# IMPLEMENTING CHILD MALTREATMENT PREVENTION INTO THE CLINICAL SETTING: AN ON-LINE LEARNING TUTORIAL FOR ADVANCED PRACTICE NURSES

by

Vanessa Velez



A DNP Project Submitted to the Faculty of the

COLLEGE OF NURSING

In Partial Fulfillment of the Requirements
For the Degree of

DOCTOR OF NURSING PRACTICE

In the Graduate College

THE UNIVERSITY OF ARIZONA

2 0 1 5

THE UNIVERSITY OF ARIZONA
GRADUATE COLLEGE

As members of the DNP Project Committee, we certify that we have read the DNP Project prepared by Vanessa Velez entitled "Implementing Child Maltreatment Prevention in the Clinical Setting: An On-line Learning Tutorial for Advanced Practice Nurses" and recommend that it be accepted as fulfilling the DNP Project requirement for the Degree of Doctor of Nursing Practice.

_____ Date: 04/16/2015
Lorri M. Phipps, DNP, RN, CPNP

_____ Date: 04/16/2015
Gloanna J. Peek, PhD, RN, CPNP

_____ Date: 04/16/2015
Sheila M. Gephart, PhD, RN

Final approval and acceptance of this DNP Project is contingent upon the candidate's submission of the final copies of the DNP Project to the Graduate College.

I hereby certify that I have read this DNP Project prepared under my direction and recommend that it be accepted as fulfilling the DNP Project requirement.

_____ Date: 04/16/2015
DNP Project Director: Lorri M. Phipps, DNP, RN, CPNP

STATEMENT BY AUTHOR

This DNP Project has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Brief quotations from this DNP Project are allowable without special permission, provided that accurate acknowledgment of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the copyright holder

SIGNED: __Vanessa Velez_____

# ACKNOWLEDGMENTS

I would like to express my sincere and heartfelt gratitude to Dr. Lorri Phipps for the immeasurable amount of support, guidance, and encouragement she has provided throughout this project. Dr. Phipps' selflessly provided me with the necessary guidance and continued support and her mentorship has been a true blessing. Thank you for always believing in me! I would also like to thank my committee member Dr. Gloanna Peek, who has given me support throughout my academic career, and Dr. Sheila Gephart, who has provided me with assistance and encouragement to pursue my academic goal.

A special thank you to Amanda Gluski and Michael Clark for their assistance, guidance, and support with this project. I would also like to thank my classmates in the DNP program, together we succeeded and I couldn't have done it without all of you!

I would also like to extend my deepest gratitude to my family. You gave me the opportunity to follow my dreams and the love to make them a reality. To my husband, Leith, you selflessly provided for our family so that I could pursue my dreams and were my rock throughout this journey. You are the love of my life and I couldn't have done this without you! To my beautiful son, Lucca, you bring sunshine into my life every day and are always my inspiration to be better and do better. I feel so honored to be your mama! To my mother, Lourdes, you always taught me to follow my dreams and go after what I want. It is because of you that I am the person I am today and I thank you from the bottom of my heart! To my big brother, Richard, you have been an inspiration to me. I am where I'm at today because of you! You always encourage me, you motivate me, and you set me straight when it is needed. Thank you is not enough; no words could ever express how grateful I am to have you as my big brother. I love you all very much!

# DEDICATION

This project is dedicated to all the children who have fallen into the hands of abuse. May they find peace in their hearts, protection in their lives, and love and happiness in their journey.

# TABLE OF CONTENTS

TABLE OF CONTENTS – *Continued*

# LIST OF FIGURES

# LIST OF TABLES

# ABSTRACT

Child maltreatment in the pediatric population is becoming more prevalent in today's society and is being seen more frequently in the primary care setting. Universal prevention of child maltreatment plays a significant role in nursing practice. The American Academy of Pediatrics set forth guidance for pediatricians to practice when assessing a pediatric patient for maltreatment; however, such guidance is not available for advanced practice nurses and little to no training is provided in the clinical setting. In order to accurately identify the child who is a suspected victim of maltreatment, advanced practice nurses must possess the ability to assess, evaluate, refer, investigate, and provide appropriate outcomes for the child and his/her families. The purpose of this Doctor of Nursing (DNP) project was to create an on-line learning tutorial for advanced practice nurses regarding the prevention of child maltreatment in the clinical setting. The goal of the on-line learning tutorial was to address the crucial role advanced practice nurses have in the prevention of child maltreatment and promote the well-being and safety of children. This project used a quasi-experimental, one-group, pre-test/post-test design to determine the effectiveness of an on-line learning tutorial related to child maltreatment. The pre-test and post-test would determine the inferences on the effect of the intervention by examining the differences in the pre- and post-test results. This study provided significant evidence demonstrating that an on-line learning tutorial on the implementation of child maltreatment prevention in the clinical setting was an effective means for increasing knowledge of nurse practitioner graduate students on child maltreatment. The results demonstrated a significant increase in the test scores of the participants after viewing the on-line learning tutorial, indicating the tutorial was effective.

# CHAPTER I: INTRODUCTION AND SIGNIFICANCE OF THE PROBLEM

Child maltreatment in the pediatric population is becoming more prevalent in today's society and is being seen more frequently in the primary care setting. It is essential for primary care providers, such as advanced practice nurses,' to assess for and acknowledge the signs and symptoms of child maltreatment during a clinical visit and to address the situation. Often times, "red flags" of child maltreatment are dismissed during the physical exam of a pediatric patient; therefore, being unreported or undocumented. Child maltreatment is defined as an act or failure to act which presents an imminent risk of serious harm to a child, or any recent act or failure to act on the part of a parent or caregiver which results in serious physical or emotional harm, sexual abuse exploitation, or death (Child Welfare Information Gateway, 2011b). Child maltreatment has been known to have significant long-term medical and mental health morbidity, placing the victim at a higher risk of developing a variety of behavioral and functional problems (Kellogg, 2007).

Primary care providers often provide care for children with suspected abuse; however, few are involved in primary and secondary prevention of child abuse and maltreatment (Krugman, Lane, & Walsh, 2007). Advanced practice nurses can provide primary prevention in the clinical setting with a goal to protect healthy individuals from experiencing an injury, thus aiding in the reduction of child abuse cases. Advanced practice nurses who are aware of how to screen and assess for suspected child maltreatment during a physical exam would be in a better position to help reduce the risk of abuse and maltreatment.

## Significance of Problem

Child maltreatment can affect children of all races, socioeconomic status, gender, ethnicity, and background. The statistics on child maltreatment in the United States amongst the

pediatric population was obtained by those who were subjects of reports and the characteristics of individuals who were found to have been victims of abuse and neglect (Children's Bureau, 2013). For fiscal year 2012, the United States National Child Abuse and Neglect Data System (NCANDS) estimated nationally 686,000 victims of abuse and neglect, which resulted in a rate of 9.2 victims per 1,000 children in the population (Children's Bureau, 2013). More than 3.8 million children were the subject of at least one report, one-fifth of which were found to be victims with dispositions of substantiated (17.7%), indicated (0.9%), and alternative response victims (0.5%) (Children's Bureau, 2013). The U.S. Department of Health and Human Services, Administration for Children and Families, Children's Bureau (2013), estimated 1,640 children died from abuse and neglect in the United States in 2012.

More than one-quarter (26.8%) of victims were younger than three years; 20% of victims were in the age group of 3-5 years (Children's Bureau, 2013). Victims in the age group of <1 to 2 years had the largest percentage of all maltreatment types, with the exception of sexual abuse. Of the victimized children who were sexually abused, 26.3% were in the age gathering of 12-14 years and one-third (33.8%) were less than nine years. Medical neglect made up for one-third (33.2%) of cases and were younger than three years, which was approximately twice as large as the next age group (3-5 years). Overall, more than 75% of victimized children were neglected, 18.3% were physically mishandled, and 9.3% were sexually abused (Children's Bureau, 2013). The risk of physical abuse increases with age, but abuse leading to death and serious abusive injuries are more common among children and infants younger than two years (Kellogg, 2007).

It has been known that both male and female children experience similar rates of physical abuse; thus, gender did not play a major role in the number of incidence of child abuse and neglect for the fiscal year 2012. The percentage of child victims were similar for both boys

(48.7%) and girls (48.3%) (Children's Bureau, 2013). Three races of ethnicity were the majority of victims in 2012, which comprised White (44%), Hispanic (21.8%), and African-American (21%) (Children's Bureau, 2013). Socioeconomic status also plays a role in child abuse and maltreatment. Households with annual incomes of less than $15,000 per year are three times more likely to have children who suffer from fatal injuries, seven times the number of serious injuries, and five times more likely to have moderate injuries inflicted by a caregiver, compared to children living in homes with an annual income greater than $15,000 per year (Kellogg, 2007).

## Review of Literature

All literature for this Doctor of Nursing Practice (DNP) project were obtained using search engines from scholarly journals found at CINAHL Plus, Cochrane Library, Google Scholar, and MEDLINE: PubMed. The American Academy of Pediatrics search engine was also utilized. Key words used were: child abuse, child maltreatment, pediatrics, prevention, sexual abuse, physical abuse, emotional abuse, and neglect. The timeframe of the scholarly journal articles used ranged from the year 2000 to present.

## Child Abuse Prevention and Treatment Act

Child maltreatment may have a detrimental effect on a child's well-being. Such abuse can have a negative outcome and long-term effect on their emotional, physical, and behavioral welfare. Individuals who experienced abuse and/or maltreatment during their childhood are more inclined to have an array of behavioral and emotional problems, including physical aggressive behavior, conduct disorders, decreased cognitive function, and poor school performance (Kellogg, 2007). Child maltreatment has been an issue and concern for several decades, yet to date there are still several cases of abuse that go unreported. The Child Abuse Prevention and Treatment Act (CAPTA) is a key piece of legislation that was set in place to help protect

children from abuse and neglect. CAPTA was signed into law on January 31, 1974 and was reauthorized on December 20, 2010. CAPTA provides Federal subsidies to states for prevention, assessment, investigation, prosecution, and treatment activities of child abuse and maltreatment (Child Welfare Information Gateway, 2010). Grants to public agencies and nonprofit organizations, including Indian Tribes and Tribal organizations are provided by CAPTA, for demonstration programs and projects. During the reauthorization of CAPTA in 2010, congressional findings discovered African-American children, American Indian children, Alaska native children, and children of multiple races and ethnicities were among the highest rates of child abuse and neglect (Child Welfare Information Gateway, 2010).

A comprehensive approach with the integration of social services, legal, and health care services to include mental health, domestic violence services, education and community-based organizations are required by the Child Abuse Prevention and Treatment Act to address the problems associated with child abuse and neglect. As primary care providers, the need for properly trained staff, such as advanced practice nurses, need to carry out their child protection duties and ensure any child exhibiting signs and symptoms of child abuse or any suspicion of child abuse and neglect does not go undocumented or unreported. Primary care providers ought to be appropriately prepared to perceive the conveyance of ethnic, cultural, religious convictions and conventions that may affect child rearing patterns, while not permitting the distinctions in those convictions and customs to enable abuse or neglect (Child Welfare Information Gateway, 2010).

