PREVENTING CHILD MALTREATMENT IN MILITARY FAMILIES:
EVALUATING THE EFFECTIVENESS OF A WEB-BASED TUTORIAL FOR
MANDATED REPORTERS

by

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SIGNED: __Lorri Marie Phipps__________________
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DEDICATION

This dissertation is dedicated to all the United States military children and families stationed in Japan. Your strength and resilience is inspiring.
# TABLE OF CONTENTS

LIST OF ILLUSTRATIONS ........................................................................................................... 8
LIST OF TABLES ............................................................................................................................. 9
ABSTRACT ....................................................................................................................................... 10

CHAPTER ONE: INTRODUCTION AND SIGNIFICANCE OF THE PROBLEM ......................... 12
Child Maltreatment Statistics ........................................................................................................ 12
Outcomes and Costs of Child Maltreatment ............................................................................. 14
The Response to Child Maltreatment ......................................................................................... 15
  Recognition ................................................................................................................................. 15
  Reporting .................................................................................................................................. 16
Background .................................................................................................................................. 17
  Child Maltreatment in Military Communities ........................................................................ 17
Maltreatment Risk Factors for Military Families ......................................................................... 18
  Separation and Deployment ..................................................................................................... 19
  Overseas Environment ............................................................................................................. 21
Child Maltreatment in U.S. Military Families in Japan ................................................................. 21
The Role of Educators in Preventing Child Maltreatment......................................................... 23
Educators’ Roles in Preventing Child Maltreatment in the U.S. Military Community in Japan ... 25
Definitions .................................................................................................................................... 27
  Child Maltreatment .................................................................................................................... 27
  Military Family .......................................................................................................................... 29
  Military Deployment .................................................................................................................. 29
  DoDDS ...................................................................................................................................... 29
  Educators, School Professionals and School Personnel with Direct Student Contact .......... 30
Significance to Nursing ................................................................................................................ 30
Purpose ......................................................................................................................................... 32
Conclusion ................................................................................................................................... 34

CHAPTER TWO: THEORETICAL UNDERPINNINGS OF CHILD MALTREATMENT .......... 35
Introduction ..................................................................................................................................... 35
Stress and Coping Model of Child Maltreatment ....................................................................... 35
A Framework for Prevention of Child Maltreatment .................................................................. 36
  Universal Prevention .................................................................................................................. 38
  Selected Prevention ................................................................................................................... 38
  Indicated Prevention ................................................................................................................. 38
Learning Theories ......................................................................................................................... 40
  Constructivism .......................................................................................................................... 40
  WeBTAS ..................................................................................................................................... 41
  R2D2 .......................................................................................................................................... 42
Conclusion ................................................................................................................................... 43
TABLE OF CONTENTS – Continued

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY ........................................45
Setting and Sample .............................................................................................................45
Recruitment and Consent Procedures ................................................................................46
  Recruitment and Eligibility Screening .......................................................................47
Instruments.........................................................................................................................47
  Questionnaire and Formative Evaluation .............................................................47
  Pre- and Post-tests ....................................................................................................48
Mini-quizzes .....................................................................................................................48
Methods..............................................................................................................................51
Data Collection Procedures ..........................................................................................52
Data Analysis Plan ..........................................................................................................53
Human Subjects Protection ............................................................................................53
Conclusion .......................................................................................................................54

CHAPTER FOUR: RESULTS .............................................................................................55
Sample...............................................................................................................................55
Data Preparation..............................................................................................................55
Quantitative Data Analysis: Evaluation of Pre- and Post-test Scores .........................55
  Rejection of Null Hypothesis ................................................................................57
Formative Evaluation of Web-based Tutorial ...............................................................58
Qualitative Findings: Responses to Open-ended Questions ........................................58
Conclusion .......................................................................................................................59

CHAPTER FIVE: DISCUSSION .........................................................................................60
Discussion.........................................................................................................................60
Significance of Results to Nursing Practice ..................................................................61
Strengths and Limitations .............................................................................................62
Suggestions for Improving the Project and Future Considerations ..............................64
Conclusion .......................................................................................................................66

