predictable method to increase the likelihood of CAN reporting.

Gerend and Shepherd (2012) also hypothesized that incorporating HBM components could potentially create a stronger TPB model. The construct of perceived behavioral control was added later (i.e., to the Theory of Reasoned Action), which according to Ajzen (1991) improved the predictability of the model. Similarly, Ajzen (2011) suggests, the TPB is set up to include additional components to the model.

> "The theory of planned behavior is, in principle, open to the inclusion of additional predictors if it can be shown that they capture a significant proportion of the variance in intention or behavior after the theory's current variables have been taken into account" (Ajzen, 1991, p.199).

Overall, the results of the study did support this, as the model was significant and the CTAS was a significant predictor, but more research is needed. For future research,

Ajzen (1991) stresses if an additional variable included in the TPB, guidelines should be considered.

> The variable needs to be measurable, the variable should have the ability to be causal (in that it would determine intention and action), the variable needs to be separate and independent from the other variables in the TPB, the variable needs to have applicability to a range of behaviors, and lastly the variable needs to show it is predictable repeatedly (Ajzen, 1991).

Also corroborating with Ajzen's (1991) definitions of attitudes in the TPB, both positive and negative aspects of attitudes were seen in the study. In the current study, the total attitudes scale (ATS) and the subjective norms scale (SNS) were not significant predicators to intended practice behaviors (the dependent variable) in the study. This lack of significance in the SNS and the ATS with the dependent variable should be addressed. First, attitudes and subjective norms did show significant relationships between the study variables. Second, Ajzen (1991) writes that generally speaking, the predictive ability of attitudes, subjective norms, and perceived control on intended behaviors will differ depending on the situation/setting and what the intended behavior is (in this case CAN reporting). In the current study of the TPB possible predictors, only perceived behavioral control was a significant predicator in the study. As one could postulate, two or more TPB components that are significant predictors could possibly increase the intended practice behavior, i.e., attitudes and perceived control together make stronger intentions. However, it is possible in some cases such as the current study, the cues to action component may be something to focus on in intervention strategies (e.g., compared to attitudes) because nurses may need something such a stimulus to make a CAN report.

On the analysis was conducted using only the intentions to report CAN (IPBS-6) from the IPBS, the results of analysis (i.e., total model variance) revealed that Model F was statistically significant, F (4,118) = 3.41, p< .05, R^2= .11, explaining 11% of the variance. Again, the PBCS was the strongest predictor influencing the outcome variable (i.e., IPBS-6), β=.25, p<.05, followed by the ATS, β=.21, p<.05. Model G explained 16% of the total variance, F (6,118) = 3.43, p< .05, R^2= .16. The variables that were significant in the hierarchical linear regression were the PBCS, β =.23, p<.05, ATS β =.18, p<.05, and work status, β =.18, p<.05. This again shows the TPB does work to explain CAN reporting also further showing the important effect of the PBCS and work status on intended practice behaviors.

Lastly, a person's intentions can be a poor predictor of actual behavior (Ajzen. 2011). Because there is a difference between actual intended practice behavior and proxy behavior, the current study included the proxy behavior scale (PBS). The subjective norms scale (SNS) was the only close significant predictor to the PBS showing the social influences on actual behavior. Importantly, a moral responsibility to the behavior is included with subjective norms (Ajzen, 1991). As nurses are ethically required to advocate for those who cannot advocate for themselves, it is not surprising that the SNS was significantly related to actual reporting behavior (the PBS). However, the overall model with the PBS was not significant.

Differences in CAN Reporting by Reporter Location

The study found no differences when comparing means by reporter location. This may have been due to the fact that the sample was non-representative of reporter location, e.g., the study had only five RNS report from non-core county locations and most

selected central NM as their work location. Continued research is needed. The study did find a significant relationship with the non-core and other group means.

Recruitment Procedures

The study sample base (i.e., NM RN population) came from 30,476 potential participants; that is, the listserv received from the NMBON of the RNs who were licensed in the state of NM. To address issues related to selection bias, the study compared the sample characteristics with the study sample base by examining the means between both groups. The current study sample characteristics were overall similar when compared to the base population of actual NM RN characteristics, i.e., there were no significant differences between group means (NMHCWC, 2021).

Table 5.1

Sociodemographic Comparison of Study Sample and Base Population of RNs in NM

Sociodemographic Characteristic	**Sample**	**Base Population in NM (Statewide)**
Age (Mean/ *SD*)	*M*=48.69, *SD*=13.18.	*M*=47.88
Sex	Female: 91.1% Male: 8.9%	Female: 88% Male: 12%
Race/Ethnicity		
White	63%	*82.9%
Hispanic/Latino a/x	18.5%	*
American Indian or Alaska Native	4.1%	6.6%
Pacific Islander/Asian	.7%	6.9%
Black or African	.7%	3.6%
American	8.2%	*
Mixed	4.1%	
Prefer not to answer		

Note: *This NMHCWC (2021) information on NM population combined RNs & CNSs in their data and did not provide a mixed response for The data NMHCWC (2021) also provided data for Ethnicity as follows: Hispanic: 34.1%; Non-Hispanic: 65.9%.

The study used a random selection process for potential participants and received 146 valid surveys, with a relatively low final response rate of 2.44%. Evidence shows that online survey response rates have varied but are typically higher (e.g., around 30%) than the one obtained from this study (Guo et al., 2016; Wu et al., 2022). There are several plausible explanations for this study's low response rate (bearing in mind that these explanations may be speculative in nature and more research on the topic is needed). First, non-response bias may have been an issue as many (118 out of the 357) participants began the survey but discontinued it right after the screening stage (Sax et al., 2003). It is unclear why so many participants stopped after the screening stage. This may have been due to the sensitive topic (i.e., CAN) of this online survey study. CAN has long lasting psychological (e.g., depression, PTSD) and physical effects (e.g., obesity) for many victims, and as such may be a sensitive topic for some (Felitti et al., 1998). CAN also can be a topic open to debatable questions, as cultural norms can influence how people perceive CAN (Feng & Levine, 2005). Evidence shows sensitive topics on surveys can result in lower response rates (in this case CAN), and it is possible that the CAN topic influenced the response rate in this study (Epstein et al., 2021). Although clearly speculative, another plausible influence on response rates in the study was the potential issue of RN perceptions of liability. In effect, most (95%) of the RNs in the study were well aware that it was mandatory to report CAN. It is plausible some potential participants did not want to get involved in answering the survey due to legal and ethical issues, and therefore more research is needed. The topic of how the nursing code of ethics relates to/reconciles with individual cultural norms and CAN reporting might also be a consideration for future surveys.

The COVID-19 pandemic is worthy of mention as the survey was sent in July of 2022 and the country was beginning to merge back into society. The study had received several requests from RNs to be removed from the listserv supporting that people did not want to be disturbed. Also, RNs are busy people and maybe don't have the time to complete surveys. In a study by Vercruyssen et al., (2014) feeling too busy contributed to overall decreased survey participation. As the survey received a better response rate with the second round of emails, the time of year (e.g., seasons) should also be considered here, i.e., the first emails were sent in June and the second round of emails in August. Summertime may not be optimal for nurses with families. Saleh & Bista (2017) reported in their study 20% of responders were less likely to complete surveys at the beginning of the school year, and 26.6% were less likely to complete surveys at the end of the school year.

Per Sax et al., (2003), the length of surveys can influence response rates, and the current survey was somewhat lengthy with 111 questions (including demographic and case study items). The current dissertation study also did not provide any type of incentive. Evidence suggests incentives can help increase responses (Dillman et al., 2014). However, in their study, Corner and Lemonde (2019) present that when it comes to online surveys with nurses, financial incentives and the length of the survey do not necessarily influence response rates. Supporting this, Sax et al., (2003) explain the most likely influence on survey response rates is the population itself. Case in point, the current study received a better response rate with the second larger round of recruitment emails with the addition of a more compelling subject heading in the recruitment email: "Need Help: Child Abuse & Neglect (CAN) Survey". These findings suggest that when it

comes to nurse focused surveys, a stronger motivator (compared to finances) should be considered—that is, appealing to RN sense of duty.

To increase RN survey response rates, further refinement and research is needed. Corner and Lemonde (2019) explain, response rates from nurses have varied, and a low response rate can be an issue despite following recommended guidelines. They recommend: (a) focusing on one specialty of nurses (in this case those nurses who work with children), (b) having an easy number of questions on the survey, and (c) personally handing out the surveys directly to RNs (Corner & Lemonde, 2019). Dillman et al., (2014) suggest using a mixed mode survey method (e.g., traditional mail, email, phone) so that responders can choose the type of survey that works best for them. In addition, Epstein et al. (2021) recommend having trusted organizations who can champion for these kinds of surveys. For example, if the NMBON was to champion a study such as the one described in this dissertation, perhaps more participants would consider participating.

The Sample

Other noted sample characteristics are included in this discussion. First, there were disparate sample characteristics. For example, racial and ethnic minority groups were under-represented in the sample study. Although, the current study did not find significant relationships between variables related to race and ethnicity, this study finding reinforces that continued and more efforts need to be made in this initiative beginning with nursing schools (American Association of Colleges of Nursing [AACN], 2023). Similar minority under-representation in the nursing workforce is the case nationally (AACN, 2023). According to the American Association of Colleges of Nursing [AACN] (2023), one-fifth of U.S. RNs identified with a minority, with RNs of Hispanic/Latino

origin at only 6.9% in the U.S. This under-representation in professional nursing brings with it possible issues of bias related to CAN reporting, as missed cases in the detecting child abuse based on parent demographics has been documented in the literature (Diderich et al., 2015).

Furthermore, gender representation in the study was disproportionate, i.e., a small percentage of responders selected ‘men’ (8.9%) or ‘other’ (1.4%). Similar under-representation in the nursing workforce is also an issue nationally. For example, of the current U.S. nursing workforce only 9.4% are men (AACN, 2023). Underrepresentation in nursing brings with it possible issues related to CAN reporting as evidence shows that children who choose to identify with a gender minority are more likely to be abused (Friedman et al, 2011). In turn, a lack of equal representation in the nursing workforce further contributes to stereotypes (e.g., gender minority negativity) in nursing affecting nurse retention and patient care (Klotzbaugh & Spencer, 2015). Like Klotzbaugh & Spencer (2015) explain, to advocate for the perspectives of those who are underrepresented in nursing is what nursing is all about and as such initiatives to increase awareness are essential to the profession as a whole (p. 118).

It is notable that the RNs (n=146) in the sample were quite experienced as nurses, with a M=17.33 (SD=13.73) years of nursing experience. This finding shows that the study participants had adequate nursing experience and could be considered experts in their professions. As such, their nursing responses to the survey questions come from the perspective of an experienced healthcare professional. Just as Dickson (2017) explains, data from knowledgeable participants (in this case nurses) at domestic localized levels can have a major influence for future interventions (p. 74).

Another observation of the RNs surveyed in this dissertation study is that a majority worked full-time and were also married and/or had children, i.e., they were dedicated to work, but also had personal responsibilities. As a sample they were also busy in their roles as RNs as they saw a *M*=13.45 (*SD*=19.98) patients daily which brings with it a certain level of stress. This study finding shows that issues related to CAN reporting can stem from RN workload. It is relevant to mention at this point, that NM has a total shortage of 6,223 RNs/CNSs (NMHCWC, 2021). In turn, RNs may require additional CAN reporting support so that they can be effective in their roles (Leite et al., 2016).

CAN Reporting Practices

Of the responses received on CAN reporting practices among the sample, there were missing responses (e.g., to the number of CAN reports) and some responses lacked agreement. For example, about half of the RNs in the study sample stated that they had made a CAN report. However, in the follow-up question –'If yes, how many reports', only about 25% of RNs actually provided a number for the CAN report (s). It is unclear why RNs responded to the CAN reporting questions in this manner in the survey. The idea that social desirability influenced nurses in their survey responses is also speculative and further research is warranted. Social desirability is the predisposition of an individual to say they have a socially desirable attitude associated with behavioral health behavior outcomes (versus a socially undesirable attitude) (Latkin et al., 2017; Paulhus, 1984).

Similar types of mandatory CAN reporting inconsistencies seen in the current study are also cited throughout the literature (Alter et al., 2012; Feng & Levine, 2005; Fraser et al., 2010). In the current study these findings show that RNs in NM are unsure and/or lacked confidence in their CAN reporting responsibilities. As reported previously in this chapter, a significant factor influencing CAN reporting intended behaviors was

RN perceived behavioral control. This factor and other findings associated with CAN reporting behaviors provide more perspective to the CAN reporting.

Recommendations & Implications for Practice

The current study presents evidence that specific CAN training is a vital component to ideal CAN reporting. Nurses need to feel a sense of control to report CAN effectively. Work to create and implement RN focused CAN virtual reality training programs in NM needs to begin, including the provision for CAN on the job training for nurses that collaborates with local child protection agencies. At a minimum, CAN evidenced-based CAN training options (with websites) should be posted on the BON website and NMCYFD so that mandated reporters have resources to help guide their decisions.