## Financial Burden

The failure to facilitate and exhaustively forestall and treat child abuse and neglect undermines the fate of thousands of children; this brings about an expense to the country of billions of dollars in substantial consumptions, and critical intangible expenses. With an increase in the number of child abuse and neglect cases, the amount of funding that is needed to treat these children is on a rise. The average estimated lifetime cost per victim of nonfatal child maltreatment in 2010 was $210,012, including $32,648 in childhood health care costs; $10, 530 in adult medical costs (Fang, Brown, Florence, & Mercy, 2012). In cases where the child does not survive the abuse, the average lifetime costs per death was an estimated $1,272,900, which includes $14,100 in medical costs and $1,258,800 in productivity losses (Fang et al., 2012). In a survey on child abuse and neglect conducted by the National Association of Children's Hospitals and Related Institutions (NACHRI), 92% of children's hospitals indicated they subsidize their programs and reported contributing anywhere from $26,000 to $143, 000 to meet budget shortfalls in order to care for and treat children with abuse and maltreatment (Hill, 2004).

## Child Maltreatment

Maltreatment of a child includes all types of abuse and neglect of an individual under the age of 18 by a parent, caregiver, or another person in a custodial role such as a coach or teacher (Centers for Disease Control and Prevention [CDC], 2014). Child maltreatment is a public health concern and needs to be addressed. According to the Centers for Disease Control and Prevention (CDC, 2014), child protective services in 2012 found an estimated 686,000 children were victims of maltreatment. The total lifetime financial burden of child maltreatment in the United States, which results from new cases (fatal and nonfatal), is approximately $124 billion (CDC, 2014).

Maltreatment towards a child can lead to the physical abuse and possibly be fatal if the actions and/or behavior of a parent and/or caretaker are not intervened.

Psychological and emotional maltreatment are also of great concern and are the most challenging and prevalent forms of child abuse and neglect (Hibbard, Barlow, & MacMillan, 2012). Acts of omission or commission are behaviors exhibited by a parent or caregiver towards a child. This type of maltreatment consists of verbal or nonverbal, active or passive, and with or without intent to harm a child. Psychological and emotional maltreatment can have a negative impact on the child and affect his/her cognitive, social, emotional, and/or physical development (Hibbard et.al, 2012). When a child is psychologically maltreated, the offender may spin (belittling, degrading, or shaming), terrorize (commit life threatening acts, make child feel unsafe), isolate (confining, placing limitations to freedom of movement), ignore or impair the socialization of the child (Kairys & Johnson, 2002). These factors would be critical for the health care provider to notice during the clinical visit and investigate further with the child and parent or caregiver.

**Risk Factors**

Maltreatment is often times associated with risk factors which are specifically pertinent to the child and relevant to the parent, the community, and the environment, which in turn can create an obstructive pattern for abuse and/or neglect (Flaherty & Stirling, 2010). There are several risk factors associated with the maltreatment of a child. Premature infants at times are at risk for maltreatment from a parent and/or caregiver. These children are potentially seen as less attractive and more demanding by their parent(s) or caregiver, coupled with the prolonged separating of the infant from his/her parents by being hospitalized, contributing to the risk of maltreatment. Having a child with special needs or required special care, which include an

increase number of special therapy or medical visits, is a risk associated with maltreatment (Flaherty & Stirling, 2010). An unplanned or unwanted pregnancy also places the infant or child at greater risk. The financial burden of an unplanned pregnancy or unwanted child can create a major strain on the family, thus increasing the risk of maltreatment towards an infant or child.

Parental factors also play a major role in the association with increased maltreatment in children. Such factors include: parent's ability to cope with stress, poor impulse control, tendency to easily lash out in response to stress, substance use and alcohol abuse (Flaherty & Stirling, 2010). Another risk factor associated with maltreatment of a child is the lack of knowledge about child-rearing. This may increase the level of frustration for the parent and/or caregiver. A lack of social support, poverty, unemployment, low maternal education, and single parenting are other risk factors associated with maltreatment of a child.

## Child Abuse

Child abuse is a form of child maltreatment and can affect children of all ages, races, ethnicities and backgrounds. Child abuse does not discriminate and is a social concern and affects the health and well-being of children in the United States. Approximately six million children have been reported to child protective services with suspected child abuse and many more go undetected (Institute of Medicine & National Research Council, 2013). Physical signs and behavioral symptoms can be used to help detect potential victims of abuse. Unexplained injuries are physical indicators of abuse and make it easier to identify a potential victim, but it is the injuries that are not visible that makes child abuse hard to detect (Reilly & Martin, 2013).

The child's behavior can also be an important sign of child abuse. Long-term effects of child abuse can affect one's psychological health to include depression, post-traumatic stress disorder, and heightened anxiety (Stirling & Amaya-Jackson, 2008). Depression is a serious

medical condition that can interfere with one's everyday life. Symptoms of depression include, but are not limited to sadness, loss of interest, difficulty sleeping, feeling of worthlessness, and thoughts of death or suicide. Post-traumatic stress disorder is the result of a traumatic event that occurred in one's life and can often begin years later from the actual time of occurrence. Symptoms of post-traumatic stress disorder include reliving the ordeal through thoughts and memories of the traumatic event, avoiding people, places, and thoughts; and may exhibit an increased arousal which could contribute to an increase in anxiety, causing irritability, outbursts of anger, and easily startled (Stirling & Amaya-Jackson, 2008). As primary care providers, it is imperative to consider the outcomes of past physical and emotional abuse for the child's continuous improvement and adjustment when analyzing an assortment of present long-term behavior issues. Child abuse is something that can be and should be prevented.

**Risk Factors**

Parents and/or caregivers who are: 1) suffering from depression, substance abuse or other mental health disorders, 2) of early child bearing age, and/or 3) exhibiting antisocial personality disorders are at increased risk of being abusive to children (Institute of Medicine & National Research Council, 2013). Other contributing risk factors are contextual and include single-parent households, low socioeconomic status, stressful environment, violence, and social isolation.

## Neglect

Neglect can arise when a parent or caregiver fails to meet the basic needs of the child, such as food, clothing, education, adequate supervision, safe shelter, and access to medical care. It is estimated that more than three-quarters of all abuse cases in the United States are classified as neglect (Institute of Medicine & National Research Council, 2013). A child relies on his/her parent and/or caregiver to provide him/her with the daily necessities to maintain good hygiene,

adequate nutrition and development, and overall good health. The medical needs of a child are also essential to his/her well-being; however, health care professionals are being confronted in practice by children whose medical needs are being neglected (Jenny, 2007). Examples of neglect seen in children are medical neglect and failure to thrive. Medical neglect is said to account for 2.3% of all confirmed cases of child maltreatment (Jenny, 2007). There are two forms of medical neglect seen in children: 1) failure to regard obvious signs of serious illness; or, 2) failure to follow the instructions provided by a physician or other clinician once medical treatment has been obtained. Failure to thrive seen in infants and children as a result of parental or caregiver neglect raises concern for child maltreatment (Jenny, 2007).

Although not excusable, understanding what the barriers to not seeking medical care for the child can help guide health care professionals towards the direction of providing assistance and resources to families in need. Lack of health insurance can deter a parent or caregiver from obtaining medical care for their child due to the lack of financial resources. The possibility of incurring a large bill for the doctor's visit may result in not seeking medical attention. Children in the United States who do not have health insurance are approximately between 8.7 and 11.1 million (Jenny, 2007). Parents and/or caregivers may not be aware of the signs and symptoms associated with major illness; therefore not seeking medical attention in a timely manner. The lack of awareness, knowledge and skills may lead a parent and/or caregiver from understanding the severity of seeking medical attention or treatment.

Failure to thrive is most commonly seen in infants and children. Failure to thrive is an altogether delayed discontinuance of suitable weight addition contrasted and perceived standards for age and gender orientation. Inadequate nutrition and disturbed social interaction is said to contribute to delayed development, poor weight gain, and abnormal behavior; thus can result as a

consequence of child neglect (Block & Krebs, 2005). Associated risk factors related to failure to thrive are similar to those seen in medical neglect. As primary care providers, when considering neglect, a close assessment of risk factors in the context of each family's unique situation should be determined (Block & Krebs, 2005).

### Risk Factors

As primary care providers, it is important to address reasons for medical neglect and assess for the underlying issue. Economic hardship, lack of access to care, family chaos and disorganization, lack of awareness, knowledge, or skill, and lack of trust in primary care professionals are all risk factors associated with medical neglect. Other risk factors to consider include impairment of caregivers, caregiver's belief system, and the child's attitude and behavior towards primary care providers (Jenny, 2007).

## Sexual Abuse

Sexual abuse of a child and adolescent is difficult to determine because the prevalence of such abuse often times goes unreported by the victim. It is essential for health care providers to have the ability to respond to and evaluate the child who presents into the clinical setting with signs and symptoms of sexual abuse. Child sexual abuse can occur at home or out of the home, by a parent, caregiver, or public figure such as a teacher or coach. In 2006, The Fourth National Incidence Study on child abuse and neglect estimated that 1.8 children per 1,000 or a total of 135,300 children were victims of sexual abuse in the United States (Jenny & Crawford-Jakubiak, 2013).

Sexual abuse can also lead to an array of disorders that may have a continuous effect into adulthood, such as an increased risk of developing post-traumatic stress disorder, anxiety disorders, depression, low self-esteem, and social phobias. Children who are exposed to sexual

abuse are at an increased risk of mental illness and are more likely to need hospitalizations for treatment of such disorders (Jenny & Crawford-Jakubiak, 2013). In adulthood, victims of child sexual abuse are at a higher risk of developing obesity, intimacy problems, and developing chronic illnesses such as irritable bowel syndrome and fibromyalgia. They are also more susceptible of having sexually transmitted infections and including human immunodeficiency virus (HIV) (Jenny & Crawford-Jakubiak, 2013).

**Risk Factors**

Several risk factors are associated with child sexual abuse and occur across all socioeconomic and ethnic groups. There are certain risk factors that have been identified that increase the risk of child sexual abuse. Gender plays a significant role. Girls are 2.5 to 3 times more likely than boys to be victims of sexual abuse (Putnam, 2003). Age is another risk factor. The risk for child sexual abuse rises with age with approximately 10% of victims being between the ages of 0 to 3 years and the percentage nearly triples (28.4%) between the ages of 4 and 7 years (Putnam, 2003). Children between the ages of 8 to 11 years account for a quarter (25.5%) of the cases and children 12 years and older account for the remaining third (35.9%) (Putnam, 2003). Another risk factor associated with child sexual abuse is physical disabilities. Children who are blind, deaf, and have severe developmental and cognitive delays are associated with increased risk of sexual abuse (Putnam, 2003). A significant risk factor associated with child sexual abuse is family composition. The absence of one or both parents places the child at greater risk for sexual abuse. Parental impairment, maternal alcoholism, external maternal absences, parental substance abuse, and social isolation are all risk factors increasing the risk of child sexual abuse.