APPENDIX A: POST-TEST WITH DEMOGRAPHIC AND FORMATIVE EVALUATION ..67
APPENDIX B: SUBJECT DISCLOSURE FORM ..............................................................76
APPENDIX C: COMPARISON OF CORRECT RESPONSES FOR EACH QUESTION ......79
APPENDIX D: QUALITATIVE DATA..............................................................................81

REFERENCES ................................................................................................................85
LIST OF ILLUSTRATIONS

FIGURE 1. MacMillan Prevention Framework with IOM Criteria ............................................. 37
FIGURE 2. Screen Shot of Mini-Quiz ......................................................................................... 49
FIGURE 3. Screen Shot of Case Vignette ....................................................................................... 50
FIGURE 4. Screen Shot of Quiz Feedback: Wrong Answer .......................................................... 51
FIGURE 5. Screen Shot of About Page .......................................................................................... 52
LIST OF TABLES

TABLE 1. WeBTAS Components in Child Maltreatment Tutorial ...........................................42
TABLE 2. Learning Preferences, Activities and Technologies in R2D2 ...................................43
TABLE 3. Pre-test and Post-test Scores: Means and Corresponding Ranges ............................56
TABLE 4. Wilcoxon Signed Ranks Test: Ranks ........................................................................56
TABLE 5. Test Statistics for Wilcoxon Signed Ranks Test .......................................................57
ABSTRACT

Introduction: Child maltreatment, which includes neglect, physical, emotional, and sexual abuse, continues to be a significant public health concern. Child maltreatment has profound short and long term negative effects on children and families and is tremendously costly to society. Although there are mixed data regarding the prevalence of child maltreatment in military families compared to civilian families, what is clear is that child maltreatment is a significant problem in the military community, and there are several correlates of child maltreatment unique to the military family: deployment of the active duty service member and living in an overseas duty locations.

Rationale: The high rate of deployments within the Marine Corps military community in Japan makes these children particularly vulnerable to child maltreatment. Many forms of child maltreatment are most significant in school aged children, and nearly all maltreated children display recognizable signs and symptoms including physical, emotional, and behavioral characteristics, but also academic difficulties which can be best detected by the educator or other school personnel. Thus, the importance of improving school personnel’s knowledge regarding the recognition and response of child maltreatment is especially important. Department of Defense Dependent Schools (DoDDS) teachers, school professionals, and staff with direct student contact spend a significant amount of time with military children and are in a prime position to recognize and respond to at-risk and maltreated children.

Purpose/Objective: The purpose of this study was to pilot a web-based child maltreatment tutorial for DoDDS teachers, school professionals and support staff with direct student contact within the Marine Corps community in Japan. The goal was to determine whether these
professionals would gain information about child maltreatment in general and specific to the military families in Japan.

**Methods:** Thirty-three eligible school personnel within the DoDDS school district in Japan participated in the study. The web-based tutorial was a standalone educational program included as part of a larger website which could be remotely accessed from any computer using a password supplied by the principal investigator. A pre-test /post-test design was used to determine the effectiveness of the tutorial in increasing participant knowledge of risk factors, signs and symptoms, and reporting procedures for child maltreatment. Completion of the tutorial took about one hour.

**Results:** Findings indicated that participants’ post-test scores were significantly higher than pre-test scores (p <0.001). In addition, the majority of participants indicated that they liked the format and self-paced nature of the tutorial.

**Conclusions:** This exploratory study demonstrated the effectiveness of a web-based tutorial to disseminate information about child maltreatment in military families.
CHAPTER ONE: INTRODUCTION AND SIGNIFICANCE OF THE PROBLEM

Although the maltreatment of children is not a new phenomenon, it was not until 1962 when Kempe and colleagues first described the “battered child syndrome” that child maltreatment was acknowledged as a serious social problem (Kempe, Silverman, Steele, Droegemuller, & Silver, 1962). Kempe’s article included case reports of two children who had suffered head injuries and unexplained fractures with radiological evidence that the injuries were not accidental. In addition, Kempe collaborated with other physicians around the country who had treated children with similar unexplained injuries, finally putting a name on the face of child maltreatment. Perhaps of greatest importance, Kempe’s article established that pediatric health care providers and those professionals with regular contact with children have a special responsibility to children to keep them safe from harm, sometimes even from their own parents. When read today, this landmark article seems almost naïve because it has become increasingly clear that child maltreatment is far too common, has profound short and long term effects on the children and families, and is extremely costly to society (Jenny, 2008).