Advocating for policy changes will need to begin at state and national levels. Collaboration should occur with child protection agencies and hospitals to set up local community centers where multi-disciplinary team of professionals can assist nurses (and others) in identifying CAN. This study provides important data from a statewide perspective of experienced registered nurses who work in NM. Their perspectives are important, and the results of this study should be presented to the NM BON first, for policy change direction. Legislation requiring nurses to complete CAN training in order to renew the nursing license should be advocated as a requirement in NM due to the challenges nurses and children face in NM. A consideration to CAN under and over-reporting should be included in policies. As RNs should be accountable for their CAN reporting responsibilities, policy changes should include RN tracking system that still remains anonymous. The survey could be administered again after policy changes have

been implemented. Follow-up by child protection agencies after a report is made could be initiated as part of policy change too help nurses develop a positive relationship with government agencies.

The survey instrument overall measured what it was intended to measure. This instrument needs to be refined and more validity testing needs to be conducted on the survey instrument as it shows good potential for use in a national survey. It also needs refinement to determine it is "a cross-culturally appropriate measure" (J. Lee et al., 2015, p. 143).

Future research to systematically examine the potential applicability, usability, and challenges of applying the TPB and HBM is needed. However, as there are causal relationships in CAN reporting, theoretical research should also be causal (not just correlational) to develop CAN prevention strategies (Petersen et al., 2014). Advanced analytical strategies (e.g., path analysis) to test the underlying mechanisms of the research framework should be included. Furthermore, the phenomenon of this study could be explored among nurses at different levels (i.e., those that were excluded from the study).

Study Limitations and Strengths

Limitations

There were several limitations. First, the researcher was a novice and therefore statistical tests and analyses may have been lacking due to the lack of researcher knowledge and experience. For example, the demographic questionnaire needs to be more specific on race/ethnicity responses. Data analysis needs to be continued and reanalyzed for other perspectives.

There was a low survey response rate. The recruitment technique also required more in-depth research in regard to how to get a specific population like RNs to answer a survey with sensitive content. The study used a cross-sectional design so causation could not be determined. The study applied a random sample strategy, but in some ways, this also was a convenient sampling method. The survey was by random invitation, so there may have been a possible response bias, i.e., all RNs in NM did not respond to survey. Selection bias was a limitation as there may have been the possibility that only individuals who were engaged/interested in CAN and CAN reporting, consented to participate in the study and therefore, associations may be difficult to identify. The CARIS questionnaire may need to be refined for use in the U.S. For example, maybe the knowledge questions could be more specific to include U.S. terminology of misdemeanors, etc. Cues to action questions also were based on questions from other studies, but these were not cues for reporting CAN. Survey burden was also a limitation as the survey was long. The CARIS instrument should be further examined for conciseness.

There was generalizability limitation since the sample was comprised of only of NM RN nurses, the results may not be generalizable to the general population of RNs. Sometimes individuals can over-report CAN and this study assumed individuals under-report CAN. A weakness in the TPB, is that intended practice behaviors does not imply the actual behavior, i.e., just because an individual states they intend to do a certain behavior doesn’t mean that individual will actually perform that behavior.

Strengths

The study applied multiple regression and controlled for covariates. The study sample was randomized, i.e., participants were located from all parts of the state of NM. Demographics of the study sample were similar to the base population. The level of design was a strength as the study was based on an established theory and used an established instrument. The study also used a proxy behavior question (PBS) to determine actual CAN reporting behavior.

Conclusion

The focus of the study was on CAN reporting behavior. The RNs in the study were experienced professionals and the responses to the survey should be considered carefully. The study showed there are several factors associated with CAN reporting and the most significant factor that predicted CAN reporting was RN perceived behavioral control. A focus for future interventions should be to find ways to increase RN perceptions of control with CAN reporting.

There were both positive and negative attitudes among nurses in the study. For example, age was a factor associated with negative attitudes towards CAN. Nurses had professional attitudes regarding reporting. Some nurses in the study mistrusted government agencies. Nurses in the study were not aware of the possible repercussions of not reporting CAN (so there was a lack of awareness), and many felt that their CAN training was on the whole inadequate and deficient. Subjective Norms showed the social influences that are associated with reporting CAN and how they related to attitudes towards abusers. Cues to action was a significant predictor to intended practice CAN reporting, showing that in some cases, even experienced RNs need a cue to report CAN

effectively. When state policies are not specific, stumbling blocks render setbacks for those who are attempting to follow the direction of the law (Dickson, 2017). There are also infrastructure issues in place that are beyond the control of the RN. All these findings (and others) show that mandated RN CAN reporters in NM face barriers with CAN reporting and many similar barriers to CAN reporting are faced by nurses internationally. Further qualitatively exploring the CAN reporting experiences and perspectives of RNs should also be considered. For example, the study discovered CAN reporting barriers and RNs perceptions of what could facilitate CAN reporting should be included to help develop intervention strategies.

Finally, as the TPB components (e.g., perceived behavioral control, attitudes, subjective norms) are traced back to individual beliefs (Ajzen, 1991), perhaps there were beliefs in place that contributed to the survey results. The significant predictor of work status is unique as it may point to that being an RN is a lifestyle. In other words, nursing in and of itself may somehow become an innate personal characteristic, and as such a commitment to the profession becomes a control belief, which in turn is corroborated by the nurse's ethical behavior.

The current study had several limitations and also strengths. However, the key findings of the current study point to the complexity of CAN. Correspondingly, CAN reporting (although mandatory) is a complicated phenomenon, even more so as we consider the uniqueness of the target sample and location of the study, the RNs in NM. Therefore, CAN training is vital. Importantly, so that families in NM can stay together, a major goal of CAN training for RNs needs to be on finding those resources to support families in NM who face more than their share of obstacles. The contribution of the

current pilot study is mainly that it provides a baseline to build on as future CAN reporting research continues. As such, this study also presents numerous possibilities to generalize this research to U.S nurses nationally and obtaining more and accurate data about RN CAN reporting warrants future investigations.

APPENDICES

Appendix A: Screening Questions Used in REDCap

Page 1

Mandatory Child Abuse and Neglect Reporting Behaviors Among Registered Nurses in New Mexico: A Statewide Comparative Study

To begin, please answer the screening questions below.

Is New Mexico your current state of residence?	◯ Yes ◯ No
Are you currently licensed to practice as a nurse in the state of New Mexico?	◯ Yes ◯ No
What is the most recent type of nursing license you have?	◯ RN ◯ LPN ◯ Nurse Practitioner/Advanced Practice ◯ Clinical Nurse Specialist/Advanced Practice ◯ Lactation Specialist/Provider ◯ Other ◯ None
Is your nursing license active and unencumbered?	◯ Yes ◯ No
Are you currently employed as a nurse?	◯ Yes ◯ No
Are you at least 18 years or older?	◯ Yes ◯ No

Appendix B: Permission from the NMBON to Use Listserv

From: Ingrid A Wilson <inwilson@salud.unm.edu>
Sent: Monday, April 13, 2020, 21:29
To: Poole, Sasha, BON <Sasha.Poole@state.nm.us>
Subject: [EXT] Permission request letter to NMBON

Dear Dr. Poole,

My name is Ingrid Wilson. I am a PhD student in the nursing program at the University of New Mexico (UNM) at Albuquerque. Today I am writing this email to ask for your permission to use the email server list of nurses from the Board of Nursing in the state of New Mexico.

Inbox

To: Ingrid A Wilson.
Ms. Wilson,
As a not that long-ago dissertation completer, I have a soft spot for individuals trying to compete their dissertations. Once you provide me with your institution's IRB approval notice, I will gladly provide you the list free of charge.
Best of luck moving forward!
Regards,
Sasha N. Poole, PhD, RN | Executive Director | 505.841.9083 (D) | sasha.poole@state.nm.us
New Mexico Board of Nursing | 6301 Indian School Rd NE, Suite 710, Albuquerque, NM 87110 505.841.8340 (P) | 505.841.8347 (F) | www.nmbon.sks.com
NM BON Mission: Protect the Public safety through effective regulation of nursing care and services.

Appendix C: Child Abuse Report Intention Scale Agreement

馮 瑞鶯 <juiying@mail.ncku.edu.tw> 於 2019年4月25日 週四 上午7:08寫道：

Dear Ingrid,

Thanks for writing to me and sharing your research trajectory with me. You are welcome to use the CARIS!

I am out of town right now and will return home on Saturday. I will forward your email to my assistants, and they will help you with it.

Good luck on your study!

Jui-Ying

Jui-Ying Feng, Professor

Department of Nursing, College of Medicine

National Cheng-Kung University

1 University Road, Tainan 701, Taiwan

Phone: 886-6-2353535 Ext 5851

Fax: 886-6-2377550

Appendix C: Child Abuse Report Intention Scale Agreement Cont'd

CHILD ABUSE REPORT INTENTION SCALE (CARIS)-Nurses' Version: AGREEMENT

The *Child Abuse Report Intention Scale (CARIS) -Nurses' Version* provides a measure of factors associated with nurses' intention to report child abuse. The scale developer and the other entity (***fill-in name and address***) agree to the following conditions:

1. User sends a protocol synopsis of the proposed study at the time of sending the agreement form.
2. User agrees to maintain the *CARIS-Nurses' Version* in the form provided, without modification, unless written approval is obtained from the scale developers.
3. User agrees to use the *CARIS-Nurses' Version* for her/his own work, without distribution to other colleagues, unless written approval is obtained from the scale developers.
4. User agrees to use the *CARIS-Nurses' Version* for one trial only (as specified below). For additional trials, new agreements will be needed.
5. User agrees to cite all primary references by the *CARIS -Nurses' Version*developer.
6. User agrees to send a copy of the final published report of the study for the *CARIS-Nurses' Version* bibliography.

If in agreement with the above conditions, please sign this form, retain a copy for your records, and return the original for approval.

This agreement is made with the *CARIS-Nurses' Version* developer: _____
Signature ***Date***

User's Name (*Typed*): Ingrid Ann Wilson

User's Signature: Ingrid Ann Wilson Date: 4-26-2019

Name of Study: Factors Associated with Registered Nurses Knowledge, Self-Efficacy, Attitudes, and Intention to Report Child Abuse and Neglect in New Mexico.

Organization: University of New Mexico

Address: 2502 Marble Ave.
Albuquerque, NM 87131

Telephone #: 1-505-272-2684 Fax #: 505-272-9345

Study Sponsor: Dr. Jongwon Lee

Appendix D: Child Abuse Report Intention Scale (CARIS) (Feng, 2003)

Section 1. Personal, professional, and institutional information. Provide only one answer to each question unless instructed to check all that apply.

 Personal

1. What is your gender?
   (1) _____ Female (0) _____ Male

2. What is the year of your birthday? _____

3. What is your marital status?
   (1) _____ Never married
   (2) _____ Married or living as married
   (3) _____ Separated
   (4) _____ Divorced
   (5) _____ Widowed

4. Do you have children?
   (1) _____ Yes. How many? _____
   (0) _____ No

5. What is your religion?
   (1) _____ Buddhism
   (2) _____ Taoism
   (3) _____ Christianity
   (4) _____ Catholicism
   (5) _____ None
   (6) _____ Other (specify) _____

6. What is your highest education degree?
   (1) _____ Diploma
   (2) _____ Associate degree
   (3) _____ Baccalaureate degree
   (4) _____ Master's degree
   (5) _____ Doctorate degree
   (6) _____ Other

7. In what year you receive your last degree? _____

8. Were you a victim of child abuse?
   (1) _____ Yes
   (0) _____ No

9. Do you know anyone who has been abused?

(1) _____ Yes
(0) _____ No

10. Nurse's history of reporting:

1). In your work, have you ever made a report of suspected child abuse?
(1) _____ Yes. How many? _____
(0) _____ No

2). Have there ever been times when you thought a child was being abused but did not report?
(1) _____ Yes
(0) _____ No

3). If (2) answer yes, please rank the reasons for not reporting: 1 as the most important and 3 as the least important reason.
(Example: the reasons for me to do exercise
____3___ Hobby
____1___ Health
_____ Leisure
____2___ Weight Control
_____ Have company.
_____ Other)

_____ Culture issue
_____ Fear of reprisal
_____ Feeling uncertain about the evidence.
_____ Fear of litigation
_____ Lack of faith in legal authority
_____ Others

 Professional

11. How many years have you practiced as an RN? _____ years _____ months

12. Specialty:
(1) _____ Pediatric
(2) _____ Emergency care
(3) _____ Psychiatric
(4) _____ Others (specify) _____

13. Current position:
(1) _____ Staff nurse
(2) _____ Nurse administrator
(3) _____ Nurse educator

(4) _____ Clinical nurse specialist
(5) _____ Other (specify) _____

14. Do you work
(1) _____ Full time?
(2) _____ Part time?

15. During your education in school how many hours of instruction, if any, did you have on child abuse?
_____ hours
0 = None

16. Have you ever received any formal instruction about child abuse at your present institution?
(1) _____ Yes
(0) _____ No

17. At what level do you feel your training in school education prepared you to deal with cases of child abuse?
(1) _____ Adequate
(2) _____ Minimal
(3) _____ Inadequate

18. At what level do you feel your in-service training prepared you to deal with cases of child abuse?
(1) _____ Adequate
(2) _____ Minimal
(3) _____ Inadequate

Institutional

19. How many patients do you see every day? _____ (approximately)

20. Where is the location of your workplace?
(1) _____ North
(2) _____ Central
(3) _____ South
(4) _____ East

21. What is the source of support of your hospital
(1) _____ Public
(2) _____ Private _____ Affiliated with religious non-profit proprietary

22. What is the accreditation of the hospital you work in?
(1) _____ Medical center
(2) _____ Regional hospital

(3) _____ District hospital
(4) _____ Psychiatric hospital
(5) _____ Other

Section 2a. Examines 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	5	Strongly agree 6
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 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. Examines 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	5	Strongly agree 6
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. Examines attitudes regarding professional responsibility. Indicate with a check (√) the degree to which you disagree or agree with the following statements.