## Purpose

The purpose of this Doctor of Nursing (DNP) project was to create an educational on-line learning tutorial for advanced practice nurses regarding the prevention of child maltreatment in the clinical setting. The goal of the on-line learning tutorial was to address the crucial role advanced practice nurses have in the prevention of child maltreatment and promote the well-being and safety of children. The role of the pediatrician is clearly stated as having the ability to recognize and respond to signs and symptoms of child abuse and maltreatment and follow specific guidelines to the treatment of a child with suspected abuse; however, no guidelines are set in place for advanced practice nurses (Flaherty & Stirling, 2010). The assessment and detection of child abuse and maltreatment is lightly addressed in the academia setting and may be taught in the clinical setting if one's preceptor is familiar with the subject. Through the use of an on-line learning tutorial, doctoral students enrolled in an advanced practice nursing program, would gain the knowledge to recognize risk factors, provide a thorough medical assessment, be able to identify suspicious injuries, and understand the process and implementation of reporting child maltreatment to the appropriate authorities. The on-line learning tutorial would allow advanced practice nurses to help in the prevention and avoidance of further abusive trauma in infants and children; thus decreasing the number of reported child maltreatment cases.

## Specific Aims

Specific aims of this project include:

1) to address the need for implementation of a child maltreatment prevention in the clinical setting,
2) to obtain the ability and knowledge for advanced practice nurses to identify risk factors and "red flags" associated with the child who is a suspected victim of abuse

and facilitate appropriate evaluation, referral, investigation, and outcome for these children and their families in the clinical setting,

3) to address the gaps of knowledge between the pediatrician and advanced practice nurses in assessing for child maltreatment, and
4) to implement the educational on-line learning tutorial for doctoral students and to educate them on the proper technique of assessment and evaluation of a child with suspected maltreatment.

## Significance to Advanced Practice Nursing

The role of the advanced practice nurse should include the prevention of maltreatment, detection of maltreatment, and the management of victims of abuse. In order to accurately identify the child who is a suspected victims of maltreatment, advanced practice nurses must possess the ability to assess, evaluate, refer, investigate, and provide appropriate outcomes for the child and his/her families (Kellogg, 2007). Universal prevention of child maltreatment has a significant role in nursing practice. Advanced practice nurses can aid in the prevention of maltreatment in children by obtaining the ability to assess not only the child, but assess the caregiver's strength and deficits and connect the family with community resources that will protect the dependent child before maltreatment occurs (Flaherty & Stirling, 2010).

The American Academy of Pediatrics (AAP) provides guidelines on the prevention of maltreatment for physicians to follow during the scheduled routine health care visit, such as well-child checks; however, such guidelines are not in place for advanced practice nurses. During the routine health care visit, the AAP recommends the clinician have sufficient opportunity to observe and assess the parent's child rearing practice at the same time when a child would be anticipated to initiate new and possibly challenging behaviors (Flaherty &

Stirling, 2010). Through the use of *Bright Futures* from the AAP, anticipatory guidance and prioritization of topics for discussion at each health supervision visit are implemented by the clinician. *Bright Futures* is a national health promotion and disease prevention initiative that addresses children's health needs in the context of family and community, and is implemented in the pediatric practice (American Academy of Pediatrics, n.d.).

Advanced practice nurses must have the ability to detect and diagnose child maltreatment. It is essential to have a nursing foundation that allows for advanced practice nurses to recognize suspicious injuries, conduct a careful and complete physical examination with judicious use of auxiliary tests, and consider whether the caregiver's explanation is supported by the characteristics of the injury or injuries and the child's developmental capabilities (Kellogg, 2007). Advanced practice nurses who conduct a thorough and detailed medical assessment, detection of suspicious injuries, and proper reporting of abuse can potentially prevent any further abusive trauma in infants and children.

## Guidance for Advanced Practice Nursing

The American Academy of Pediatrics set forth guidance for the pediatrician to practice when assessing a pediatric patient for maltreatment. Such guidance is not available for advanced practice nurses and little to no training is provided in the clinical setting. This guidance for the pediatrician can be implemented into the academic program and training of advanced practice nurses to prepare them for the possibility of examining and assessing a child with potential maltreatment, ability to acknowledge "red flags," and what action to take in the event this occurs in their clinic. During the routine well-child check visits, an advanced practice nurse must have the ability to obtain a thorough social history, initially and periodically, throughout the patient's childhood. Part of the assessment includes the use of a parent-screening tool which can be

obtained through *Bright Futures* (available at http://brightfuture.aap.org) and may be utilized to screen for risk factors and issues; recognize and expand on family qualities, strengths, and intervening elements; recognize and address parent's concerns; and strengthen compelling child rearing (Flaherty & Stirling, 2010).

Advanced practice nurses must retain the ability to recognize the dissatisfaction and outrages that may occur or accompany parenting, thus providing parents with anticipatory guidance about developmental stages that may be demanding or serve as a trigger for child maltreatment. For example, obtaining information on the amount or frequency their infant cries and how they cope with it can assist the advanced practice nurse with providing the parents or caregiver with insight into the infants behavior and teach alternative responses (Flaherty & Stirling, 2010). It can be difficult enough to care for a healthy child, but caring for a child with disabilities is even more challenging and can increase the vulnerability for abuse and neglect. Advanced practice nurses must be cognizant of this and look for signs of maltreatment. Validation of the parent's stresses can be provided by the advanced practice nurse and may provide him/her with information about respite care. Respite care allows someone else to care for the child with disabilities so that the parents or caregiver can take a break (Flaherty & Stirling, 2010).

The guidance for the pediatrician, which can be transferred to the guidance for advanced practice nurses, also includes the ability to be alert to signs and symptoms of parental intimate partner violence and postpartum depression. Many times parental intimate partner violence plays a significant role in the maltreatment of infants and children. Being aware of the signs and symptoms of parental intimate partner violence can help prevent the abuse and maltreatment; thus potentially breaking the cycle and providing parents with resources on how to seek help

and/or get out of an abuse relationship. Identifying and being familiar with appropriate community resources, and how to respond if a parent or caregiver reports intimate partner violence or depression is essential for advanced practice nurses to know.

Providing parents or caregivers with guidance on effective discipline is crucial and may aid in the prevention of child maltreatment. Encourage parents to use alternatives to corporal punishment, such as time out techniques and positive reinforcement (Flaherty & Stirling, 2010). Understanding normal sexual development is an important factor for parents to know and they should be counseled by advanced practice nurses on how to prevent sexual abuse. The American Academy of Pediatrics developed an educational toolkit that helps health care providers talk to parents and patients about sexual violence topics and provides them with educational material and other resources (available at: www.aap.org/pubserv/PSVpreview/start.html) (Flaherty & Stirling, 2010).

Advanced practice nurses must also possess the ability to recognize signs and symptoms of maltreatment and report suspected maltreatment to the appropriate authorities. Reporting maltreatment is critical and having an understanding of the proper procedure is essential. It is mandated that professionals report *suspected* child maltreatment to the appropriate government agency, such as child protective services or police agencies (Jenny & Crawford-Jakubiak, 2013).

## Definitions

- *Child Maltreatment*: is defined at the federal and state laws; at the state level child abuse and neglect may be defined in both civil and criminal statutes. At the federal level, the Child Abuse Prevention and Treatment Act (CAPTA) defines child maltreatment as: (a) any recent act or failure to act on the part of a parent or caregiver, which results in death, serious physical or emotional harm, sexual abuse

exploitation; or, (b) an act or failure to act which presents an imminent risk of serious harm (Child Welfare Information Gateway, 2011b).

- *Neglect*: the failure of a parent or caregiver who is responsible for the child to provide required nourishment, clothing, housing, medical care, or supervision to the extent that a child's well-being, security and health are exposed to harm (Child Welfare Information Gateway, 2011b).
- *Sexual Abuse*: CAPTA defines sexual abuse as: (a) the employment, use, persuasion, inducement, enticement, or coercion of any child to engage in, or assist any other person to engage in, any sexually explicit conduct or simulation of such conduct for the purpose of producing a visual depiction of such conduct; or, (b) the rape, and in cases of caretaker or interfamilial relationships, statutory rape, molestation, prostitution, or other form of sexual exploitation of children, or incest with children (Child Welfare Information Gateway, 2011b).
- *Physical Abuse*: any non-accidental physical harm to a child and can include, but is not limited to striking, kicking, burning, or biting the child, or any activity that brings about a physical debilitation of the child (Child Welfare Information Gateway, 2011b).
- *Psychological Maltreatment*: also known as emotional abuse is defined as injury to the psychological capacity or emotional stability of the child as evidence by an observable or substantial change in behavior, emotional response, or cognition, which is evidence by the child exhibiting anxiety, depression, withdrawal, or aggressive behavior (Child Welfare Information Gateway, 2011b). Psychological maltreatment is also defined as the repeated pattern of damaging interactions between parent(s) or

caregiver and the child that becomes typical of the relationship and occurs when a person conveys to a child that he or she is worthless, flawed, unloved, unwanted, endangered, or only of value in meeting another's needs (Kairys & Johnson, 2002).

- *Advanced Practice Nurses*: a registered nurse educated at the doctoral level and specific role and patient population who have acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice in the health care profession (Pulcini, Jelic, Gul, & Loke, 2010). Advanced practice nurses are prepared by education and certification to assess, diagnose, and manage patient problems, order tests, and prescribe medications (National Council of State Board of Nursing [NCSBN], 2012).

## Conclusion

Efforts to prevent child maltreatment are empirical and can be achieved by primary care providers. Primary care providers, such as advanced practice nurses, must have an understanding of what to look for when examining a child for suspected maltreatment. This includes acknowledging the risk factors associated with abuse and neglect, obtaining the skills to assess and screen a pediatric patient for maltreatment, how to prevent child maltreatment, and reporting procedures. Advanced practice nurses can play an essential role in reducing the number of child maltreatment cases across the United States. This can be achieved through the proper education and training.

# CHAPTER II: THEORETICAL FOUNDATION AND FRAMEWORK

The implementation of the framework for prevention of child maltreatment by advanced practice nurses is essential to ensure children are assessed for child abuse and/or maltreatment during a routine well-child check or sick visit. By understanding the necessity of primary, secondary, and tertiary prevention, advanced practice nurses can assist families at risk for child maltreatment or address the child who is already a victim to maltreatment. This chapter will address the framework for prevention of child abuse and maltreatment and address the Safe Environment for Every Kid (SEEK) model, also an important factor to the prevention of child maltreatment. Finally, this chapter will present the experiential learning theory and identify the differences in individual learning styles and corresponding learning environments through the use of an on-line learning tutorial.

## Framework of Prevention in the Clinical Setting

Working closely with public health organizations and community-based prevention interventions, the prevention of child abuse and maltreatment has had a great influence on the implementation of organizing a framework of prevention services. This framework consists of three levels of services: *primary, secondary*, and *tertiary* prevention. Public health organizations and community-based prevention interventions focus on the populations with the aim of preventing disease from occurring; increasing behaviors that improve health and well-being; and when disease does occur, slowing or stopping its progress, reducing or eliminating negative consequences, and decreasing disparities that result in inequitable distribution of health (Institute of Medicine, 2012). As advanced practice nurses, this framework needs to be implemented into the clinical setting and into the routine of a well-child check in order to reduce the risk of child abuse and maltreatment.