Child Maltreatment Statistics

Child maltreatment, which includes neglect, emotional abuse, physical abuse, and sexual abuse, crosses all cultural and racial backgrounds, occupations, ranks, income levels, and ages. During fiscal year 2007, the United States National Child Abuse and Neglect Data System (NCANDS) estimated that 3.2 million referrals alleging maltreatment to 5.8 million children were made to child protective service (CPS) agencies (as cited in Gaudiosi, 2009). Of those reports, 794,000 children were determined to be victims of child maltreatment, representing 10.6/1000 children (as cited in Gaudiosi, 2009). Current statistics indicate that approximately 40
million children globally are subjected to physical abuse each year. Moreover, one out of every five girls and one out of every ten boys will be a victim of sexual abuse by the time they are 18 years of age (World Health Organization [WHO], 2006). In one study, between 30% and 40% of adult women and 13% of adult men reported prior experiences of sexual abuse during childhood (Bolen & Scannapieco, 1999). The children at greatest risk for physical and sexual abuse are those between the ages of 5 and 16 years.

The data related to cases of fatal maltreatment are staggering. In the United States, 1760 children died as a result of abuse or neglect in 2007. That corresponds to five children dying every day. It has been estimated that 31,000 deaths worldwide can be attributed to homicide resulting from abuse or neglect to children less than 15 years of age (as cited in Gaudiosi, 2009; Gilbert et al., 2009b). However many experts believe this figure is low; arguing that as many as 2000 children may die each year as a result of maltreatment in the US alone (Gilbert et al., 2009a; Jenny & Isaac, 2006).

Global estimates of child homicide secondary to maltreatment indicate that infants and very young children are at greatest risk. Rates for the 0–4 age group are more than double those for 5–14-year-olds. Infants and pre-school children are at the greatest risk of fatal maltreatment as a result of their dependency, vulnerability and relative social invisibility (Jenny & Isaac, 2006). Sabotta and Davis (1992) noted that children reported to social service agencies for suspected child abuse or neglect had an excessively high death rate from all causes in the years that followed. Moreover, children listed on a state’s child abuse registry were almost three times more likely to die before their 18th birthday compared to children not found on the registry (9.1 compared with 3.1 deaths/10,000 years at risk). The increased death risk was highest for children
who had experienced physical abuse, but the difference was statistically significant for neglected and sexually abused children as well. Sadly, this still holds true today. Twelve percent of child fatalities in 2007 had received prior services through CPS (as cited in Gaudiosi, 2009). This tragedy is compounded by the fact that as many as one-fifth of children killed from maltreatment had interacted with a healthcare provider in the month prior to death, with many of the encounters being suspicious for undiagnosed abusive injuries (King, Kiesel, & Simon, 2006).

Unfortunately, many child maltreatment experts believe that these data may substantially underestimate the annual prevalence of maltreatment because child maltreatment is easily disguised. These data represent failures on many levels; failures to recognize maltreatment, failures to report, and failures of agencies to respond or substantiate maltreatment (Gilbert et al., 2009a).