Questions	Strongly disagree 1	2	3	4	5	Strongly agree 6
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 case.						

Section 3. Examine your knowledge of child abuse and the reporting law. Please read each statement carefully and indicate with a check (√) the degree to which you disagree or agree with the following statements.

Questions	Yes 1	No 2	Don't know 3
1. Nurses are mandated by law to report suspected child abuse. (True)			
2. A professional must have physical evidence of child abuse before reporting the case to Child protective services. (False)			
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 case, children who are sexually abused are abused 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. Subjective norm

Questions	Definitely No 1	2	3	4	Definitely Yes 5
1. Do most people who are important to you think you should report suspected child abuse?					
2. Do most people whose opinion you respect think you should report suspected child abuse?					

Section 5. Perceived Behavior Control

Questions	Definitely No 1	2	3	4	Definitely Yes 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 than child abuse. This affects my decision to become involved or not in reporting child abuse.					

Section 6. Intended Practice Behaviors: Vignette Questions and Response Options:

Case scenarios with the same 6 Likert responses for each case scenario.

1. The parents regularly left their nine-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.
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.
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.
4. These parents 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.
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 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.
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.
7. The parents often compare the school performance of the child to that of others, and make the child feel inferior. The parents ridicule and criticize the child whenever the child does not do well in the exams.
8. The parent repeatedly showed the child pornographic pictures.

(1) Based on the information you have provided, how serious in this incident?	1	2	3	4	5	6	7	8	9	10
	Not at all serious									Extremely serious
(2) In your own professional judgment, does the incident described above constitute abuse?	1	2	3	4	5	6	7	8	9	10
	Definitely no									Definitely yes
(3) In your view, would you be required by law to report this incident?	1	2	3	4	5	6	7	8	9	10
	definitely not required to report						definitely required to report			
(4) All things considered, what overall impact would a child abuse report be likely to have on this child?	1	2	3	4	5	6	7	8	9	10
	Highly negatively impact									Highly positive impact
(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	7	8	9	10
	Highly negatively impact									Highly positive impact
(6) How likely would you be to report this case?	1	2	3	4	5	6	7	8	9	10
	Almost certainly would not report									Almost certainly would report

Appendix E: Supporting Evidence for Cues to Action Questions

Authors of Previous Research using Cues to Action	**Previous Question Item Used**	**Reliability**	**Adapted Items Measuring Cues to Action for this study *(plus the measurement scores applied)***
Klotzbaugh & Spencer (2015)	"I would attempt to initiate LGBT sensitivity training and/or policies only if an LGBT patient filed a complaint." *and* "I would attempt to initiate LGBT sensitivity training and/or policies based on my own standards in advocating for LGBT patients and staff" (Klotzbaugh & Spencer, 2015. p. 136). Questions scored: 1=disagree to 3=agree with higher scores indicating greater agreement in personally attempting to initiate LGBT-related sensitivity training and/or policies.	Cronbach α=.815	1. I would attempt to initiate a CAN report only if another nurse stated they would file a complaint against my license. 2. I would attempt to initiate CAN training and/or policies based on my own standards in advocating for CAN patients. *(1=strongly disagree; 5=strongly agree)*
Chen et al. (2011)	"The recommendation in the mass media affects my decision whether to vaccinate my children for influenza." "My doctor(s) recommendation affects my decision whether to vaccinate my children for influenza" (Chen et al., 2011, p. 36). The determinants scored by "agree/disagree" (Chen et al., p. 36).	Cronbach α=.82	3. I would report CAN based on recommendations in the mass media. 4. I would report CAN based on the doctor(s) recommendation. *(1 =strongly disagree; 5=strongly agree)*

McClenahan et al. (2007)	"Personal experience with testicular cancer prompted me to do testicular. self-examination" "Family/friends with testicular cancer prompted me to do testicular self-examination (McClenahan et al., 2007, p. 276). Items scored on a 7-point scale: strongly disagree – strongly agree.	Cronbach α=.79	5. I would report CAN because of my own personal experience with CAN. 6. I would report CAN because I have family/friends who are victims of CAN *(1 =strongly disagree; 5=strongly agree)*
Coe et al. (2012)	Questions in the study included items relating to sharing the experience of a relatives' illnesses with H1N1 which swayed the decision to get the H1N1 vaccine. The question was scored on a 4-point Likert scale ranging from 1 (very unlikely) to 4 (very likely). A higher score indicated a higher willingness to receive the vaccination.	Cronbach α=.98	See row above.
Gerend & Shepherd (2012)	"Has a doctor or other health care provider ever recommended that, you get the HPV vaccine?" (Gerend & Shepherd, 2012, p. 175). Item was scored using "yes" or "no".	R^2=.26	7. Has a doctor or other health care provider ever recommended that you report CAN *(yes; no)*

Appendix F: Final Instrument Used for Dissertation Study
(Feng, 2003)

Section 1. Personal, professional, and institutional information. Provide only one answer to each question unless instructed to check all that apply.

Personal

1. What is your current sex?
   (1) _____ ☐Male
   (2) _____ ☐Female
   (3) _____ ☐Other (Please specify: _____)

2. What is your gender/gender identity?
   (1) _____ ☐Man
   (2) _____ ☐Woman
   (3) _____☐Transgender/Gender Non-Conforming
   (4) _____☐Other (Please specify: _____)

3. Age: _____ years old.

4. Please indicate the racial or ethnic groups with which you most identify (Check all that apply).
   (1) _____ ☐ African American/Black
   (2) _____ ☐ Asian American/Asian
   (3) _____ ☐ Hispanic/Latino a/x
   (4) _____ ☐ Middle Eastern/North African
   (5) _____ ☐ Native American/Alaskan Native
   (6) _____ ☐ Native Hawaiian/Hawaiian/Another Pacific Islander
   (7) _____ ☐ White
   (8) _____ ☐ Mixed/More than one race/ethnic group
   (9) _____ ☐ Prefer not to answer

5. What is your marital status?
   (1) _____ ☐Never married
   (2) _____ ☐Married or living as married
   (3) _____ ☐Separated
   (4) _____ ☐Divorced
   (5) _____ ☐Widowed

6. Do you have children?
   (0) _____ ☐No
   (1) _____ ☐Yes. How many? _____

7. What is your religion?

(1) _____ ☐Buddhism
(2) _____ ☐Taoism
(3) _____ ☐Christianity
(4) _____ ☐Catholicism
(5) _____ ☐None
(6) _____ ☐Other (Please specify: _____)

8. What is your highest education degree?

(1) _____ ☐Diploma
(2) _____ ☐Baccalaureate degree
(3) _____ ☐Master's degree
(4) _____ ☐Doctorate degree
(5) _____ ☐Other (Please specify: _____)

9. In what year you received your last degree? _____

10. Do you know anyone who has been abused?

(0) _____ ☐No
(1) _____ ☐Yes
(2) _____ ☐Prefer not to respond

11. Nurse's history of reporting:

(1). In your work, have you ever made a report of suspected child abuse?

(0) _____ ☐No
(1) _____ ☐Yes.
A. How many reports? _____

(2). On a scale of 1-7, if you thought a child was being abused today, how likely would you be to report CAN:

(1) Extremely unlikely
(2) Quite unlikely
(3) Slightly unlikely
(4) Neither
(5) Slightly likely
(6) Quite likely
(7) Extremely likely

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

(0) _____☐No
(1) _____☐Yes

(2) _____ ☐Prefer not to respond

4). If Yes in Question (3), please rank the reasons for not reporting: 1 as the most. important and 3 as the least important reason. Please see example and then provide actual response.
(Example: the reasons for me to do exercise
____3___ Hobby
____1___ Health
_____ Leisure
____2___ Weight Control
_____ Have company.
_____ Other

Actual Response: Please rank below:
_____ Culture issue (Please specify: _____)
_____ Fear of reprisal
_____ Feeling uncertain about the child and abuse neglect evidence.
_____ Fear of litigation
_____ Lack of trust in legal authority
_____ Lack of training
_____ Lack of knowledge/awareness
_____ Lack of CAN evidence
_____ Lack of time due to workload
_____ Lack of support from peers
_____ Lack of support from administration or director/supervisor
_____ Inconsistent, unclear CAN regulatory policies
_____ Lack of existing CAN screening tools.
_____ Lack of or no CAN question items assessing CAN in admission assessment tools
_____ Personal faith and/or religion
_____ Personal beliefs on child rearing
_____ Other (Please specify: _____)

Professional

12. How many years have you practiced as an RN? _____ years _____ months

13. Specialty:
(1) _____ ☐Pediatric
(2) _____ ☐Emergency care
(3) _____ ☐Psychiatric
(4) _____ ☐Other (Please specify: _____)

14. Current position:
(1) _____☐Staff nurse

(2) _____☐Nurse administrator
(3) _____☐Nurse educator
(4) _____☐Clinical nurse specialist
(4) _____☐School nurse
(5) _____☐Other (Please specify: _____)

15. What is your current employment status?

(0) _____ ☐Part time?
(1) _____ ☐Full time?

16. During your education in school how many hours of instruction, if any, did you have on child abuse?

_____hours

17. Have you ever received any formal instruction about child abuse at your present institution?

(0) _____ ☐No
(1) _____ ☐Yes

18. At what level do you feel your training in school education prepared you to deal with cases of child abuse?

(1) _____ ☐Inadequate
(2) _____ ☐Minimal
(3) _____ ☐Adequate

19. At what level do you feel your in-service training prepared you to deal with cases of child abuse?

(1) _____☐ Inadequate
(2) _____ ☐Minimal
(3) _____ ☐Adequate

Institutional

20. How many patients in general do you see every day? _____ (approximately)

21. Where is the location of your workplace in New Mexico (NM)?

(1) _____ ☐Northeast
(2) _____ ☐Northwest
(3) _____ ☐Southwest
(4) _____ ☐Southeast
(5) _____ ☐Central

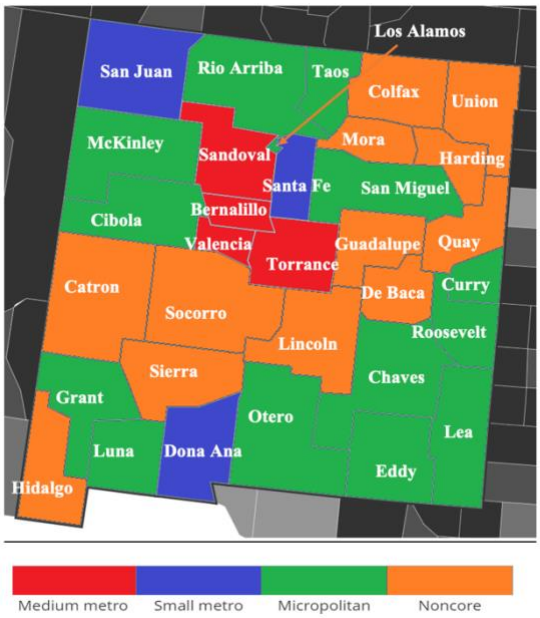
(6) _____ ☐East
(7) _____ ☐West
(8) _____ ☐North
(9) _____ ☐South

To answer question 22, please refer to the County Metropolitan Map.

22. Select one of the four options from the list that includes the county metropolitan classification in which you work. For example, if you work in Albuquerque, you will select "Medium Metro".

(1) ☐**Medium Metro (**Bernalillo, Sandoval, Valencia, Torrance)
(2) ☐**Small Metro (**Dona Ana, San Juan, Santa Fe)
(3) ☐**Micropolitan (**Grant, Luna, Otero, Chaves, Eddy, Lea, Roosevelt, Curry, San Miguel, Taos, Rio Arriba, McKinley, Cibola, Los Alamos)
(4) ☐**Noncore (**Hidalgo, Catron, Socorro, Sierra, Lincoln, Guadalupe, De Baca Quay, Harding, Union, Mora, Colfax)

New Mexico County Metropolitan Map: Sources: Ingram & Franco, 2013; National Center for Health Statistics, 2013; Rural Health Information Hub, 2023c.