Primary prevention is directed at the general population as a whole in an effort to prevent child maltreatment before it occurs. Advanced practice nurses can implement primary prevention of child maltreatment into the well-child check in the clinical setting. Public service announcements that encourage positive parenting; parent education programs and support groups that focus on child development, age-appropriate expectations, and the roles and responsibilities of parenting; and family support and family strengthening programs that enhance the ability of families to access existing services, and resources to support positive interactions among family members are essential for advanced practice nurses to implement into well-child check visits and provide parents with the needed assistance (Child Welfare Information Gateway, 2011c). The implementation of these universal approaches of primary prevention in the clinical setting by advanced practice nurses can aid in the reduction of child maltreatment in the pediatric population thus reducing the number of maltreatment cases seen in pediatric clinics.

When addressing the potential risk factors exhibited by the patient and the family, a secondary prevention intervention can be implemented into the clinical setting by the advanced practice nurse. Secondary prevention activities with a high-risk focus are offered to individuals who have one or more risk factors associated with child maltreatment, such as poverty, parental substance abuse, parental mental health concerns, young parental age, and a child with special needs. Providing parent education; information on support groups for parents to help deal with everyday stresses and meet the challenges and responsibility of parenting; direct them to family resource centers that offer referral services and other information to families living in low-income neighborhoods or who are having financial hardship; and provide information on how to receive respite care for families that have a child with special needs are all examples of how

advanced practice nurses can provide secondary prevention to their patients and families to aid in the prevention of child maltreatment (Child Welfare Information Gateway, 2011c).

Lastly, tertiary prevention focuses on patients and family members where child maltreatment has already occurred. The goal of tertiary prevention in the clinical setting is to reduce the negative consequences of maltreatment and to prevent it from recurring. Prevention programs should be implemented by the advanced practice nurse in order to sustain the goal of recurrence. Referral to mental health services, such as individual or family counseling by a trained mental health counselor, should be provided to both the patient and the family. By seeking counseling from a trained professional, children and families affected by maltreatment can help improve family communication and functioning (Child Welfare Information Gateway, 2011c). Providing parents and the patient with information on local support groups that help transform negative practices and beliefs into positive parenting behaviors and attitudes can play a major role in achieving the goal of not having the incidence of child maltreatment from recurring (Child Welfare Information Gateway, 2011c). Although the incidence of child maltreatment has already occurred, this does not mean that the advanced practice nurse cannot aid in slowing or stopping the process of maltreatment and decrease the disparities that are a result of such abuse for his/her patient.

## Safe Environment for Every Kid Model

Many primary care providers are unsure of and are not properly trained to screen their patients for child maltreatment during a clinical visit. Child maltreatment is a universal public health problem with vast expenses to individuals, families, and society. There are several consequences associated with child maltreatment including injuries, psychological disorders, learning difficulties, and sometimes death. Prevention strategies of child maltreatment are

essential in the clinical setting. Research on preventing child maltreatment has focused mainly on secondary and tertiary prevention and a few primary prevention strategies have been evaluated; thus making it a national priority for the development of preventative interventions (Dubowitz, Feigelman, Lane, & Kim, 2009). The mandate of pediatrics has advanced to incorporate perceiving and tending to psychosocial issues facing many families, however regardless of this improvement, there has been an uncertain change in practice. Reason for this uncertain change in practice include the lack of training, time, screening tools, and discomfort addressing sensitive issues by primary care providers (Dubowitz et al., 2009).

The Safe Environment for Every Kid (SEEK) model is designed to enhance pediatric primary care and better address major risk factors of maltreatment in the clinical setting. Although this model has been designed for pediatricians, advanced practice nurses must also be well equipped and trained to assess for child maltreatment. The SEEK model was designed to: 1) train residents to address targeted risk factors; 2) provide parents with a brief Parent Screening Questionnaire; and, 3) form a relationship with ancillary personnel to address concerns, such as social workers. The goal of the SEEK model is to improve the attitudes, knowledge, comfort, competence, and behavior of child primary care providers addressing major risk factors for child maltreatment (Dubowitz, Lane, Semiatin, Magder, Venepally, & Jans, 2011). The concept of the SEEK model was implemented into the on-line learning tutorial to provide education to the advanced practice nurse and focus on improving the attitudes, knowledge, comfort, competence and behavior in order to gain the ability to feel confident in addressing major risk factors of child maltreatment in the clinical setting.

The American Academy of Pediatrics recommends that pediatricians or child health providers address child maltreatment by acknowledging key psychological risk factors, including

family stress, intimate partner violence, maternal depression, and substance abuse (Dubowitz et al., 2011). This screening should be implemented during regular checkups. These risk factors were addressed in the on-line learning tutorial and provided the advanced practice nurse with the knowledge and skills necessary to address such issues during the clinical visit. Regular checkups, such as well-child checks, provide an excellent opportunity for advanced practice nurses to help address such risk factors.

Barriers have been known to prevent health care providers from screening for child abuse and maltreatment. One barrier to the involvement of health care providers in these sensitive areas is the lack of training and tools. Pediatricians and child health providers, such as advanced practice nurses must become knowledgeable, competent, and comfortable to address these problems with their patient and family members (Dubowitz et al., 2011). The on-line learning tutorial provided advanced practice nurses with the training and tools, such as the implementation of the SEEK model into their practice in order to become knowledgeable and competent in addressing problems related to child abuse and maltreatment. The SEEK model of pediatric primary care was developed to help health care professionals attain these attributes and thereby promote children's health, development, and safety (Dubowitz et al., 2011).

Dubowitz et al. (2011) examined whether the SEEK model to enhance primary care would improve the attitudes, knowledge, comfort, competence, and behavior of child health professionals regarding addressing the major risk factors for child maltreatment. In a cluster randomized control trial, 18 private practices were assigned to intervention (SEEK) or control groups. The SEEK health care professionals received training on child maltreatment risk factors, such as maternal depression. The results of the study revealed a significant improvement in SEEK group compared with controls on addressing depression (after 6 months training),

substance abuse (18 months), intimate partner violence (6 and 18 months), stress (6, 18, and 36 months), and in their comfort level and perceived competence (both at 6, 18, and 36 months). Overall, the SEEK model led to significant and sustained improvement in several areas, which is a crucial first step in helping primary care providers address major psychosocial problems that confront many families (Dubowitz et al., 2011).

A second study conducted by Dubowitz et al. (2009) evaluated the efficiency of the Safe Environment for Every Kid (SEEK) model of pediatric primary care in reducing the occurrence of child maltreatment. A randomized trial was conducted from June 2002 to November 2005 in a university-based resident continuity clinic in Baltimore, Maryland, with 729 participants, of which 558 completed the study protocol (Dubowitz et al., 2009). The standard care was conducted in a routine pediatric primary care setting and the model consisted of: 1) residents who received special training; 2) the Parent Screening Questionnaire; and, 3) a social worker. Risk factors for child maltreatment were identified and addressed by the resident physician and/or social worker. Child maltreatment was measured in three ways: 1) child protective services report using state agency data; 2) medical chart documentation of possible abuse or neglect; and, 3) parental report of harsh punishment via the Parent-Child Conflict Tactics scale (Dubowitz et al., 2009). The results of the model demonstrated a significantly lower rate of child maltreatment in all the outcome measures: fewer child protective services reports, fewer instances of possible medical neglect documented as treatment non-adherence, fewer children with delayed immunizations, and less harsh punishment reported by parents (Dubowitz et al., 2009).

**Experiential Learning Cycle**

Through the use of an innovative on-line learning tutorial, University of Arizona College of Nursing doctoral students would be skillfully trained to assess, screen and treat patients at risk for child abuse and maltreatment or victims of abuse and maltreatment. In order to address the audience, one must be able to engage them in an effective and productive manner. Experiential learning is a four-stage cyclical theory of learning and is a holistic perspective that combines experience, perception, cognition, and behavior (Kolb & Kolb, 2005). The experiential learning theory is defined as the process whereby knowledge is created through transformation of experience and knowledge results from combination of grasping and transforming experience (Kolb & Kolb, 2005). Experiential learning theory is a process of constructing knowledge that involves a creative tension among the four learning modes that is responsive to contextual demands (Figure 1).

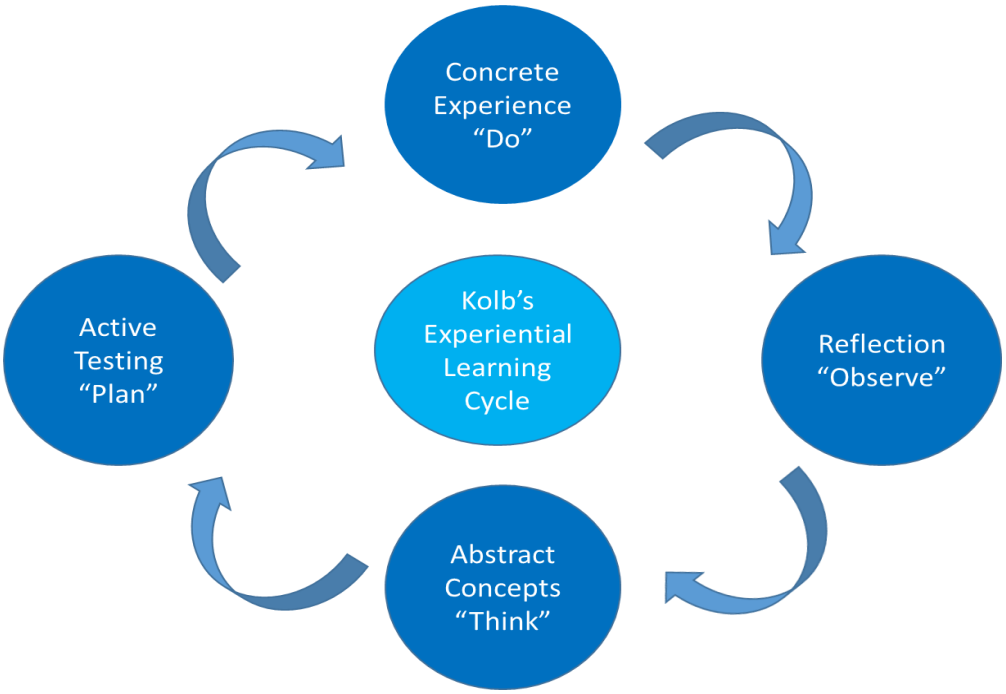


FIGURE 1. *Kolb's Experiential Learning Cycle.*

The first stage of the learning theory is the concrete experience or the "do" stage which is where the learner actively experiences the innovative on-line learning tutorial on how to assess, screen and treat patients at risk for child abuse and maltreatment. The on-line learning tutorial was introduced to the learner during this stage of the learning theory cycle in which the learner takes a pre-test to assess his/her knowledge, actively participate in the on-line tutorial, and then takes a post-test to reassess his/her knowledge. The second stage of the experiential learning cycle is the reflection stage, also known as "observe." In this stage of the cycle the learner consciously reflects back on the previous experience (Kolb & Kolb, 2005). The goal of the on-line learning tutorial during this stage is to provide the learner with the ability to reflect back on the on-line tutorial and prepare to implement what he/she has learned and experienced into the clinical setting. This leads us into the next stage of the learning cycle of forming abstract concepts or "think" stage. In this stage of the cycle the learner attempts to conceptualize a theory or model of what was observed. This is where the learner is thinking about how he/she would implement what has been learned through the on-line tutorial into the clinical setting.