23. What is the source of support of your hospital?
(1) _____☐Public
(2) _____☐ Private
(3) _____☐Affiliated with religious non-profit proprietary

24. What is the accreditation of the hospital you work in?

(1) _____☐Medical center
(2) _____☐Regional hospital
(3) _____☐District hospital
(4) _____☐Psychiatric hospital
(5) _____☐School
(6) _____☐Other (Please specify: _____)

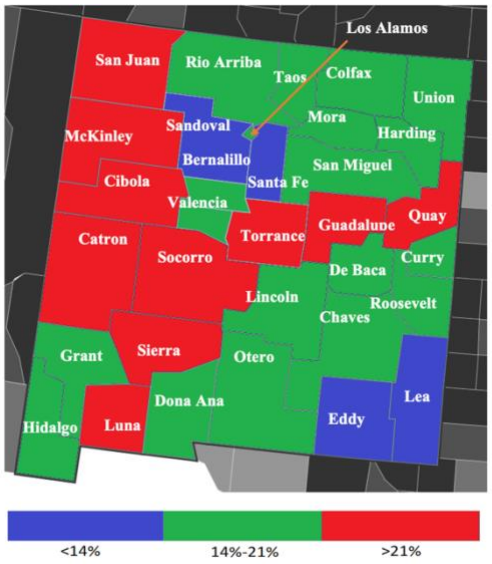
To answer question #25, please use the following New Mexico Poverty map.
25. Select one of the three options from the list that includes the county with the poverty rate of your workplace:

(1) _____ ☐**About average (Up to 14%)**: Sandoval, Bernalillo, Santa Fe, Lincoln, Colfax, Harding, Union Lea, Eddy

(2) _____ ☐**Higher than average (14%-21%):** Hidalgo, Grant, Catron, San Juan, Rio Arriba, Taos, Mora, Sierra, Socorro, Valencia, Torrance, Guadalupe, Quay, Curry, De Baca, Roosevelt, Chaves, Otero, Dona Ana

(3) _____ ☐**High (greater than 21%):** McKinley, Cibola, Catron, Socorro, Sierra, Luna, Torrance, Guadalupe, Quay

New Mexico County Poverty Map: Source: Rural Health Information Hub, 2023c



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For sections 2-6 see CARIS Appendix D.

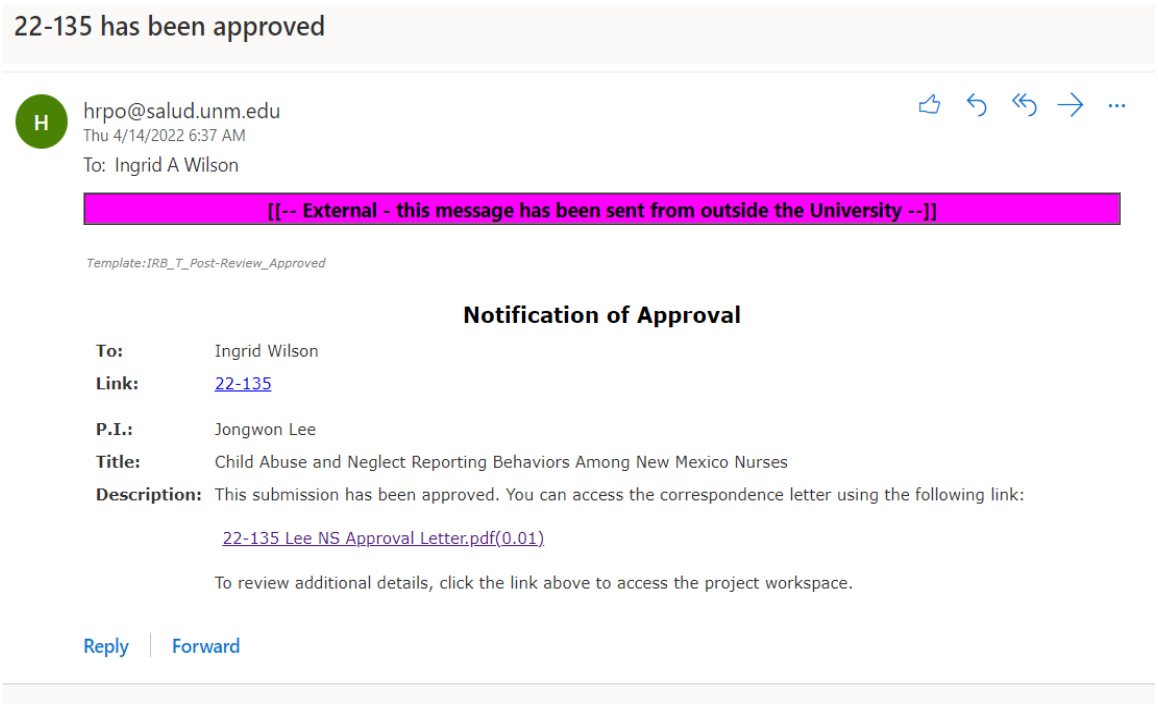
Section 7: Cues to Action (Chen et al., 2011; Klotzbaugh & Spencer, 2015, McClenahan et al., 2007)

Please indicate with a checkmark the degree to which you disagree or agree with the following statements:

Statement	Strongly Disagree **1**	**2**	**3**	**4**	**5**	Strongly Agree **6**
1. I would attempt to initiate a CAN report only if another nurse stated they would file a complaint against my license.						
2. I would attempt to initiate CAN training and/or policies based on my own standards in advocating for CAN patients.						
3. I would report CAN based on recommendations in the mass media						
4. I would report CAN based on the doctor(s) recommendation						
5. I would report CAN because of my own personal experience with CAN.						
6. I would report CAN because I have family/friends who are victims of CAN						

7. Has a doctor or other health care provider ever recommended that you report CAN?
   (0) _____ ☐No
   (1) _____ ☐Yes

Appendix G: IRB Approval



22-135 has been approved

H

hrpo@salud.unm.edu
Thu 4/14/2022 6:37 AM
To: Ingrid A Wilson

[[-- External - this message has been sent from outside the University --]]

Template:IRB_T_Post-Review_Approved

Notification of Approval

To:	Ingrid Wilson
Link:	22-135
P.I.:	Jongwon Lee
Title:	Child Abuse and Neglect Reporting Behaviors Among New Mexico Nurses
Description:	This submission has been approved. You can access the correspondence letter using the following link:

22-135 Lee NS Approval Letter.pdf(0.01)

To review additional details, click the link above to access the project workspace.

Reply | Forward

Appendix H: Content Validity (Lee, 2007)

Dear Colleague,

The following items are intended to measure: (a) the constructs of the Theory of Planned Behavior model, which are attitudes, subjective norms, perceived behavioral control, and intentioned practice behaviors regarding mandatory child abuse and neglect reporting, (b) knowledge, and (c) cues to action among registered nurses in New Mexico. You will be asked to rate the content relevance of the individual elements of the instrument using the following three-point ordinal rating scales. The table below is organized by the sections of components on the first column, the question item (s) measuring the criteria in the second column, and the content validity index (CVI) on the third column. Please read each of the following items and rate it on an l to 3 scales according to how relevant you think each item is (i.e., the CVI). If you rate each item as 1 (not acceptable), please provide some comments on this item.

1 = Not acceptable
2 = Possibly usable if reworded
3 = Acceptable/relevant

COMPONENTS	QUESTION ITEM	CONTENT VALIDITY INDEX (CVI) 1. Not acceptable 2. Possibly usable if reworded. 3. Acceptable/relevant
SECTION 2A: Examines attitudes regarding childrearing belief and discipline.	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 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: Examines attitudes regarding punishment and	1. Abusive parents should lose the right to raise their children.	
	2. Severe punishment of child abusers would help stop abuse of children.	

culpability of offenders or victims of child abuse. See question items 1-5.	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: Examines attitudes regarding professional responsibility. See question items 1-7.	6. Nurses should advocate for abused children.	
	7. In my practice, I intend to screen for child abuse	
	8. In my practice, I don't want to ask parents about child abuse.	
	9. Nurses should always report child abuse cases.	
	10. Reporting child abuse is troublesome to me.	
	11. Nurses have the responsibility to protect children from further abuse.	
	12. It is very time consuming to deal with child abuse case.	
SECTION 3: Examines knowledge of child abuse and the reporting law. See question Items 1-13.	14. Nurses are mandated by law to report suspected child abuse.	
	15. A professional must have physical evidence of child abuse before reporting the case to Child protective services.	
	16. Most sexual abuse of children involves physical force.	
	17. Children who have been abused usually tell someone soon after the abuse.	
	18. Professionals who report a case of suspected child abuse can be sued if the case is not substantiated in court.	
	19. Bruises that circumscribe the neck are usually associated with accidental trauma.	

	20. In most cases of child abuse and neglect, children are not removed from their parents' home.	
	21. In most cases, children who are sexually abused are abused by strangers.	
	22. Most sexual abuse of children includes intercourse.	
	23. Many runaway children and adolescents have been abused before running away.	
	24. A sexually abused child may have a normal physical examination.	
	25. Failure on the part of a health professional to report suspected child abuse or neglect can result in paying a fine.	
	26. Child abuse and neglect rarely occur among middle- or high social economic class.	
SECTION 4: Subjective norms. See question items 1-2.	1. Do most people who are important to you think you should report suspected child abuse?	
	2. Do most people whose opinion you respect think you should report suspected child abuse?	
SECTION 5: Perceived Behavior Control. See question items 1-8.	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 than child abuse. This affects my decision to become involved or not in reporting child abuse.	
SECTION 6: Intended Practice Behaviors: Vignettes 1-8 Questions. The 6 Response Options are on the next column. 1. The parents regularly left their nine-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 you have provided, how serious in this incident?	
	2. In your own professional judgment, does the incident described above constitute abuse?	
	3. In your view, would you be required by law to report this incident?	
	4. All things considered, what overall impact would a child abuse report be likely to have on this child?	
	5. All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	
	6. How likely would you be to report this case?	
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	1. Based on the information you have provided, how serious in this incident?	
	2. In your own professional judgment, does the incident described above constitute abuse?	
	3. In your view, would you be required by law to report this incident?	
	4. All things considered, what overall impact would a child	

seriously dehydrated.	abuse report be likely to have on this child?	
	5. All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	
	6. How likely would you be to report this case?	
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 you have provided, how serious in this incident?	
	2. In your own professional judgment, does the incident described above constitute abuse?	
	3. In your view, would you be required by law to report this incident?	
	4. All things considered, what overall impact would a child abuse report be likely to have on this child?	
	5. All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	
	6. How likely would you be to report this case?	
4. These parents 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 you have provided, how serious in this incident?	
	2. In your own professional judgment, does the incident described above constitute abuse?	
	3. In your view, would you be required by law to report this incident?	
	4. All things considered, what overall impact would a child abuse report be likely to have on this child?	

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

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.	4. All things considered, what overall impact would a child abuse report be likely to have on this child?	
	5. All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	
	6. How likely would you be to report this case?	
7. The parents often compare the school performance of the child to that of 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 you have provided, how serious in this incident?	
	2. In your own professional judgment, does the incident described above constitute abuse?	
	3. In your view, would you be required by law to report this incident?	
	4. All things considered, what overall impact would a child abuse report be likely to have on this child?	
	5. All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	
	6. How likely would you be to report this case?	
8. The parent repeatedly showed the child pornographic pictures.	1. Based on the information you have provided, how serious in this incident?	
	2. In your own professional judgment, does the incident described above constitute abuse?	
	3. In your view, would you be required by law to report this incident?	

	4. All things considered, what overall impact would a child abuse report be likely to have on this child?	
	5. All things considered, what overall impact would a child abuse report be likely to have on the rest of the family?	
	6. How likely would you be to report this case?	
SECTION 7: Cues to Action. See 7 question items.	1. I would attempt to initiate a child abuse and/or neglect) CAN report only if another nurse stated they would file a complaint against my license.	
	2. I would attempt to initiate CAN training and/or policies based on my own standards in advocating for CAN patients.	
	3. I would report CAN based on recommendations in the mass media.	
	4. I would report CAN based on the doctor(s) recommendation.	
	5. I would report CAN because of my own personal experience with CAN.	
	6. I would report CAN because I have family/friends who are victims of CAN.	
	7. Has a doctor or other health care provider ever recommended that you report CAN?	

REFERENCES

Aggarwal, R., & Ranganathan, P. (2019). Study designs: Part 2—Descriptive studies. *Perspectives in Clinical Research, 10*(1), 34–36. doi: 10.4103/picr.PICR_154_18

Ainsworth, F. (2002). Mandatory reporting of child abuse and neglect: Does it really make a difference? *Child & Family Social Work, 7*(1), 57–63. https://doi.org/10.1046/j.1365-2206.2002.00228.x

Ajzen, I. (1991). The theory of planned behavior. *Organ Behavior Human Decision Process*, 50. https://doi.org/10.1016/0749-5978(91)90020-T

Ajzen, I. (2011). The theory of planned behavior: Reactions and reflections. *Psychology & Health, 26*(9), 1113–1127. https://doi.org/10.1080/08870446.2011.613995

Al-Saif, D. M., Al-Eissa, M., Saleheen, H., Al-Mutlaq, H., Everson, M. D., & Almuneef, M. A. (2018). Professionals' attitude toward reporting child sexual abuse in Saudi Arabia. *Journal of Child Sexual Abuse, 27*(1), 22–37. https://doi.org/10.1080/10538712.2017.1360429

Alter, J., Bennett, E., Bombach, V., Delacueva, S., Hauer, J., Kirchner, D., Meyerhoff, D., Randall, J., Starr, K. J., Trupke-Bastidas, J., Vos, J. (2012). *Evaluation report: Child protection screening. St. Paul, MN: Office of the Legislative Auditor, State of Minnesota, Program Evaluation Division; 2012.* https://www.auditor.leg.state.mn.us/ped/pedrep/screening.pdf

Alvarez, K. M., Kenny, M. C., Donohue, B., & Carpin, K. M. (2004). Why are professionals, failing to initiate mandated reports of child maltreatment, and are there any empirically based training programs to assist professionals in the reporting process? *Aggression & Violent Behavior, 9*(5), 563-578. https://doi.org/10.1016/j.avb.2003.07.001

American Association of Colleges of Nursing (AACN). (2023). Enhancing diversity in the workforce: Fact sheet. Author. https://www.aacnnursing.org/news-data/fact-sheets/enhancing-diversity-in-the-nursing-workforce

American Nurses Association (ANA). 2023. View the code of ethics for nurses. Author. https://www.nursingworld.org/practice-policy/nursing-excellence/ethics/code-of-ethics-for-nurses/

Anusiewicz, C., Fifolt, M., Montgomery, A., & Patrician, P. (2021). Survey methodology and response rates among Alabama inpatient staff registered nurses. *Medsurg Nursing: Official Journal of the Academy of Medical- Surgical Nurses*, *30*(6), 407–413.

Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behavior: A meta-analytic review. *The British Journal of Social Psychology*, *40*, 471–99.

Beck, M. E., Lineer, M. M., Melzer-Lange, M., Simpson, P., Nugent, M., & Rabbitt, A. (2015). Medical providers' understanding of sex trafficking and their experience with at-risk patients. *Pediatrics*, *135*(4), 895–902. https://doi.org/10.1542/peds.2014-2814

Becker, M.H. (1974). The Health Belief Model and sick role behavior. *Health Education Monographs*, *2*(4), 409-419. doi:10.1177/109019817400200407

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.

Berger, L. M., Collins, J. M., Font, S. A., Gjertson, L., Slack, K. S., & Smeeding, T. (2015). Home foreclosure and Child Protective Services involvement. *Pediatrics, 136*(2), 299–307. https://doi.org/10.1542/peds.2014-2832

Bledsoe, L. K. (2006). Smoking cessation: An application of theory of planned behavior to understanding progress through stages of change. *Addictive Behaviors*, *31*(7), 1271–1276. https://doi.org/10.1016/j.addbeh.2005.08.012

Bonner, E. C. R., Owora, A., Nandyal, R., Chaffin, M., Bonner, B. L. (2014). Risk for child maltreatment among infants discharged from a neonatal intensive care unit: a sibling comparison. *Child Maltreatment*. *18*(2). doi: 10.1177/1077559514539387

Bradbury-Jones, C., Innes, N., Evans, D., Ballantyne, F., & Taylor, J. (2013). Dental neglect as a marker of broader neglect: A qualitative investigation of public health nurses' assessments of oral health in preschool children. *BMC Public Health, 13*, 370. https://doi.org/10.1186/1471-2458-13-370

Brühl, A., Kley, H., Grocholewski, A., Neuner, F., & Heinrichs, N. (2019). Child maltreatment, peer victimization, and social anxiety in adulthood: A cross-sectional study in a treatment-seeking sample. *BMC Psychiatry*, *19*(1), 1–11. https://doi.org/10.1186/s12888-019-2400-4

Casey Family Programs. (2015). Geography matters: Consider family and child well-being in the context of the community. https://www.casey.org/geography-matters/

Casper, E. S. (2007). The theory of planned behavior applied to continuing education for mental health professionals. *Psychiatric Services*, *58*(10), 1324–1329. https://doi.org/10.1176/ps.2007.58.10.1324

Centers for Disease Control and Prevention [CDC]. (2022a). *Fast facts: Preventing child abuse and neglect/violence Prevention Injury Center CDC*. Author. https://www.cdc.gov/violenceprevention/childabuseandneglect/fastfact.html

Centers for Disease Control and Prevention [CDC]. (2022b). *Risk and protective factors Violence/Prevention Injury Center CDC*. Author. https://www.cdc.gov/violenceprevention/childabuseandneglect/riskprotectivefactors.html

Centers for Disease Control and Prevention [CDC]. (2023). *Adverse childhood experiences (ACEs)*. Author. https://www.cdc.gov/violenceprevention/aces/index.html

Center for Safety and Healing. (n.d.). Child Assessment Centers. Author. https://familysafetyandhealing.org/services/child-assessment-center/#

Cerna-Turoff, I., Fischer, H.-T., Mansourian, H., & Mayhew, S. (2021). The pathways between natural disasters and violence against children: A systematic review. *BMC Public Health*, *21*(1), 1249. https://doi.org/10.1186/s12889-021-11252-3

Chan, A. C. Y., Cheng, W. L., Lin, Y. N., Ma, K. W., Mark, C. Y., Yan, L. C., Yim, K.W., Yim, P. Y., & Ho, G. W. K. (2019). Knowledge and perceptions of child protection and mandatory reporting: A survey of nurses in Hong Kong. *Comprehensive Child and Adolescent Nursing*, 1–17. WorldCat.org. https://doi.org/10.1080/24694193.2018.1561763

Chan, K. (2022). Ways millennials parent differently than Gen X and Boomer parents. *Family Education*. https://www.familyeducation.com/family-

life/relationships/parenting/ways-millennials-parent-differently-gen-x-boomer-parent

Chen, M.-F., Wang, R.-H., Schneider, J. K., Tsai, C.-T., Jiang, D. D.-S., Hung, M.-N., & Lin, L.-J. (2011). Using the health belief model to understand caregiver factors influencing childhood influenza vaccinations. *Journal of Community Health Nursing*, *28*(1), 29–40.

Child Abuse and Prevention Act (CAPTA) of 1974, 42 U.S.C. §§5101–5119. (2010). *United States Code, 2017 Edition; Title 42—The public health and welfare; chapter 67—Child abuse prevention and treatment and adoption reform; U.S. Government Publishing Office.* https://www.govinfo.gov/content/pkg/USCODE-2017-title42/html/USCODE-2017-title42-chap67.htm

Child Welfare Information Gateway. (2019). *About CAPTA: A legislative history* [Fact sheet]. Child Welfare Information Gateway/Children's Bureau. https://www.childwelfare.gov/pubPDFs/about.pdf

Child Welfare Information Gateway. (n.d.). *Impact by type of maltreatment.* https://www.childwelfare.gov/topics/can/impact/types/

Child Welfare Information Gateway. (2021). *Links to state and Tribal child welfare law and policy.* https://www.childwelfare.gov/pubPDFs/resources.pdf

Children's Bureau. (2013). *What is child abuse and neglect? How does my state define child abuse and neglect?* https://www.acf.hhs.gov/cb/faq/can1

Children's Bureau. (2021). *Child and family services reviews: Round 3 findings: 2015–2016.* https://www.acf.hhs.gov/cb/training-technical-assistance/child-and-family-services-reviews-round-3-findings-2015-2016

Christodoulou, A.-D., Abakoumkin, G., & Tseliou, E. (2019). Teachers' intention to report child maltreatment: Testing theoretically derived predictions. *Child & Youth Care Forum*, *48*(4), 513–527. https://doi.org/10.1007/s10566-019-09492-x

City of Albuquerque. (2023). Albuquerque Family Advocacy Center. https://www.cabq.gov/albuquerque-family-advocacy-center

CITI Program. (2020). *University of New Mexico Health Sciences Center: Group 2 social & behavioral research investigators course 2*. https://About.Citiprogram.Org/. https://about.citiprogram.org/en/homepage/

Coburn, A. F., MacKinney, C., McBride, T. D., Mueller, K. J., Slifkin, R. T., & Wakefield, M. K. (2007). Choosing rural definitions: Implications for health policy (Issue Brief #2). *Rural Policy Research Institute Health Panel.* https://rupri.org/wp-content/uploads/RuralDefinitionsBrief.pdf

Coe, A. B., Gatewood, S. B. S., Moczygemba, L. R., Goode, J.-V. "Kelly" R., & Beckner, J. O. (2012). The use of the health belief model to assess predictors of intent to receive the novel (2009) H1N1 influenza vaccine. *Innovations in Pharmacy*, *3*(2), 1. https://doi.org/10.24926/iip.v3i2.257

Commission to Eliminate Child Abuse and Neglect Fatalities. (2016). *Within our reach: A national strategy to eliminate child abuse and neglect fatalities.* https://www.acf.hhs.gov/sites/default/files/documents/cb/cecanf_final_report.pdf

Conner, M., Norman, P., & Bell, R. (2002). The theory of planned behavior and healthy eating. *Health Psychology*, *21*(2), 194–201. https://psycnet.apa.org/doiLanding?doi=10.1037%2F0278-6133.21.2.194

Corner, B. & Lemonde, M. (2019). Survey techniques for nursing studies. *Canadian Oncology Nursing Journal*, *29*(1), 58-60. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6516248/

Crow, T., Cross, D., Powers, A., & Bradley, B. (2014). Emotion dysregulation as a mediator between childhood emotional abuse and current depression in a low-income African American sample. *Child Abuse & Neglect*, *38*(10), 1590–1598. https://doi.org/10.1016/j.chiabu.2014.05.015

Curtis, T., Miller, B. C., & Berry, E. H. (2000). Changes in reports and incidence of child abuse following natural disasters. *Child Abuse & Neglect*, *24*(9), 1151–1162. https://doi.org/10.1016/S0145-2134(00)00176-9

Daro, D., & Benedetti, G. (2014). Sustaining progress in preventing child maltreatment: A transformative challenge. *Handbook of Child Maltreatment*, 281–300. https://doi.org/10.1007/978-94-007-7208-3_14

Davidov, D. M., Jack, S. M., Frost, S. S., & Coben, J. H. (2012). Mandatory reporting in the context of home visitation programs: Intimate partner violence and children's exposure to intimate partner violence. *Violence Against Women*, *18*(5), 595–610. https://doi.org/10.1177/1077801212453278

Davis, A. K., & Rosenberg, H. (2016). Using the theory of planned behavior to predict implementation of harm reduction strategies among mdma/ecstasy users. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors*, *30*(4), 500–8. doi: 10.1037/adb0000167. PMID: 2732280

DeFilippis, E., Impink, S.M., Singell, M., Polzer, J.T., & Sadun, R. (2022). The impact of COVID-19 on digital communication patterns. *Humanity Social Sciences Communication*, 9 (180). https://doi.org/10.1057/s41599-022-01190-9

Department of Human Services: Pennsylvania. (2023). Keep kids safe by strengthening families. Author. https://www.dhs.pa.gov/keepkidssafe/pages/default.aspx?utm_medium=paid_search&utm_source=google&utm_campaign=kks_2022&utm_content=2023search&gclid=EAIaIQobChMI1pf_vMuE_wIVoc3jBx1l-gLbEAAYASAAEgITvPD_BwE

Dickson, E. (2017). *Sexual health education in New Mexico public secondary schools* [Doctoral dissertation, University of New Mexico at Albuquerque]. https://digitalrepository.unm.edu/nurs_etds/38/

Diderich, H. M., Verkerk, P. H., Oudesluys-Murphy, A. M., Dechesne, M., Buitendijk, S. E., & Fekkes, M. (2015). Missed cases in the detection of child abuse based on parental characteristics in the emergency department (the Hague Protocol). *Journal of Emergency Nursing*, *41*(1), 65–68. https://doi.org/10.1016/j.jen.2014.05.016

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method*. ProQuest eBook Central. https://about.proquest.com/en/products-services/ebooks-main

Disability Rights NM. (2022). Kevin S. settlement and implementation for foster youth. Author. https://drnm.org/2022/11/16/kevin-s-settlement-and-implementation-for-foster-youth/

Drake, B., & Jonson-Reid, M. (2011). NIS interpretations: Race and the National Incidence Studies of Child Abuse and Neglect. *Children and Youth Services Review*, *33*(1), 16–20. https://doi.org/10.1016/j.childyouth.2010.08.006

Duquesne University. (2020). Nurse leaders assessing ageism in nursing. https://onlinenursing.duq.edu/blog/nurse-leaders-addressing-ageism-in-nursing/

Easton, S. D., & Kong, J. (2017). Mental health indicators fifty years later: A population-based study of men with histories of child sexual abuse. *Child Abuse & Neglect, 63*, 273-283. https://doi.org/10.1016/j.chiabu.2016.09.011

Eisbach, S. S., & Dreissnack, 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. https://doi.org/10.1111/j.1744-6155.2010.00259.x

Elliott, G. C., Cunningham, S. M., Linder, M., Colangelo, M., & Gross, M. (2005). Child physical abuse and self-perceived social isolation among adolescents. *Journal of Interpersonal Violence*, *20*(12), 1663–168. https://doi.org/10.1177/0886260505281439

Epstein, D.S., Enticott, J.C., Larson, H.J., and Barton, C. (2021). Recruiting for research on sensitive topics in schools: an experience with Vaxcards, a collectable vaccine card game. *Trials* **22**, 320. https://doi.org/10.1186/s13063-021-05288-4

Fang, X., Brown, D. S., Florence, C. S., & Mercy, J. A. (2012). The economic burden of child maltreatment in the United States and implications for prevention. *Child Abuse & Neglect*, *36*(2), 156–165. doi: 10.1016/j.chiabu.2011.10.006

Farrell, C. A., Fleegler, E. W., Monuteaux, M. C., Wilson, C. R., Christian, C. W., & Lee, L. K. (2017). Community poverty and child abuse fatalities in the United States. *Pediatrics*, *139*(5). https://doi.org/10.1542/peds.2016-1616

Federal Register: National Archives. (2021). Annual update of HHS poverty guidelines: A notice by the Health and Human Services Department on 2/01/2021. *Federal register: The daily journal of the United States Government.* Author. https://www.federalregister.gov/documents/2021/02/01/2021-01969/annual-update-of-the-hhs-poverty-guidelines#p-13

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) study. *American Journal of Preventive Medicine*, *14*(4), 245–258. https://doi.org/10.1016/S0749-3797(98)00

Feng, J.-Y. (2003). *Factors associated with nurses' intention to report child abuse: A national survey of Taiwanese nurses* [Doctoral dissertation, State University of New York at Buffalo]. https://www.proquest.com/docview/305247407/abstract/EFED9165CD0F47A3PQ/3

Feng, J.-Y., & Levine, M. (2005). Factors associated with nurses' intention to report child abuse: A national survey of Taiwanese nurses. *Child Abuse & Neglect*, *29*(7), 783–795. https://doi.org/10.1016/j.chiabu.2004.11.006

Feng, J.-Y., Jezewski, M., & Hsu, T.-W. (2005). The meaning of child abuse for nurses in Taiwan. *Journal of Transcultural Nursing*, *16*(2), 142–149.