The last stage is the active testing or "plan" stage of the experiential learning cycle. In this fourth stage, the learner is planning how to test the model or theory for the upcoming experience (Kolb & Kolb, 2005). During this stage the learner should have gained knowledge necessary to implement he/she has learned through the on-line tutorial and utilizes it in the clinical setting. The learner is now planning to execute and implement what he/she has learned through the on-line tutorial and figure out how it would be implemented into the regular checkup of their pediatric patients. When all stages have been met, the learner would have gained the knowledge and ability to assess, screen, and treat a child at risk for child maltreatment.

## Conclusion

This chapter outlined the theoretical framework and learning theory, which provides an insight into the prevention of child maltreatment and how advanced practice nurses would retain the necessary knowledge to assess, screen and treat children at risk. Through the primary, secondary, and tertiary preventative measures utilized in the clinical setting, child maltreatment can be significantly reduced. In order to implement this framework into the clinical setting, advanced practice nurses must be extensively and properly trained. The experiential learning theory addresses the stages necessary to engage the learner and ensure they achieve the goal of being well skilled and educated to implement what they have learned through the on-line tutorial into the clinical setting; thus potentially reducing the number of child maltreatment incidences seen on a daily basis.

## CHAPTER III: PROJECT DESIGN AND METHODOLOGY

The project used a quasi-experimental, one-group, pre-test – post-test design to determine the effectiveness of an on-line learning tutorial related to child maltreatment. The participants' were provided with a pre-test prior to the intervention to test their knowledge of child maltreatment. The tutorial consisted of child maltreatment risk factors, signs and symptoms of child maltreatment, how to assess and screen for child maltreatment, and reporting procedures for advanced practice nurses' to follow (Appendix A). The scores of the pre-test were compared to the post-test scores of the identical test that was administered after viewing the on-line learning tutorial. This study only looked at one group of the participants who received the intervention, known as the treatment group.

The independent variable was the on-line child maltreatment learning tutorial with a categorical level of measurement. The dependent variable was the participants knowledge of child maltreatment (measured with assessment tool), and the level of measurement is ratio. The null hypothesis for the study was participating in the on-line learning tutorial on child maltreatment would have no significant improvement of the participant's knowledge, awareness of risk factors, define signs and symptoms, methods of assessment and screening of child maltreatment, and increase his/her knowledge and confidence of reporting procedures to the proper authorities. The alternative hypothesis was participating in the on-line learning tutorial would have a significant improvement of the participant's knowledge, awareness of risk factors, define signs and symptoms, methods of assessment and screening of child maltreatment, and increase his/her knowledge and confidence of reporting procedures to the proper authorities. In addition, it is further hypothesized that participants would report that the self-paced, on-line learning tutorial was a convenient and efficient means for educational attainment about child

maltreatment. The overall goal were to compare the pre- and post-test scores to help determine the effectiveness of the tutorial, to increase the knowledge of the participants and to assess the process measures related to the on-line learning tutorial.

## Sample and Setting

The sample was purposively recruited from the University of Arizona, College of Nursing, second year Doctor of Nursing Practice (DNP) students enrolled in the Pediatric Nurse Practitioner (PNP) or Family Nurse Practitioner (FNP) program. The University of Arizona, College of Nursing, DNP program is primarily made up of on-line course work and the majority of courses are offered via the internet. Individuals may enter the DNP program as a post-Bachelor of Science Nursing (BSN) student or a post-master's nursing student, on a part-time or full-time basis. Eligibility criteria to participate in the DNP project was: 1) be a second year graduate student at the University of Arizona, College of Nursing; 2) enroll in the Doctor of Nursing Practice, Pediatric Nurse Practitioner program or Family Nurse Practitioner program; (3) register for NURS 642A and 620 during the spring 2015 semester; and, 4) have access to the on-line learning tutorial through the University of Arizona D2L UA on-line services. Those excluded were: 1) graduate students enrolled in the Doctor of Nursing Practice, Adult-Gerontology Acute Care Nurse Practitioner program; 2) graduate students enrolled in the Doctor of Nursing, Psychiatric Mental Health Nurse Practitioner program; and, 3) anyone not registered for NURS 642A and 620.

A *priori* sample size was estimated using a paired *t*-test to compare the means across the intervention with an effect size of 0.6 (i.e., a large difference between pre- and post-test is expected), an alpha of 0.05, and a power of 0.8, the recommended sample size to demonstrate a statistically significance difference between the pre- and post-test scores will be set at 25. Using

these elements, power analysis estimated that 25 participants would be sufficient at 80% power to detect a large difference between groups (effect size of 0.6).

## Human Subject Protection

The DNP project was reviewed and approved by the University of Arizona's Human Subject Protection Program. Approval was granted, and the informed consents were obtained prior to the participation of the on-line learning tutorial. In the event that the "I Agree" button was not clicked on, no data was collected and participants were not able to move on to the next step of the tutorial. Full disclosure was provided to the participants and by clicking on the "I Agree" button, they demonstrated they understood the terms and conditions of their participation. Personal information (i.e., name, date of birth, social security number) was not obtained or retained.

## Instruments

### Questionnaire

In order to gather information on the participants' demographics, a questionnaire was constructed to obtain the data. The questionnaire consisted of six questions regarding the participants occupation, years of experience, area of study (PNP or FNP), gender, age, and race. The questionnaire was presented prior to entering the on-line learning tutorial.

### Pre- and Post-test

The pre- and post- test collected data on the participants' level of knowledge before the intervention and collected the same data after the intervention. This project looked at one participating group who received the intervention, known as the treatment group. The pre- and post-test contained the same questions, consisting of 20 multiple choice, select all that apply, or true/false (T/F) questions and assessed the information covered in the on-line learning tutorial

(Appendix B). Questions for the pre- and post-test were obtained by a special publication on Child Abuse Recognition and Reporting by Jackie Reilly, MS, Area Extension Specialist, Children Youth and Families, and Sally Martin, PhD, State Extension Specialist, Human Development and Family Studies from the University of Nevada, Cooperative Extension. The quiz questions were hyperlinked into the on-line learning tutorial through the use of Survey Monkey software.

**Mini-quizzes**

Each section of the on-line learning tutorial was followed by a mini-quiz consisting of five multiple choice or true/false questions. The mini-quizzes highlighted the relevant information of each section of the tutorial. The participants had immediate feedback for both the right and wrong responses and had the rationale for each answer. The responses to the mini-quizzes were not be recorded or measured for the DNP project.

**Evaluation**

After viewing the on-line learning tutorial, participants were asked to evaluate and rate the tutorial. Participants rated how convenient the tutorial was by using the Likert scale (5-point: strongly agree to strongly disagree) and then answered two other questions pertaining to the on-line learning tutorial (i.e., "How likely is it that you would recommend the tutorial to a friends or colleagues?"). The evaluation concluded with three open-ended questions regarding the participants' perception of the tutorial (i.e., "What did you like best? What did you like least? How can this tutorial be improved?). The last question of the evaluation allowed participants to type in additional comments or feedback. The evaluation had a total of six questions.

## Methods

A recruitment email was sent to students at the University of Arizona, College of Nursing enrolled in NURS 642A – Care of the Well Child and Adolescent and NURS 612 – Pediatrics in Advance Practice. The recruitment e-mail was sent on the Primary Investigator's behalf by Amanda Gluski, MA, Assistant Director of Student Affairs, The University of Arizona, College of Nursing. Ms. Gluski had no role in the research. The rationale in selecting participants from NURS 642A – Care of the Well Child and Adolescent was due to the fact the course focused on the role transitioning from the Registered Nurse to the Pediatric Nurse Practitioner in health detection, promotion and prevention in pediatric primary health care. Research and theory were used to identify strategies to provide primary care of the well child, to include the implementation of child maltreatment prevention. The rationale in selecting participants from NURS 612 – Pediatric Advanced Practice was due to the fact that a primary care course to prepare FNP students with skills in children's health promotion, disease prevention, and assessment/management of common health concerns in individuals and families. Both of the selected courses are based on the pediatric population and the target population of Pediatric Nurse Practitioner and Family Nurse Practitioner students. Participant(s) were given access to the on-line learning tutorial through a hyperlink located on the recruitment email. The on-line learning tutorial consisted of a PowerPoint presentation with a hyper-link provided by Survey Monkey. Prior to beginning the tutorial, participants had access to the disclosure statement (Appendix C) and demographic questionnaire. Each participant was given access to the tutorial through the recruitment letter and was powered through Google Drive. A hyperlink containing the consent form was provided prior to participating in the tutorial. The participants were then routed to the demographic questionnaire prior to beginning the tutorial. Once the pre-test was

completed, the participant could begin viewing the on-line learning tutorial. The participants viewed each section of the tutorial which was followed by a mini-quiz to test their knowledge.

## Data Collection Procedures

Each participant yielded one pre-test and one post-test. The pre-test and post-test from each participant was associated through the unique identifier. The pre-test and post-test required the participant to create a unique identifier that includes: first two letters of your birth month, year of high school graduation (YYY), and first two letters of your mother's maiden name. The purpose of this unique identifier was to match the participant's pre-test and post-test scores for data analysis purposes. The pre-test and post-test did not contain information that would identify the participant. The disclosure statement would also ask to input the same unique identifier used for the pre-test and posttest. The purpose of the unique identifier for the disclosure statement was to ensure the participant had agreed to participate; therefore the results of the pre-test and post-test could be used for data analysis. The disclosure statement did not contain information that would identify the participant (Appendix C). The demographic information requested did not identify the participant; it would only be used for survey purposes only. The results of the pre-test and post-test, to include the questionnaire and evaluation, were collected through the link provided on the tutorial to Survey Monkey. Survey Monkey is an online survey tool used by professional researchers to collect data and obtain feedback.

## Data Analysis Plan

Data results were viewed and analyzed during the collection process in the analyze section of the software. Survey Monkey allows for summaries of each question to be viewed or allows browsing through individual survey responses. Question summaries were viewed in the default analyze view. Close-ended questions were analyzed through dynamic charts which were generated automatically for visual analysis. After data was collected from the pre-test and post-test, the data analysis would demonstrate a significant increase in the amount of correct answers in the post-test after viewing the tutorial, demonstrating an increase in knowledge. For instance, if the post-intervention scores were three questions higher on average than the pre-intervention scores, and the standard deviation on the test is +/- 3 questions, this would demonstrate a statistical significance with a sample size of 25. Open-ended comments in the evaluation survey were used only for input towards the tutorial and were not used for data analysis. SPSS was used for data analysis. The McNemar test was used to compare paired proportions of the test questions. For non-parametric data, the Wilcoxon rank sum test was used to analyze differences in pre- and post-test scores. For missing data, all participants with missing post-tests were to be excluded from the data analysis, but none were identified. Participants with unusually low or high pre-tests were planned to be excluded from data analysis, but this was not applied.

## Conclusion

This chapter reviewed the research design and methodology of the Doctor of Nursing Practice (DNP) project. The methodology included design, sample, setting, and measures. Instruments used for the on-line learning tutorial were reviewed and procedures for data collection and consent to participate were reported. Lastly, a projected timeline and project budget were also illustrated.

# CHAPTER IV: RESULTS

This chapter will discuss the results and conclusion of the present study. This chapter will also discuss the percentages for the demographics and evaluation data.

## Sample

A recruitment e-mail was sent to 45 potential participants by the College of Nursing, Office of Student Affairs at the University of Arizona, of which only 15 students participated in the on-line learning tutorial. The demographic information collected for the participants revealed that 100% were graduate students enrolled in the doctor of nursing practice program (DNP); 79% were female, between the ages of 30 and 39 (57%) and 77% were White.

## Data Preparation

All 15 participants completed both the pre- and post-test and were included in the data analysis. The pre- and post-test for each participant were matched-up by using the unique identifier which consisted of the participant filling out the first two letters of their birth month, year of high school graduation (YYY), and first two letters of their mother's maiden name.

## Quantitative Data Analysis: Evaluation of Pre- and Post-test Scores

Table 1 presents the calculated mean scores for both the pre-test and post-test and corresponding ranges. A tabular report comparing the percentages of correct responses for each question on the pre-test and post-test are presented in Appendix D.

TABLE 1. *Pre-test and Post-test Scores: Means and Corresponding Ranges*.

| | N | Mean | Standard Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| Pre-test Scores | 15 | 12.73 | 3.900 | 5 | 17 |
| Post-test Scores | 15 | 17.73 | 1.438 | 15 | 20 |

The McNemar's test was performed to determine the difference between the individual responses of each question for the pre- and post-test. The McNemar's test demonstrated five questions had significant differences in the proportion of correct responses using a *priori alpha* of 0.05. The McNemar's test demonstrated the difference between the pre- and post-test to be statistically significant. The following five questions had significant differences in proportion of correct responses: 1) What are the different types of child maltreatment? 2) A physical indicator of emotional abuse is? 3) A behavioral indicator of sexual abuse is? 4) Children are most often sexually abused by strangers, and 5) Any suspected child maltreatment must be reported within? Table 2 demonstrates the highlighted five questions that had significant difference in the proportion of correct responses. McNemar's test was not performed for questions 6, 14, and 17 because these questions had 100% correct responses on both pre- and post-test.

TABLE 2. *McNemar's Test Statistics for Each Question of the Pre- and Post-test.*

| **Question Pair** | **Pre_Q_1 & Post_Q_1** | **Pre_Q_2 & Post_Q_2** | **Pre_Q_3 & Post_Q_3** | **Pre_Q_4 & Post_Q_4** | **Pre_Q_5 & Post_Q_5** | **Pre_Q_7 & Post_Q_7** |
|---|---|---|---|---|---|---|
| Exact Significance (2-tailed) | .002 | 1.000 | .008 | .500 | .250 | .016 |
| | 2->12 | | 6->14 | | | 6->13 |
| **Question Pair** | **Pre_Q_8 & Post_Q_8** | **Pre_Q_9 & Post_Q_9** | **Pre_Q_10 & Post_Q_10** | **Pre_Q_11 & Post_Q_11** | **Pre_Q_12 & Post_Q_12** | **Pre_Q_13 & Post_Q_13** |
| Exact Significance (2-tailed) | .125 | .727 | .070 | .031 | .500 | .070 |
| | | | | 9->15 | | |
| **Question Pair** | **Pre_Q_15 & Post_Q_15** | **Pre_Q_16 & Post_Q_16** | **Pre_Q_18 & Post_Q_18** | **Pre_Q_19 & Post_Q_19** | **Pre_Q_20 & Post_Q_20** | |
| Exact Significance (2-tailed) | .250 | 1.000 | .008 | .250 | .250 | |
| | | | 7->15 | | | |

Pre-test scores (M = 12.73, SD = 3.90) were significantly lower than post-test scores (M = 17.73, SD = 1.43); z = -3.30, p < 0.001, *r* = -0.648. Tables 3 and 4 summarize the output for the Wilcoxon signed rank test using SPSS. These results indicate that there was a significant improvement in test scores after viewing the on-line learning tutorial, as measured by higher scores on the post-test compared to the pre-test.

TABLE 3. *Wilcoxon Signed Rank Test: Ranks*.

| | | **N** | **Mean Rank** | **Sum of Ranks** |
|---|---|---|---|---|
| Pre-test Total Score Post-test Total Score | Negative Ranks | 0[a] | .00 | .00 |
| | Positive Ranks | 14[b] | 7.50 | 105.00 |
| | Ties | 1[c] | | |
| | Total | 15 | | |

[a]Post-test total < Pre-test total
[b]Post-test total > Pre-test total
[c]Post-test total = Pre-test total

TABLE 4. *Test Statistics for Wilcox Signed Ranks Test*.

| | **Pre-Mean Score – Post-Mean Score** |
|---|---|
| Z | -3.302[a] |
| Asymp. Sig. (2-tailed) | .001 |

[a]*Based on positive ranks*

The effect size was calculated using Cohen's effect size criteria. The effect size was large (*r* = -0.647), which represents a large change in level of knowledge from the pre-test to the post-test. In addition, the large statistical effect size was achieved with a smaller sample size than originally calculated. In spite of achieving a smaller sample size than was estimated to be required, scores post-test on-line learning tutorial were significantly better than before (z = -3.30, p < 0.001, *r* = -0.65).

## Rejection of the Null Hypothesis

Since the p value of < 0.001 was less than the alpha value of .05, the principal investigator rejected the null hypothesis and concluded that there was a relationship between the on-line learning tutorial and participant's knowledge. The statistical results demonstrated that there was a difference between the mean pre-test knowledge score and the mean of the post-test knowledge scores among the participants viewing the on-line learning tutorial. An analysis of the difference between the pre-test and post-test means demonstrated that the tutorial resulted in improved knowledge test scores.

## Evaluation of the On-line Learning Tutorial

The results of the evaluation were generally positive. The majority of the participants found the tutorial to be extremely convenient (60%), while the rest found the tutorial to be very convenient (40%). Nearly all liked the tutorial a great deal (90%) and all would recommend it to a friend or colleague (100%).

## Qualitative Findings: Response to Open-ended Questions

The responses to open-ended questions of the evaluation varied. For the question, "What does this tutorial do really well?" responses included, "easy to follow and navigate, flows very well and does not overwhelm you with information;" "brings awareness to physical and behavioral signs of all types of abuse;" and "educates healthcare professionals on the identification of child maltreatment." For the question, "What changes would most improve the tutorial?" the most common responses was "none," many found the tutorial to be "convenient and can be done on your own timing." Recommendations to improve the tutorial included: "discussing how to build more trust with the child while gaining a history and physical exam;" "compatibility with Mac computers and apple software;" and "not very interactive besides taking

a pre- and post-test." Lastly, for the question, "Do you have any other comments, questions, or concerns?" the majority stated "very well done and very informative;" and one individual stated "question 14 on the survey was difficult for me to understand."

## Conclusion

This chapter reviewed the results of the present DNP study. This study was designed to evaluate the impact of an on-line learning tutorial on the prevention of child maltreatment in the clinical setting. A statistically significant increase in test scores from the pre-test and post-test was demonstrated using the Wilcoxon signed rank test for paired samples supporting an increase in knowledge after viewing the on-line learning tutorial. The large effect size strengthened the confidence in the usefulness of the tutorial. Open-ended responses indicated that most participants found the on-line learning tutorial to be well done, very informative, and convenient. Some individuals indicated the tutorial could be improved by making the tutorial more interactive and improving its compatibility with Mac and Apple software.

# CHAPTER V: DISCUSSION

This one group quasi-experimental study demonstrated that an on-line learning tutorial on the implementation of child maltreatment prevention in the clinical setting was an effective means for increasing knowledge of nurse practitioner graduate students on child maltreatment. The results demonstrated a significant increase in the test scores of the participants after viewing the on-line learning tutorial, indicating that the tutorial was effective. The results also highlighted the lack of child maltreatment information possessed by participants before the training.

The on-line learning tutorial which utilized the framework of prevention in the clinical setting and the Safe Environment for Every Kid (SEEK) model was largely liked by the participants. The framework of prevention model focuses on public health organizations and community-based prevention interventions focus on the populations with the aim of preventing disease from occurring; increasing behaviors that improve health and well-being; and when disease does occur, slowing or stopping its progress, reducing or eliminating negative consequences, and decreasing disparities that result in inequitable distribution of health (Institute of Medicine, 2012). This framework was implemented into the on-line learning tutorial to aid the participant in the implementation of prevention in the clinical setting and into the routine of well-child checks in order to reduce the risk of child maltreatment. The SEEK model was utilized in the tutorial to improve the attitudes, knowledge, comfort, competence, and behavior of the participant by addressing major risk factors for child maltreatment (Dubowitz et al., 2011). The application of the SEEK model was implemented into the on-line learning tutorial to provide education to the participant and focus on improving the attitudes, knowledge, comfort, competence and behavior in order to gain the ability to feel confident in addressing major risk factors of child maltreatment in the clinical setting. The majority of participants commented

favorable about all aspects of the on-line learning tutorial, including the section mini-quizzes, the videos, and pictures. Although the findings of the study support a statistically significant increase in knowledge among participants, it is unknown if the results would indicate an increase in recognition or reporting, thus preventing or decreasing child maltreatment since a study like this has never been completed. There is potential usefulness of the tutorial with other populations beyond advanced practice nurses, such as law enforcement, school administration, social services, and other community-based organizations.

## Significance of Results to Advanced Practice Nursing

Published literature reveals a gap in evidence on child maltreatment prevention in the clinical setting for primary care providers, but especially among advanced practice nurses. The American Academy of Pediatrics (AAP) provides guidelines on the prevention of child maltreatment for physicians to follow during the scheduled routine health care visit; however, such guidelines are not in place for advance practice nurses. Literature also identifies the discrepancy of failure to recognize child maltreatment, failure to report, and failure of agencies to respond or confirm maltreatment (Gilbert et al., 2009). Literature further reports primary care providers' under-report children they suspect of being maltreated due to the lack of knowledge or awareness of the signs of child maltreatment and the process for reporting maltreatment to the appropriate agencies (Gilbert et al., 2009). Potential reasons for these findings include the lack of training, time, screening tools, and discomfort addressing sensitive issues (Dubowitz et al., 2008). The implementation of the on-line learning tutorial could fill these gaps and provide primary care providers, such as advanced practice nurses, with the training needed to recognize, assess, diagnose, and report child maltreatment; thus reducing the number of child maltreatment cases in the pediatric population.