Feng, J.-Y., Chen, Y.-W., Fetzer, S., Feng, M.-C., & Lin, C.-L. (2012). Ethical and legal challenges of mandated child abuse reporters. *Children and Youth Services Review*, *34*(1), 276–280. https://doi.org/10.1016/j.childyouth.2011.10.026

FindLaw. (2021). *New Mexico Statutes Chapter 32A. Children's Code § 32A-4-2. definitions*. https://codes.findlaw.com/nm/chapter-32a-childrens-code/nm-st-sect-32a-4-2.html

Finkelhor, D., Jones, L., Shattuck, A., & Saito, K. (2013). Updated trends in child maltreatment, 2012. *Crimes Against Children Research Center*,1–5. https://scholars.unh.edu/cgi/viewcontent.cgi?article=1061&context=ccrc

Flynn, G. A. H., Polivka, B., & Behr, J. H. (2018). Smartphone use by nurses in acute care settings. *Computers, Informatics, Nursing*, *36*(3), 120–126. https://doi.org/10.1097/CIN.0000000000000400

Fortson, B. L., Klevens, J., Merrick, M. T., Gilbert, L. K., & Alexander, S. P. (2016). Preventing child abuse and neglect: A technical package for policy, norm, and programmatic activities. *Division of Violence Prevention National Center for Injury Prevention and Control Centers for Disease Control and Prevention*. https://www.cdc.gov/violenceprevention/pdf/can-prevention-technical-package.pdf

Francis, K., Chapman, Y., Sellick, K., James, A., Miles, M., Jones, J., & Grant, J. (2014). The decision-making processes adopted by rurally located mandated professionals when child abuse or neglect is suspected. *Contemporary Nurse*, *41*(1), 58–69. https://doi.org/10.5172/conu.2012.41.1.58

Fraser, J. A., Mathews, 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

Friedman, M.S., Marshal, M.P., Guadamuz, T.E., Wei, C., Wong, C.F., Saewyc, E., Stall, R. (2011). A meta-analysis of disparities in childhood sexual abuse, parental physical abuse, and peer victimization among sexual minority and sexual nonminority individuals. *American Journal of Public* Health,101(8).1481-94. doi: 10.2105/AJPH.2009.190009

Freisthler, B., Wolf, J. P., Wiegmann, W., & Kepple, N. J. (2017). Drug use, the drug environment, and child physical abuse and neglect. *Child Maltreatment*, *22*(3), 245–255. doi: 10.1177/1077559517711042

Fuller-Thomson, E., & Lewis, D. A. (2015). The relationship between early adversities and attention-deficit/hyperactivity disorder. *Child Abuse & Neglect*, *47*, 94–101. https://doi.org/10.1016/j.chiabu.2015.03.00

Gerend, M. A., & Shepherd, J. E. (2012). Predicting human papillomavirus vaccine uptake in young adult women: Comparing the health belief model and theory of planned behavior. *Annals of Behavioral Medicine*, *44*(2), 171–180. https://doi.org/10.1007/s12160-012-9388-z

Gershoff, E. T., Font, S. A., Taylor, C. A., Foster, R. H., Garza, A. B., Olson-Dorff, D., Terreros, A., Nielsen-Parker, M., & Spector, L. (2016). Medical center staff attitudes about spanking. *Child Abuse & Neglect*, *61*, 55–62. doi: 10.1016/j.chiabu.2016.10.003

Gibbs, D. A., Martin, S. L., Kupper, L. L., & Johnson, R. E. (2007). Child maltreatment in enlisted soldiers' families during combat-related deployments. *Journal of the American Medical Association*, *298*, 528–535. https://doi.org/10.1001/jama.298.5.528

Gilbert, L. K., Breiding, M. J., Merrick, M. T., Thompson, W. W., Ford, D. C., Dhingra, S. S., & Parks, S. E. (2015). Childhood adversity and adult chronic disease: An update from ten states and the District of Columbia, 2010. *American Journal of Preventive Medicine*, *48*(3), 345–349. https://doi.org/10.1016/j.amepre.2014.09.006

Gluck, S. (2015). *Effects of child physical abuse | Healthy place*. https://www.healthyplace.com/abuse/child-physical-abuse/effects-of-child-physical-abuse

Godin, G., & Kok, G. (1996). The theory of planned behavior: A review of its applications to health-related behaviors. *American Journal of Health Promotion*, *11*(2), 87–98. doi: 10.4278/0890-1171-11.2.87cc

Guo, Y., Kopec, J. A., Cibere, J., Li, L. C., & Goldsmith, C. H. (2016). Population survey features and response rates: A randomized experiment. *American Journal of Public Health*, *106*(8), 1422–1426. https://doi.org/10.2105/AJPH.2016.303198

Gracia, E., & Musitu, G. (2003). Social isolation from communities and child maltreatment: A cross-cultural comparison. *Child Abuse & Neglect*, *27*(2), 153–168. https://doi.org/10.1016/S0145-2134(02)00538-0

Green. M. (2020). Nurses' adherence to mandated reporting of suspected cases of child abuse. *Journal of Pediatric Nursing*, *54*, 109-113.

https://www.pediatricnursing.org/article/S0882-5963(20)30463-2/pdf

Halpern, S. C., Schuch, F. B., Scherer, J. N., Sordi, A. O., Pachado, M., Dalbosco, C., Fara, L., Pechansky, F., Kessler, F., & Diemen, L. V. (2018). Child maltreatment and illicit substance abuse: A systematic review and meta-analysis of longitudinal studies. *Child Abuse Review*, *27*(5), 344–360. https://doi.org/10.1002/car.2534

Hartley, E. M., Hoch, M. C., & Cramer, R. J. (2018). Health belief model and theory of planned behavior: A theoretical approach for enhancing lower extremity injury prevention program participation. *International Journal of Athletic Therapy and Training*, *23*(1), 16–20. https://doi.org/10.1123/ijatt.2017-0016

Hillis, S., Mercy, J., Amobi, A., & Kress, H. (2016). Global prevalence of past-year violence against children: A systematic review and minimum estimates. *Pediatrics*, *137*(3). https://doi.org/10.1542/peds.2015-4079

Ho, G. W. K., Bettencourt, A. F., & Gross, D. A. (2017). Reporting and identifying child physical abuse: How well are we doing? *Research in Nursing & Health*, *40*, 519–527. doi: 10.1002/nur.21818

Ho, G. W. K., & Gross, D. A. (2015). Pediatric nurses' differentiations between acceptable and unacceptable parent discipline behaviors: A Q-study. *Journal of Pediatric Health Care: Official Publication of National Association of Pediatric Nurse Associates & Practitioners*, *29*(3), 255–264. https://doi.org/10.1016/j.pedhc.2014.12.004

Homma, Y., Wang, N., Saewyc, E., & Kishor, N. (2012). The relationship between sexual abuse and risky sexual behavior among adolescent boys: A meta-analysis.

Journal of Adolescent Health, *51*(1), 18–24. https://doi.org/10.1016/j.jadohealth.2011.12.032

Hutchinson, M. K., & Sutherland, M. A. (2019). Conducting surveys with multidisciplinary health care providers: Current challenges and creative approaches to sampling, recruitment, and data collection. *Research in Nursing & Health*, *42*(6), 458–466. https://doi.org/10.1002/nur.21976

Hymel, K. P., Laskey, A. L., Crowell, K. R., Wang, M., Armijo-Garcia, V., Frazier, T. N., Tieves, K. S., Foster, R., Weeks, K., & Pediatric Brain Injury Research Network (PediBIRN) Investigators. (2018). Racial and ethnic disparities and bias in the evaluation and reporting of abusive head trauma. *The Journal of Pediatrics*, *198*, 137–143.e1. https://doi.org/10.1016/j.jpeds.2018.01.048

Ingram, D. D., & Franco, S. J. (2013). 2013 NCHS urban–rural classification scheme for counties. *Vital and Health Statistics 2013, Series 2, Number 166: USDDHS*. 1-68. https://www.cdc.gov/nchs/data/series/sr_02/sr02_166.pdf

International Society for the Prevention of Child Abuse and Neglect [ISPCAN]. (2021). *ISPCAN World Perspectives on Child Abuse: 14th Edition.* https://issuu.com/nicshash/docs/ispcan_0001-20_world_perspectives_report_page_2.3

Javadi, M., Kadkhodaee, M., Yaghoubi, M., Maroufi, M., & Shams, A. (2013). Applying theory of planned behavior in predicting of patient safety behaviors of nurses. *Materia Socio-Medica*, *25*(1), 52. doi: 10.5455/msm.2013.25.52-55

Johnson, J. (2021). U.S. households with Internet subscription 1997–2019. *Statista.* https://www.statista.com/statistics/189349/us-households-home-internet-connection-subscription/

Justia U.S. Law. (2018). *2018 New Mexico Statutes Chapter 30—Criminal offenses Article 6 - Crimes against children and dependents Section 30-6-1—Abandonment or abuse of a child*. https://law.justia.com/codes/new-mexico/2018/chapter-30/article-6/section-30-6-1/

Kairys, S. W., Johnson, C. F., & Committee on Child Abuse and Neglect. (2002). The psychological maltreatment of children—Technical report. *Pediatrics*, *109*(4), 68. doiI: 10.1542/peds.109.4.e68

Kernsmith, P. D., & Tolman, R. M. (2011). Attitudinal correlates of girls' use of violence in teen dating relationships. *Violence against Women*, *17*(4), 500–16. doiI: 10.1177/1077801211404312

Klotzbaugh, R., & Spencer, G. (2015). Cues-to-action in initiating lesbian, gay, bisexual, and transgender-related policies among Magnet Hospital Chief Nursing Officers: A demographic assessment. *Advances in Nursing Science*, *38*(2), 110–120. https://doi.org/10.1097/ANS.0000000000000069

Konijnendijk, A. A. J., Boere-Boonekamp, M. M., Fleuren, M. A. H., Haasnoot, M. E., & Need, A. (2016). What factors increase Dutch child health care professionals' adherence to a national guideline on preventing child abuse and neglect? *Child Abuse & Neglect*, *53*, 118–127. https://doi.org/10.1016/j.chiabu.2015.11.00

Ko, N.-Y., Feng, M.-C., Chiu, D.-Y., Wu, M.-H., Feng, J.-Y., & Pan, S.-M. (2004). Applying theory of planned behavior to predict nurses' intention and volunteering

to care for SARS patients in Southern Taiwan. *The Kaohsiung Journal of Medical Sciences, 20*(8), 389–398. https://doi.org/10.1016/S1607-551X(09)70175-5

Kost, K., Maddow-Zimet, I., & Arpaia, A. (2017). *Pregnancies, births, and abortions among adolescents and young women in the United States, 2013: National and state trends by age, race, and ethnicity*. https://www.guttmacher.org/report/us-adolescent-pregnancy-trends-2013

Kraft, L. E., & Eriksson, U.-B. (2015). The school nurse's ability to detect and support abused children: A trust-creating process. *The Journal of School Nursing: The Official Publication of the National Association of School Nurses, 31*(5), 353–362. https://doi.org/10.1177/1059840514550483

Krug, E. G., & Dahlberg, L.L., Mercy, J.A., Zwi, A.B., & Lozano, R. (2002). World report on violence and health. *WHO Geneva 2002.* https://apps.who.int/iris/bitstream/handle/10665/42495/9241545615_eng.pdf

Kuruppu, J., Forsdike, K., & Hegarty, K. (2018). 'It's a necessary evil': experiences and perceptions of mandatory reporting of child abuse in Victorian general practice. *Australian Journal of General Practice*, *47*(10), 729–733. doi: 10.31128/AJGP-04-18-4563

Lagerberg, D. (2001). A descriptive survey of Swedish child health nurses' awareness of abuse and neglect. *Child Abuse & Neglect*, *25*(12), 1583–1601. doi: 10.1016/s0145-2134(01)00300-3

Latkin, C. A., Edwards, C., Davey-Rothwell, M. A., & Tobin, K. E. (2017). The relationship between social desirability bias and self-reports of health, substance use, and social network factors among urban substance users in Baltimore,

Maryland. *Addictive behaviors*, *73*, 133–136. https://doi.org/10.1016/j.addbeh.2017.05.005

Lavigne, J. L., Portwood, S. G., Warren-Findlow, J., & Huber, L. R. B. (2017). Pediatric inpatient nurses' perceptions of child maltreatment. *Journal of Pediatric Nursing: Nursing Care of Children and Families*, *34*, 17–22. https://doi.org/10.1016/j.pedn.2017.01.010

Lau, F. (2017). Methods for correlational studies. In *Handbook of eHealth Evaluation: An Evidence-based Approach [Internet]*. University of Victoria. https://www.ncbi.nlm.nih.gov/books/NBK481614/

Lawson, M., Piel, M. H., & Simon, M. (2020). Child maltreatment during the COVID-19 pandemic: Consequences of parental job loss on psychological and physical abuse towards children. *Child Abuse & Neglect*, *110*. https://doi.org/10.1016/j.chiabu.2020.104709

Leblanc, G., Gagnon, M. P., & Sanderson, D. (2012). Determinants of primary care nurses' intention to adopt an electronic health record in their clinical practice. *CIN: Computers, Informatics, Nursing*, *30*(9). https://journals.lww.com/cinjournal/Fulltext/2012/09000/Determinants_of_Primary_Care_Nurses__Intention_to.8.aspx

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

Lee, I. S., & Kim, K. J. (2018). Factors that influence mandatory child abuse reporting attitudes of pediatric nurses in Korea. *Journal of Forensic Nursing*, *14*(1), 31–41.