The on-line learning tutorial could be an effective means of meeting the recommendations for the need of primary and secondary prevention of child maltreatment in the clinical setting. Although primary care providers often provide medical care to children with suspected maltreatment, very few are involved in primary or secondary prevention of maltreatment, such as universal prevention programs or programs focused on families most at risk (Krugman et al., 2007). The development of child maltreatment preventative interventions remains a national priority. The on-line learning tutorial provides practitioners with methods to assess for child maltreatment and address parental concerns; thus providing patients and family members with community resources available to assist them and reduce the incidence of potential child maltreatment.

It is undoubtedly within the scope of practice for the doctorally prepared pediatric nurse practitioner and family nurse practitioner to contribute to the reduction in incidences of child maltreatment through preventative measures and advocacy efforts. The DNP is prepared to improve patient and population health outcomes through collaboration of interprofessional teams by participating and assuming leadership when appropriate. The on-line learning tutorial could be an effective means for DNPs to improve patient and population health outcomes by collaborating with primary care providers, community-based coalitions of child maltreatment experts and child welfare advocates to reduce the incidence of child maltreatment in the pediatric population. The doctorally prepared pediatric nurse practitioner or family nurse practitioner is valuable in this collaboration role. By being properly trained and educated on how to recognize signs of maltreatment, how to assess, how to diagnose, and how to report child maltreatment, the doctorally prepared nurse practitioner can ensure the best intervention is being chosen and disseminated into the clinical setting and into the community to reduce the number of child

maltreatment cases; as a result making a successful difference for the health and well-being of the pediatric population.

## Strengths and Limitations

Strengths for this quasi-experimental, one-group study were the use of a pre-test. The use of a pre-test helps strengthen the probability that the results of an increase in knowledge were the results of the tutorial. More importantly, this study helped increase awareness and knowledge of the risk factors, assessment, diagnoses, and proper reporting of suspected child maltreatment for the majority of participants.

Limitations of the study include a use of nonprobability sampling and small sample size. A convenience sample was obtained through the University of Arizona, College of Nursing, pediatric nurse practitioner and family nurse practitioner students. Furthermore, the sample included only those graduate students who were in the second year of the program and were enrolled in either NURS 642A – Care of the Well Child and Adolescent or NURS 612 – Pediatrics in Advance Practice. This limited the number of potential participants for the study and limited the generalizability of the results to other subspecialties. Due to a small sample size, a mostly female population, in a single University located in Tucson, Arizona, it is unknown if results are generalized in other populations. Another limitation of this study would be the use of an instrument (pre-test/post-test) which was not validated nor tested for reliability.

## Suggestions for Improving the Project and Further Considerations

The majority of participants commented favorably about the on-line learning tutorial. The on-line learning tutorial offers convenient, easy access, at any time, from anywhere, and provides pertinent, accurate information about the importance of child maltreatment prevention. The design of the tutorial takes into account independent learning for nurse practitioner graduate

students with varying learning styles. This kind of approach may be valuable in the classroom and primary care settings where little room exists for time away from academia or patient care for required educational training or training of primary care providers. Also, the tutorial could be easily modified and tailored to fit any reporter such as police officers, teachers, physicians, or social workers.

The content and information of the tutorial were assessed for accuracy, appropriateness, and scope by the principal investigator in consultation with several subject matter experts. However, there were still some technical aspects of the tutorial that could be significantly improved. In order to access the disclosure statement, demographic form, and pre-test/post-test, the participant would have to navigate out of the tutorial, thus leaving the tutorial momentarily to complete the stated forms; click on a hyperlink powered though Survey Monkey and then return to the tutorial once they have completed the forms. Although there were no issues with the hyperlinks, having to navigate in and out of the tutorial could be inconvenient for the participant. Another issue identified by the principal investigator would be a large data file; therefore, the tutorial could only be opened in Google Drive. Not everyone could have access to Google Drive, making it difficult to participate in the study. Budgetary constraints prohibited ideal website construction for the tutorial, which impacted optimal performance of the site. Having the ability to click on the hyperlink to fill out the disclosure statement or pre-test/post-test without having to leave the tutorial would be beneficial to the participant and improve the aesthetics of the site.

Testing the validity and reliability of the pre- and post-test before using the instrument for future tutorial evaluations would be of great importance. Another suggestion for improving the project and future considerations would be recruitment methods. Recruitment is seldom an individual exercise. Working with a multi-disciplinary team, such as faculty members and staff;

physicians; and nurses, would improve the recruitment phase of the study. Methods and tools used for recruitment could be implemented to increase study awareness of and accessibility to the study during the recruitment phase. Announcements and presentations to potential referrers or participants by arranged meeting and forums could significantly improve the number of participants for the study. Other methods of recruitment include key locations, such as community centers, libraries, clinics and hospitals.

## Conclusion

The current study demonstrated how the pediatric nurse practitioner DNP student, assessed, summarized and evaluated current literature and data, utilized models and theoretical framework of health promotion, applied experiential learning theory to engage the learner and ensure they achieve the goal of being well skilled and educated, and to create an effective on-line learning tutorial for implementation of child maltreatment prevention in the clinical setting for future advanced practice nurses. Proper training and education on the identification of child maltreatment can facilitate appropriate evaluation, referral, investigation, and outcomes for children and their families (Kellogg, 2007). Doctorally prepared pediatric nurse practitioners and family nurse practitioners (DNP) are well positioned to address the needs within a community and provide the necessary child maltreatment prevention in the clinical setting. A DNP is an instrumental factor in the multi-disciplinary team for the identification of health risks and the promotion of well-being in a community. The DNP is known for being a leader in the community, and educating and training members of multi-disciplinary teams and are skilled in the ability to access, summarize, and apply information form the literature to day-to-day clinical problems, thus allowing the DNP to enrich their clinical training and experience with up to date research (Scott & McSherry, 2009).

# APPENDIX A:

# SCREEN SHOTS OF THE ON-LINE LEARNING TUTORIAL

## Physical Abuse

**Physical Indicators**

- bruises, bites and welts
- fractures
- cuts, scratches or abrasions
- burns

**Behavioral Indicators**

- is wary of adult contacts
- is apprehensive when other children cry
- exhibits behavioral extremes, such as aggression or withdrawal
- is afraid to go home
- reports injury

(Riley & Martin, 2013)

## Risk Factors of Child Maltreatment: "Red Flags"

**More likely to occur in homes in which there is:**

- low socioeconomic status and unemployment
- lack of social support and social isolation
- conflict and/or violence between spouses or partners
- limited child development knowledge
- a child with special needs
- a child who is hard to comfort or challenging to raise

**Abuse and neglect are more likely to occur when parents or caregivers:**

- alcohol or substance abuse
- mental health problems, such as depression
- have low self-esteem or exhibit antisocial personality
- use more physical punishment than positive guidance
- were abused themselves as children
- are of early child bearing age

(Riley & Martin, 2013)

# APPENDIX B:

# CHILD MALTREATMENT PRE- AND POST- TEST

CHILD MALTREATMENT PRE- AND POST- TEST

1. What are four types of child maltreatment? (Select all that apply)
    a. Physical abuse
    b. Sexual abuse
    c. Alcohol abuse
    d. Emotional abuse
    e. Nutritional abuse
    f. Neglect
2. Emotional abuse can be defined as:
    a. Any sexual activity between a child and an adult
    b. Excessive verbal assault on a continuous basis, ignoring and/or harming the psychological capacity of a child
    c. Any behavior which physically harms a child
    d. Any behavior which results in the child being neglected
3. A physical indicator of emotional abuse is:
    a. Exhibits developmental delays
    b. Is wary of adult contacts
    c. Is afraid to go home
    d. Has bruises, bites, and welts
4. Physical abuse can be defined as:
    a. Any sexual activity between a child and an adult
    b. Any behavior which results in the child being neglected
    c. Any behavior which emotionally harms a child
    d. Any behavior which causes injury to a child and is nonaccidental
5. A physical indicator of physical abuse is:
    a. Exhibits behavioral extremes, such as aggression or withdrawal
    b. Has unexplained cuts, scratches or abrasions
    c. Has poor appetite
    d. Seems depressed

6. Sexual abuse can be defined as:
    a. Any behavior which physically harms a child
    b. Any behavior which emotionally harms a child
    c. Any sexual activity between a child under age 16 and another person, usually involving coercion
    d. Any behavior which results in the child being neglected
7. A behavioral indicator of sexual abuse is:
    a. Unusual or foul odor
    b. Exhibits withdrawal, fantasy or infantile behavior
    c. Has torn, stained or bloody underclothing
    d. Difficulty in walking or sitting
8. Neglect can be defined as:
    a. Any behavior which physically harms a child
    b. Any behavior which emotionally harms a child
    c. Any behaviors which supports the child
    d. Lack of attention by the primary caregiver to the child's welfare
9. A behavioral indicator of neglect is:
    a. Exhibits developmental delays
    b. Has poor hygiene
    c. Begs or steals food
    d. Is underweight or exhibits other signs of malnutrition
10. Which of the following are characteristics of a person more likely to abuse or neglect children?
    a. Older parents
    b. Little child development knowledge
    c. A lot of conflict between parents
    d. Abuse alcohol or other substances
    e. Have children who are very demanding
    f. Take care of themselves

11. True or False Children are most often sexually abused by strangers.
12. True or False Abuse is more likely to occur in families that use more physical punishment than positive guidance.
13. The following statements may or may not assist a practitioner in building a sense of trust with a child who has made a disclosure. Please select all that will help the child who is telling you about maltreatment:
    a. Tell the child the person who hurt them is bad and disgusting
    b. Do not interrogate or interview the child
    c. Validate the child's feelings
    d. Tell the child that you will have to tell someone whose job it is to help kids with these kinds of problems
    e. Find out what the child wants from you
    f. Don't believe anything the child tells you
    g. Let your emotions show
14. True or False You should tell the child you will try to get him/her some help
15. True or False You should tell the child that you will take care of everything
16. True or False You should be certain that the child was abused before you report it to the proper authorities.
17. True or False You should tell the child that you care about him/her and you are glad he/she talked with you
18. Any suspected child maltreatment must be reported within:
    a. One week
    b. 72 hours
    c. 48 hours
    d. 24 hours
19. The purpose of reporting suspected child maltreatment is:
    a. To legally protect yourself
    b. To help the child and his/her family
    c. To get perpetrators of child maltreatment off the streets
    d. To protect Cooperative Extension

20. Persons can be held criminally liable for reporting suspected child maltreatment only if they are:
    a. Making a report that cannot be substantiated
    b. Making a report without malicious intent
    c. Making a false report that is intended to harm someone
    d. Making a report about something that happened more than five years ago

(Adapted from Reilly & Martin, 2013)

# APPENDIX C:

# DISCLOSURE STATEMENT

Disclosure Statement

This is a consent form for research participation. It contains important information about this study and what to expect if you decide to participate. Please consider the information carefully. Feel free to discuss the study with your friends and family and to ask questions before making your decision whether or not to participate.