Lee, J. (2007). *Role of acculturation on oral contraceptive use among Korean immigrant women* [Doctoral dissertation, State University of New York at Buffalo]. https://www.proquest.com/openview/96395e41c1dd83382171292a12eb68dd/1.pdf?pq-origsite=gscholar&cbl=18750

Lee, J., Carvallo, M., & Lee, T. (2015). Psychometric properties of a measure assessing attitudes and norms as determinants of intention to use oral contraceptives. *Asian Nursing Research*, *9*(2), 138–145. https://doi.org/10.1016/j.anr.2015.04.003

Lee, L. T., Bowen, P. G., Mosley, M. K., & Turner, C. C. (2017). Theory of planned behavior: Social support and diabetes self-management. *The Journal for Nurse Practitioners*, *13*(4), 265–270. https://doi.org/10.1016/j.nurpra.2016.07.013

Leeb, R. T. & National Center for Injury Prevention and Control (U.S.). (2008). *Child maltreatment surveillance: Uniform definitions for public health and recommended data elements* (Version 1.0). Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. https://www.cdc.gov/violenceprevention/pdf/cm_surveillance-a.pdf

Leite, J. T., Beserra, M. A., Scatena, L., Silva, L. M. P. da, & Ferriani, M. das G. C. (2016). Coping with domestic violence against children and adolescents from the perspective of primary care nurses. *Revista gaucha de enfermagem*, *37*(2), e55796. https://doi.org/10.1590/1983-1447.2016.02.55796

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

Madsen, A., Sayre, E., McKagan, S. (2016). *Effect size: What is it and when and how should I use it?* PhysPort. https://www.physport.org/recommendations/Entry.cfm?ID=93385

Maguire-Jack, K., & Font, S. A. (2017). Intersections of individual and neighborhood disadvantage: Implications for child maltreatment. *Children and Youth Services Review*, *72*, 44–51. https://doi.org/10.1016/j.childyouth.2016.10.015

Maguire-Jack, K., & Kim, H. (2021). Rural differences in child maltreatment reports, reporters, and service responses. *Children and Youth Services Review*, *120*, 105792. https://doi.org/10.1016/j.childyouth.2020.105792

Maguire-Jack, K., & Klein, S. (2015). Parenting and proximity to social services: Lessons from Los Angeles County in the community context of child neglect. *Child Abuse & Neglect*, *45*, 35–45. https://doi.org/10.1016/j.chiabu.2015.04.020

Maneta, E. K., Cohen, S., Schulz, M. S., & Waldinger, R. J. (2015). Linkages between childhood emotional abuse and marital satisfaction: The mediating role of empathic accuracy for hostile emotions. *Child Abuse & Neglect*, *44*, 8–17. https://doi.org/10.1016/j.chiabu.2014.07.017

Mathews, B., & Bross, D. C. (2008). Mandated reporting is still a policy with reason: Empirical evidence and philosophical grounds. *Child Abuse & Neglect*, *32*(5), 511–516. https://doi.org/10.1016/j.chiabu.2007.06.010

Mathews, B., & Kenny, M. C. (2008). Mandatory reporting legislation in the United States, Canada, and Australia: A cross-jurisdictional review of key features, differences, and issues. *Child Maltreatment*, *13*(1), 50–63. https://doi.org/10.1177/1077559507310613

Mathews, B. (2016). Developing countries and the potential of mandatory reporting laws to identify severe child abuse and neglect. In S. Deb (Ed.), *Child safety, welfare, and well-being: Issues and challenges* (pp. 335–350). Springer. http://www.springer.com/us/book/9788132224242

Mathews, B., Lee, X. J., & Norman, R. E. (2016). Impact of a new mandatory reporting law on reporting and identification of child sexual abuse: A seven-year time trend analysis. *Child Abuse & Neglect*, *56*, 62–79. https://doi.org/10.1016/j.chiabu.2016.04.009

McCrory, E., De Brito, S. A., & Viding, E. (2010). Research review: The neurobiology and genetics of maltreatment and adversity. *Journal of Child Psychology and Psychiatry*, *51*(10), 1079–1095. https://doi.org/10.1111/j.1469-7610.2010.02271.x

McClenahan, C., Shevlin, M., Adamson, G., Bennett, C., & O'Neill, B. (2007). Testicular self-examination: A test of the health belief model and the theory of planned behavior. *Health Education Research*, *22*(2), 272–84.

Mehrotra, A., Jena, A. B., Busch, A. B., Souza, J., Uscher-Pines, L., & Landon, B. E. (2016). Utilization of telemedicine among rural Medicare beneficiaries. *Journal of the American Medical Association*, *315*(18), 2015. https://doi.org/10.1001/jama.2016.2186

Melton, G. B. (2005). Mandated reporting: A policy without reason. *Child Abuse & Neglect*, *29*(1), 9–18. https://doi.org/10.1016/j.chiabu.2004.05.005

Merrick, M. T., Ford, D. C., Ports, K. A., & Guinn, A. S. (2018). Prevalence of adverse childhood experiences from the 2011–2014 behavioral risk factor surveillance

system in 23 States. *JAMA Pediatrics*, *172*(11), 1038–1044. https://doi.org/10.1001/jamapediatrics.2018.2537

Murray, L. K., Nguyen, A., & Cohen, J. A. (2014). Child sexual abuse. *Child and Adolescent Psychiatric Clinics of North America*, *23*(2), 321–337. https://doi.org/10.1016/j.chc.2014.01.003

National Center for Health Statistics. (2017). *NCHS urban-rural classification scheme for counties.* https://www.cdc.gov/nchs/data_access/urban_rural.htm#2013_Urban-Rural_Classification_Scheme_for_Counties

National Child Abuse and Neglect Training and Publications Project. (2014). The Child Abuse Prevention and Treatment Act: 40 years of safeguarding America's children. Washington, DC: USDHHS, Children's Bureau. https://www.acf.hhs.gov/sites/default/files/documents/cb/capta_40yrs.pdf

National Child Traumatic Stress Network [NCTSN]. (n.d.). *Child maltreatment in military families: A fact sheet for providers.* https://www.nctsn.org/sites/default/files/resources/child_maltreatment_military_families_providers.pdf

Nayda, R. (2002). Influences on registered nurses' decision-making in cases of suspected child abuse. *Child Abuse Review*, *11*(3), 168–178. https://doi-org.libproxy.unm.edu/10.1002/car.736

Nelson, J. M., Cook, P. F., & Ingram, J. C. (2014). Utility of the theory of planned behavior to predict nursing staff blood pressure monitoring behaviors. *Journal of Clinical Nursing*. John Wiley & Sons, Ltd. https://onlinelibrary.wiley.com/doi/abs/10.1111/jocn.12183

New Mexico Board of Nursing (NMBON). (2021). *Laws and Rules: Practice Acts*. https://nmbon.sks.com/

New Mexico Children Youth & Families Department [NMCYFD]. (n.d.). Reporting abuse and neglect. Author. https://www.cyfd.nm.gov/protective-services/child-abuse-neglect/

New Mexico Children Youth & Families Department [NMCYFD] (2014). *NM CYFD's (2012–2014) central intake report.* https://www.nmececd.org/publications-reports/

New Mexico Children Youth & Families Department [NMCYFD]. (2021). *State of New Mexico Children Youth and family's Department 360 annual report state fiscal year 2021,* https://www.cyfd.nm.gov/wp-content/uploads/2022/12/360ANNUAL_FY21_FINAL.pdf

New Mexico Health Care Workforce Committee [NMHCWC]. (2021). *2021 Annual Report*. Albuquerque NM: University of New Mexico Health Sciences Center. https://www.nmms.org/wp-content/uploads/2018/08/NMHCWF_2021Report_FINAL_edist.pdf

New Mexico's Indicator-Based Information System [NMI-BIS]. (2022). Population demographic characteristics - Poverty among children under age 18. https://ibis.doh.nm.gov/indicator/summary/PopDemoChildPov.html#:~:text=The%20percentage%20of%20children%20in,2017%20now%20stands%20at%2025.9%25

Pabis, M., Wronska, I., Slusarska, B., & Cuber, T. (2011). Pediatric nurses' identification of violence against children. *Journal of Advanced Nursing, 67*(2), 384–393. https://doi.org/10.1111/j.1365-2648.2010.05473.x

Paine, M. L., & Hansen, D. J. (2002). Factors influencing children to self-disclose sexual abuse. *Clinical Psychology Review, 22*(2), 271–295. https://doi.org/10.1016/s0272-7358(01)00091-5

Paulhus, D. L. (1984). Two-component models of socially desirable responding. *Journal of personality and Social Psychology, 46* (3), 598-609. https://psycnet.apa.org/doiLanding?doi=10.1037%2F0022-3514.46.3.598

Pallant, J. (2016). *SPSS Survival Manual: A Step-by-Step guide to Data Analysis using SPSS* (6th ed.). Open University Press; WorldCat.org.

Pekarsky, A. D. (2020). *Overview of Child Maltreatment—Pediatrics*. Merck Manuals Professional Edition. https://www.merckmanuals.com/professional/pediatrics/child-maltreatment/overview-of-child-maltreatment

Pereznieto, P., Montes, A., Langston, L., & Routier, S. (2014). *The costs and economic impact of violence*. https://childfundalliance.org/wp-content/uploads/2014/10/ODI-Policy-Brief.-The-cost-and-economic-impact-of-violence-against-children.pdf

Petersen, A. C., Joseph, J., Feit, M., (Eds). (2014). Child abuse and neglect policy. In *New Directions in Child Abuse and Neglect Research*. *National Academies Press (US).* https://www.ncbi.nlm.nih.gov/books/NBK195993/

Peterson, C., Florence, C., & Klevens, J. (2018). The economic burden of child maltreatment in the United States, 2015. *Child Abuse & Neglect*, *86*, 178–183. https://doi.org/10.1016/j.chiabu.2018.09.018

Pinheiro, P. S. (2006). *World report on violence against children*. https://calio.dspacedirect.org/handle/11212/1031

Poss, J. E. (2001). Developing a new model for cross-cultural research: Synthesizing the Health Belief Model and the Theory of Reasoned Action. *Advances in Nursing Science*, *23*(4), 1–15. WorldCat.org.

Putnam-Hornstein, E., Cederbaum, J. A., King, B., Eastman, A. L., & Trickett, P. K. (2015). A population-level and longitudinal study of adolescent mothers and intergenerational maltreatment. *American Journal of Epidemiology*, *181*(7), 496–503. https://doi.org/10.1093/aje/kwu321

Qualtrics [XM]. 2022. About branch logic. Author. https://www.qualtrics.com/support/survey-platform/survey-module/survey-flow/standard-elements/branch-logic/#Introduction

Raman, 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

Roberton, T., Carter, E. D., Chou, V. B., Stegmuller, A. R., Jackson, B. D., Tam, Y., Sawadogo-Lewis, T., & Walker, N. (2020). Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: A modelling study. *The Lancet Global Health*, *8*(7), e901–e908. https://doi.org/10.1016/S2214-109X(20)30229-1

Rogers, A., & Nurse, S. (2019). Child protection in the neonatal unit. *Journal of Neonatal Nursing*, *25*(2), 99–101. https://doi.org/10.1016/j.jnn.2018.09.007

Rolim, A. C. A., Moreira, G. A. R., Gondim, S. M. M., Paz, S. da S., & Vieira, L. J. E. de S. (2014). Factors associated with reporting of abuse against children and adolescents by nurses within primary health care. *Revista Latino-Americana de enfermagem*, *22*(6), 1048–1055. doi: 10.1590/0104-1169.0050.2515

Rosenstock, I. M. (1960). What research in motivation suggests for public health. *American Journal of Public Health and the Nation's Health*, *50*(3 Pt. 1), 295–302. doi: 10.2105/ajph.50.3_pt_1.295

Rosenstock, I. M. (1966). Why people use health services. *The Milbank Memorial Fund Quarterly*, *44*(3), 94–127.