The purpose of this research study is to assess the knowledge of advance practice nurses regarding the prevention of child maltreatment in the primary care setting.

You are invited to participate in this research study because you are a graduate student enrolled in The University of Arizona, College of Nursing, Doctor of Nursing Practice Program with an emphasis in Pediatric Nurse Practitioner or Family Nurse Practitioner program.

Your participation is voluntary. You may refuse to participate in this study. No matter what decision you make, there will be no penalty to you and you will not lose any of your usual benefits. Your decision will not affect your future relationship with The University of Arizona. If you are a student or employee at The University of Arizona, your decision will not affect your grades or employment status. You may choose not to participate without penalty or loss of benefits to which you are otherwise entitled.

Efforts will be made to keep your study-related information confidential. However, there may be circumstances where this information must be released. For example, personal information regarding your participation in this study may be disclosed if required by state law.

Also, your records may be reviewed by the following groups (as applicable to the research):

- Office for Human Research Protections or other federal, state, or international regulatory agencies
- The University of Arizona Institutional Review Board or Office of Responsible Research Practices

You will be provided with any new information that develops during the course of the research that may affect your decision whether or not to continue participation in the study.

An Institutional Review Board responsible for human subjects' research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

There is no involvement of experimental procedures in this research study. The procedure in this research study involved filling out an online pre-test imbedded in the tutorial. The tutorial will be located in Google Drive. In the tutorial, you will first view the disclosure statement, if you agree to participate, you will then click on the "I agree" button. This will then allow you to move on to the next slide of the tutorial. A pre-test will be provided prior to viewing the tutorial. Once you have completed the tutorial, a post-test will be provided. It is essential you answer both the pre-test and post-test. The tutorial will also have links to a demographic questionnaire and an evaluation questionnaire. The entire process is estimated to take approximately 60 minutes. Your responses will be confidential and the research study does not require your personal information such as your full first and last name, date/place of birth, e-mail address, IP address, or current residence. The pre-test and post-test will require you to create a unique identifier that includes: first two letters of your birth month, year of high school graduation (YYY), and first two letters of your mother's maiden name. The purpose of this unique identifier is to match your pre-test and post-test scores for data analysis purposes. The pre-test and post-test will not contain information that will identify you. The demographic information requested will not identify you; it will only be used for survey purposes only.

There are no foreseeable risks or discomforts and no alternative procedures associated with this research study. The expected benefits to participants are knowledge gain and/or behavior change in clinical practice when assessing and diagnosing pediatric patients.

The results of this research study will be used for scholarly purposes only and may be shared with University of Arizona representatives.

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the Human Subjects Protection Program at 520-626-6721 or online at http://orcr.arizona.edu/hspp.

If you have any questions about this research study, please contact Vanessa Velez at vvelez@email.arizona.edu.

I have read (or someone has read to me) this form and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study. I am not giving up any legal rights by signing this form.

Electronic Consent: Please indicate your decision below.

Clicking on the "I agree" button indicates that you:

- Have read the above information
- Voluntarily agree to participate in the research study
- At least 18 years of age
- Will proceed to taking the test

If you decide not to participate in this study, please click on the "I disagree" button. Then you will be logged out of the survey and will not proceed to taking the test. Thank you for your consideration.

1. Unique Identifier

| | |
|---|---|
| First 2 letters of your birth month: | |
| Year of high school graduation (YYYY): | |
| First 2 letters of your mother's maiden name: | |

2. Please select one of the following:

| | |
|---|---|
| I agree | |
| I disagree | |

# APPENDIX D:

# PERCENTAGES FOR CORRECT RESPONSES

| | Percentage for Correct Responses | |
|---|---|---|
| **Question** | **Pre-test** | **Post-test** |
| What are the different types of child maltreatment (select all that apply): | 43.4 | 83.3 |
| Emotional abuse can be defined as: | 86.7 | 100 |
| A physical indicator of emotional abuse is: | 33.3 | 93.3 |
| Physical abuse can be defined as: | 80 | 100 |
| A physical indicator of physical abuse is: | 73.3 | 93.3 |
| Sexual abuse can be defined as: | 93.3 | 100 |
| A behavioral indicator of sexual abuse is: | 40 | 86.7 |
| Neglect can be defined as: | 73.3 | 100 |
| A behavioral indicator of neglect is: | 26.7 | 40 |
| Which of the following are characteristics of a person more likely to abuse or neglect children (select all that apply): | 79.9 | 86.7 |
| Children are most often sexually abused by strangers (true or false). | 60 | 100 |
| Abuse is more likely to occur in families that use more physical punishment than positive guidance (true or false). | 93.3 | 100 |
| The following statements may or may not assist a practitioner in building a sense of trust with a child who has made a disclosure (select all that apply): | 78.3 | 89.99 |
| You should tell the child you will try to get him/her some help (true or false). | 100 | 100 |
| You should tell the child that you will take care of everything (true or false). | 73.3 | 100 |
| You should be certain that the child was abused before you report it to the proper authorities (true or false). | 60 | 73.3 |
| You should tell the child that you care about him/her and you are glad he/she talked with you (true or false). | 100 | 100 |
| Any suspected child maltreatment must be reported within: | 46.7 | 100 |
| The purpose of reporting suspected child maltreatment is: | 73.3 | 100 |
| Persons can be held criminally liable for reporting suspected child maltreatment only if they are: | 73.3 | 93.3 |

# REFERENCES

American Academy of Pediatrics [AAP] (n.d.). Bright futures: Prevention and health promotion for infants, children, and adolescents and their families. American Academy of Pediatrics: Dedicated to the Health of all Children. Retrieved September 20, 2014 from: http://brightfutures.aap.org/

Block, R.W. & Krebs, N.F. (2005). Failure to thrive as manifestation of child neglect. *Pediatrics, 116*(5): 1234-1237.

Center for Disease Control and Prevention [CDC] (2014). *Understanding Child Maltreatment.* National Centers for Injury Prevention and Control, Division of Violence Prevention. Retrieved August 28, 2014 from: http://www.cdc.gov/violenceprevention/pdf/CM-Factsheet-a.pdf

Children's Bureau (2013). Child maltreatment 2012. U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth, and Families. Retrieved September 2, 2014 from: http://acf.hhs.gov/sites/default/files/cb/cm2012.pdf

Child Welfare Information Gateway (2010). *The child abuse prevention and treatment act: including adoption opportunities and the abandoned infants assistance act.* U.S Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth, and Families, Children's Bureau. Retrieved August 28, 2014 from: http://www.acf.hhs.gov/sites/default/files/cd/capta2010.pdf

Child Welfare Information Gateway (2011a). *About CAPTA: a legislative history.* U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth, and Families, Children's Bureau. Retrieved September 2, 2014 from: http://www.childwelfare.gov/pubs/factsheet/about.pdf

Child Welfare Information Gateway (2011b). *Definitions of child abuse and neglect.* U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. Retrieved September 2, 2014 from: http://www.childwelfare.gov/systemwide/laws_policies/statues/define.pdf

Child Welfare Information Gateway (2011c). Framework for prevention of child maltreatment. U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. Retrieved September 30, 2014 from: http://www.childwelfare.gov/prevention/overview/framework.cfm#one

Dubowitz, H., Feigelman, S., Lane, W., & Kim, J. (2009). Pediatric primary care to help prevent child maltreatment: the safe environment for every kid (SEEK) model. *Pediatrics, 123*: 858-864.

Dubowitz, H., Lane, W. G., Semiatin, J. N., Magder, L. S., Venepallu, M., & Jans, M. (2011). The safe environment for every kid model: Impact on pediatric primary care professionals. *Pediatrics, 127*: e962-e970.

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 and Neglect, 36*: 156-165.

Flaherty, E.G. & Stirling, J. (2010). Clinical report - the pediatrician's role in child maltreatment prevention. *Pediatrics, 126*(4): 833-841.

Gilbert, R., Kemp, A., Thoburn, J., Sidebotham, P., Radford, Glaser, D., & MacMillan, H. L. (2009). Recognizing and responding to child maltreatment. *The Lancet, 373*: 167-180.

Hibbard, R., Barlow, J., & MacMillan, H. (2012). Clinical report: Psychological maltreatment. *Pediatrics, 130*(2): 373-378

Hill, K.S. (2004). The cost of child abuse. *Children's Hospital Today*. Retrieved August 28, 2014 from: http://www.childrenshospital.net/AM/Template.cfm?Section+Search3&templateCM/HTMLDisplay.cfm&ConentID=42086

Institute of Medicine (2012). *An integrated framework for assessing the value of community based prevention.* Institute of Medicine of the National Academies. National Academy of Sciences. Retrieved September 30, 2014 from: http://www.iom.edu

Institute of Medicine and National Research Council (2013). *Understanding child abuse and neglect*. The National Academies, Advisers to the Nation on Science, Engineering, and Medicine. Retrieved September 2, 2014 from: http://www.iom.edu/Reports/2013/New-Directions-in-Child-Abuse-and-NeglectResearch/Child-Abuse-Infrographic.aspx

Jenny, C. (2007). Recognizing and responding to medical neglect. *Pediatrics, 120*(6): 1385-1389.

Jenny, C. & Crawford-Jakubiak, J. E. (2013). The evaluation of children on the primary care setting when sexual abuse if suspected. *Pediatrics, 132*(2): e558-e567.

Kairys, S. W. & Johnson, C. F. (2002). The psychological maltreatment of children technical report. *Pediatrics, 109*(4): e68-e70.

Kellogg, N. D. (2007). Evaluation of suspected child physical abuse. *Pediatrics, 119*(6): 1233-1241.

Kolb, A. Y. & Kolb, D. A. (2005). Learning styles and learning spaces: enhancing experiential learning in higher education. *Academy of Management Learning & Education, 4*(2): 193-212.

Krugman, S. D., Lane, W. G., & Walsh, C. M. (2007). Update on child abuse prevention. *Current Opinion in Pediatrics, 19*: 711-718.

National Council of State Board of Nursing [NCSBN] (2012). *APRNs in the U.S.* Policy & Legislative Affairs. Retrieved September 4, 2014 from: https://m.ncsbn.org/aprn.htm

Pulcini, J., Jelic, M., Gul, R., & Loke, A. Y. (2010). An international survey on advance practice nursing education, practice, and regulation. *Journal of Nursing Scholarship, 42*(1): 31-39.

Putnam, F. W. (2003). Ten-year research update review: Child sexual abuse. *American Academy of Child & Adolescent Psychiatry, 42*(3): 269-278.

Reilly, J. & Martin, S. (2013). Child abuse recognition and reporting: A self-study guide for people working with children. University of Nevada Cooperative Extension. Retrieved October 1, 2014 from: http://www.unce.unr.edu/publications/files/cy/2009/sp0911.pdf

Scott, K. & McSherry, R. (2009). Evidence-based nursing: Clarifying the concepts for nurses in practice. *Journal of Clinical Nursing, 18*(8): 1085-1095.

Stirling, J. & Amaya-Jackson, L. (2008). Understanding the behavioral and emotional consequences of child abuse. *Pediatrics, 122*(3): 667-673.