Rosenstock I. M. (1974). Historical origins of the Health Belief Model. *Health Education Monographs*, 2(4), 328–335. https://doi.org/10.1177/1090198174002004

Rosenstock, I. M. (2005). Why people use health services. *Milbank Quarterly*, *83*(4). https://doi.org/10.1111/j.1468-0009.2005.00425.x

Rural Health Information Hub. (2021). *What is rural?* https://www.ruralhealthinfo.org/topics/telehealth#usage

Rural Health Information Hub. (2023a). *Choosing rural definitions: Implications for health policy.* https://www.ruralhealthinfo.org/resources/1976

Rural Health Information Hub. (2023b). *New Mexico*. https://www.ruralhealthinfo.org/states/new-mexico

Rural Health Information Hub. (2023c). *Rural data explorer—County metropolitan classification/NM*. https://www.ruralhealthinfo.org/data-explorer?id=191&state=NM

Saleh, A., & Bista, K. (2017). Examining factors impacting online survey response rates in educational research: Perceptions of graduate students. *Journal of Multi-Disciplinary Evaluation*. https://www.semanticscholar.org/paper/Examining-Factors-Impacting-Online-Survey-Response-Saleh-Bista/c54877cc723191bec3caa830396b797158526fcd

Sathiadas, M. G., Viswalingam, A., & Vijayaratnam, K. (2018). Child abuse and neglect in the Jaffna district of Sri Lankaâ: A study on knowledge attitude practices and behavior of health care professionals. *BMC Pediatrics*, *18*(1), N.PAG–N.PAG. https://doi.org/10.1186/s12887-018-1138-3

Santhosh, K. R. (2016). A review on the perpetrators of child abuse. *Review of Social Sciences*, *1*(3), 45–52. https://doi.org/10.18533/rss.v1i3.25

Sax, L. J., Gilmartin, S. K., & Bryant, A. N. (2003). Assessing response rates and nonresponse bias in web and paper surveys. *Research in Higher Education*, *44*(4), 409–32.

Schaefer, D., & Dillman, D. (1998). Development of a standard e-mail methodology: Results of an experiment. *Public Opinion Quarterly*, *62*(3), 378–397. https://doi.org/10.1086/29785

Schols, M. W. A., de Ruiter, C., & Öry, F. G. (2013). How do public child healthcare professionals and primary school teachers identify and handle child abuse cases?

A qualitative study. *BMC Public Health*, *13*, 807. https://doi.org/10.1186/1471-2458-13-807

Sciamanna, J. (2020). Series finds that no state follows all of CAPTA requirements. *Child Welfare League of America.* https://www.cwla.org/series-finds-that-no-state-follows-all-of-capta-requirements/#:~:text=On%20December%2013%2C%20the%20Boston,and%20Treatment%20Act%20(CAPTA).

Sebastian, A. (2014). *Assessing pediatric nurses' knowledge and comfort level with recognition and reporting of child abuse*. [DNP Project]. https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1012&context=dnp_etds

Seddighi, H., Salmani, I., Javadi, M. H., & Seddighi, S. (2019). Child abuse in natural disasters and conflicts: A systematic review. *Trauma, Violence & Abuse, 22*(1). https://doi.org/10.1177/1524838019835973

Sedlak, A. J., Mettenburg, J., Basena, M., Petta, I., McPherson, K., Greene, A., & Li, S. (2010). *Fourth national incidence study of child abuse and neglect (NIS-4): Report to Congress*. Office of Planning, Research & Evaluation | ACF. https://www.acf.hhs.gov/opre/resource/fourth-national-incidence-study-of-child-abuse-and-neglect-nis-4-report-to

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Wadsworth Cengage Learning; WorldCat.org. http://catdir.loc.gov/catdir/enhancements/fy1105/2001131551-t.html

Sidpra, J., Abomeli, D., Hameed, B., Baker, J., & Mankad, K. (2020). Rise in the incidence of abusive head trauma during the COVID-19 pandemic. *Archives of Disease in Childhood*. https://doi.org/10.1136/archdischild-2020-319872

Siedlecki, S. L. (2020). Understanding descriptive research designs and methods. *Clinical Nurse Specialist, 34*(1), 8–12. https://doi.org/10.1097/NUR.0000000000000493

Sigad, L. I., Beker, G., Lev-Wiesel, R., & Eisikovits, Z. (2019). "Alone with our interpretations": Uncertainty in child abuse intervention among healthcare professionals. *Children and Youth Services Review, 100,* 206–213. https://doi.org/10.1016/j. childyouth.2019.02.027

Spencer N., Devereux, E., Wallace, A., Sundrum, R., Shenoy, M., Bacchus, C., & Logan, S. (2005). Disabling conditions and registration for child abuse and neglect: A population-based study. *Pediatrics*, *116*(3), 609–613. https://doi.org/10.1542/peds.2004-1882

Sullivan, G. M., & Feinn, R. (2012). Using effect size—Or why the p value is not enough. *Journal of Graduate Medical Education*, *4*(3), 279–282. https://doi.org/10.4300/JGME-D-12-00156.1

TexProtects. (2018). *Parental substance use in Child Welfare System*. https://capitol.texas.gov/tlodocs/85R/handouts/C4102018080909001/6e5d0631-3906-465d-afff-210491735f32.PDF

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

Together for Girls. (2017). *Violence against children.* Author. https://www.togetherforgirls.org/violence-children-surveys/

Toledo, D., Aerny, N., Soldevila, N., Baricot, M., Godoy, P., Castilla, J., García-Gutierrez, S., Torner, N., Astray, J., Mayoral, J. M., Tamames, S., González-Candelas, F., Martín, V., Díaz, J., Domíguez, A., & Workers, the C. W. G. for the S. on I. V. in P. H. C. (2015). Managing an online survey about influenza vaccination in primary healthcare workers. *International Journal of Environmental Research and Public Health*, *12*(1), 541. https://doi.org/10.3390/ijerph120100541

Tucker, M. C., & Rodriguez, C. M. (2014). Family dysfunction and social isolation as moderators between stress and child physical abuse risk. *Journal of Family Violence*, *29*(2), 175–186. https://doi.org/10.1007/s10896-013-9567-0

UNICEF. (2015). *Violent deaths*. https://data.unicef.org/topic/child-protection/violence/violent-deaths/#:~:text=Every%207%20minutes%2C%20somewhere%20in,adolescents%20aged%2010%20to%2014

UNICEF. (2020a). *Children living in monetary households and COVID-19.* https://data.unicef.org/resources/children-in-monetary-poor-households-and-covid-19/

UNICEF. (2020b). *Research on the sexual exploitation of boys.* *https://data.unicef.org/resources/sexual-exploitation-boys-findings-ethical-considerations-methodological-challenges/*

UNICEF. (2023a). *Child labor*. https://data.unicef.org/topic/child-protection/child-labour/

UNICEF. (2023b). *Female genital mutilation.* https://data.unicef.org/topic/child-protection/female-genital-mutilation/#_ftnref1

UNICEF. (2023c). *Sexual violence*. https://data.unicef.org/topic/child-protection/violence/sexual-violence/#_ftn1

UNICEF. (2023d). *Violent discipline*. https://data.unicef.org/topic/child-protection/violence/violent-discipline/

UNICEF. (n.d.). *Child rights and why they matter*. https://www.unicef.org/child-rights-convention/child-rights-why-they-matter

United Nations Human Rights Office of the High Commissioner. (1990). *Convention on the Rights of the Child*. https://web.archive.org/web/20150113092120/http://www.ohchr.org/en/professionalinterest/pages/crc.aspx

University of New Mexico Health Sciences Center [UNMHSC]. (2021). *University of New Mexico Health Sciences Center, Clinical Translational Science Center: REDCap*. https://hsc.unm.edu/research/ctsc/informatics/red-cap-guidance.html

U.S. Agency for International Development [USAID]. (2020). *Child health*. Author. https://www.usaid.gov/global-health/health-areas/maternal-and-child-health/technical-areas/child-health

U.S. Census Bureau. (2019). *Quick facts: New Mexico; United States.* https://www.census.gov/quickfacts/fact/table/NM,US/PST045219

U.S. Bureau of Labor Statistics. (2020). *New Mexico—May 2019 OES state occupational employment and wage estimates*. https://www.bls.gov/oes/current/oes_nm.htm

U.S. Census Bureau. (2020). *How the Census Bureau measures poverty*. https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html

U.S. Citizenship and Immigration Services. (2020). *Child abuse registries in foreign countries and geographic entities.* Author. https://www.uscis.gov/adoption/suitability-and-home-study-information/child-abuse-registries-in-foreign-countries-and-geographic-entities

U.S. Department of Agriculture [USDA] (2021). *Rural poverty & well-being: U.S. county poverty rates, 2015-2019 average*. https://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being/

U.S. Department of Health and Human Services [USDHHS], Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2015). *Child maltreatment 2014*. Children's Bureau | ACF. https://www.acf.hhs.gov/sites/default/files/documents/cb/cm2014.pdf

U.S. Department of Health and Human Services [USDHHS], Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2016). *Child maltreatment 2015*. Children's Bureau | ACF. https://www.acf.hhs.gov/sites/default/files/documents/cb/cm2016.pdf

U.S. Department of Health and Human Services [USDHHS], Administration for Children and Families, Administration on Children, Youth and Families, Children's

Bureau. (2017). *Child maltreatment 2016*. Children's Bureau | ACF. https://www.acf.hhs.gov/cb/report/child-maltreatment-2016

U.S. Department of Health and Human Services [USDHHS], Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2018). *Child maltreatment 2016*. Children's Bureau | ACF. https://www.acf.hhs.gov/cb/report/child-maltreatment-2016

U.S. Department of Health and Human Services [USDHHS], Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2019). *Child maltreatment 2017*. Children's Bureau | ACF. https://www.acf.hhs.gov/cb/report/child-maltreatment-2017

U.S. Department of Health and Human Services [USDHHS], Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2020). *Child maltreatment 2018*. Children's Bureau | ACF. https://www.acf.hhs.gov/cb/resource/child-maltreatment-2018

U.S. Department of Health and Human Services [USDHHS], Administration for Children and Families, Administration on Children, Youth and Families. (2021). *Child Maltreatment 2019.* Children's Bureau | ACF. https://www.acf.hhs.gov/sites/default/files/documents/cb/cm2019.pdf

U.S. Department of Health and Human Services [USDHHS], Administration for Children and Families, Administration on Children, Youth and Families. (2022). *Child Maltreatment 2020.* Children's Bureau | ACF. https://www.acf.hhs.gov/cb/report/child-maltreatment-2021

U.S. Department of State. (n.d.). *The United States President's Emergency Plan for AIDS Relief—United States Department of State*. https://www.state.gov/pepfar/

Van Horne, B. S., Moffitt, K. B., Canfield, M. A., Case, A. P., Greeley, C. S., Morgan, R., & Mitchell, L. E. (2015). Maltreatment of children under age 2 with specific birth defects: A population-based study. *Pediatrics*, *136*(6), e1504–e1512. https://doi.org/10.1542/peds.2015-1274

Vercruyssen, A., Roose, H., Carton, A., & Putte, B. V. D. (2014). The effect of busyness on survey participation: Being too busy or feeling too busy to cooperate? *International Journal of Social Research Methodology*, *17*(4), 357–371. https://doi.org/10.1080/13645579.2013.799255

Wasserstein, R. L., & Lazar, N. A. (2016). The ASA statement on *p*-values: Context, process, and purpose. *The American Statistician*, *70*(2), 129–133. https://doi.org/10.1080/00031305.2016.1154108

Wekerle, C. (2013). Resilience in the context of child maltreatment: Connections to the practice of mandatory reporting. *Child Abuse & Neglect*, *37*(2), 93–101. https://doi.org/10.1016/j.chiabu.2012.11.005

Wilson, I. A. & Lee, J. (2021). Barriers and facilitators associated with child abuse and neglect reporting among childcare professionals: A systematic review. *Journal of Psychosocial Nursing and Mental Health Services*, *59*(6), 14–22. https://doi.org/10.3928/02793695-20210324-01

World Bank. (2020). *World Bank Group—International development, poverty, & sustainability*. https://www.worldbank.org/

World Health Organization [WHO]. (2022). *Violence against children*. Author. https://www.who.int/news-room/fact-sheets/detail/violence-against-children

World Health Organization [WHO]. (2023). *Score global report 2020: A visual summary.* https://www.who.int/data/stories/score-global-report-2020---a-visual-summary

Wu, M.-J., Zhao, K., & Fils-Aime, F. (2022). Response rates of online surveys in published research: A meta-analysis. *Computers in Human Behavior Reports*, *7*, 100206. https://doi.org/10.1016/j.chbr.2022.100206

Zheng, J. (2023). How many days does it take respondents to respond to your survey? *Resources: Survey Monkey.com: Curiosity at Work.* https://www.surveymonkey.com/curiosity/time-to-respond/