**Outcomes and Costs of Child Maltreatment**

The outcomes of child maltreatment are more wide ranging than death and injury alone, including negative health and social consequences as well. Children who are maltreated are at increased risk for negative health behaviors including adverse psychological, physical, and behavioral consequences, academic difficulties and subsequent violent experiences and perpetration (Jenny, 2008; Rentz et al., 2008). Studies using a variety of neuroimaging techniques including functional magnetic resonance imaging (FMRI), positron emission tomography (PET) scans, and diffusion tensor imaging have demonstrated adverse brain development in children who have been maltreated (Choi et al., 2009; McCollum, 2006; Tomoda et al., 2009).
The effects of child maltreatment often have persistent, additive, negative health effects that can last into adulthood, including heart and liver disease, mental health problems, and social problems including unemployment and unwanted pregnancy (Anda et al., 2006; Gibbs, Martin, Kupper, & Johnson, 2007). Furthermore, child maltreatment is a major contributor to the 10 leading causes of death and disability in America and contributes a significant portion of the enormous burden of healthcare costs each year (Galano, 2007). The costs of child abuse related to medical care, lost productivity, public services, and quality of life are estimated at approximately $103.8 billion in 2007 dollars (Wang & Holton, 2007).

The Response to Child Maltreatment

Recognition

While Kempe’s article is often cited as the beginning of the modern response to child abuse and neglect, it wasn’t until 1974, with the passage of the Child Abuse Treatment and Prevention Act, that public and political recognition of the issue was established. This recognition led to a new focus on prevention of child maltreatment. Unfortunately formal prevention efforts have significantly waxed and waned over the last 30 years; and there remains a paucity of scientific support for many prevention initiatives (Daro & Donnelly, 2002; MacMillan et al., 2009). While it is intuitively and morally preferable to intervene before the child is hurt; formal support is vitally necessary for children who have been maltreated (WHO, 2006). Furthermore, it is difficult to focus on prevention if the risk factors for maltreated children are not recognized. Researchers and practitioners recognize that many cases of child maltreatment go undetected; and, as a result, those children do not receive formal help or protection (Gilbert et al., 2009a; Wang & Holton, 2007). Early detection of child maltreatment
and early intervention can help to minimize the likelihood of further violence and long-term health and social consequences. To achieve this end, frontline workers regularly in contact with children and families, especially teachers who have the most frequent ongoing contact with children, must be able to recognize the warning signs that indicate children and families who may need assistance; and they must also be able to act on them. Creating an ability to detect maltreatment early and intervene requires special training of school professionals.

**Reporting**

Most developed countries, including the United States, have a system of mandatory reporting of child maltreatment that requires many service providers to report any suspicion of child maltreatment to the child protection authorities (WHO, 2006). Individuals designated as mandated reporters typically are those who have frequent contact with children. These individuals may include social workers, teachers and other school professionals, physicians and other healthcare providers, mental health professionals, childcare providers, medical examiners or coroners, and law enforcement officers (Child Welfare Information Gateway, 2008).

Mandatory reporting statutes exist in all 50 states, the District of Columbia, and all U.S. territories that require the reporter to act on reasonable "suspicion of abuse" (as cited in Gaudiosi, 2009; Foreman & Bernet, 2000). In most states, therefore, failure to report suspected child abuse carries criminal and civil sanctions (Child Welfare Information Gateway, 2008; Dombrowski, Emmanuel, & McQuillan, 2003). The U.S. military community in Japan has similar mandatory reporting laws (Department of the Navy Regulation 1137, n.d.; Marine Corps Bases Japan Order 1752.2B, 2006). Mandated reporters include any civilian in a position of "trust", including healthcare personnel, daycare providers, teachers and other school
professionals. In addition, all military members are considered mandated reporters, with the exception of Judge Advocate General (JAG) staff, chaplains, and mental health providers. However, these professionals must waive any rights to confidentiality or privileged communication if withholding information represents an “imminent threat”. Reporting child maltreatment is not anonymous, but disclosure of the reporter’s name is not made available to the family in question. The exception to this is physicians who provide medical evidence to substantiate the abuse.

Despite the creation of mandatory reporting laws, professionals who come into contact with children often are reluctant to report suspected child abuse (Kenny 2001; Reiniger, Robison, & McHugh, 1995). There are many reasons for this reluctance, including misunderstanding of the reporting laws, fear of making an false report, a poor impression of child protective services, fear that reporting will exacerbate an already delicate situation, fear of legal or professional reprisal, belief that "proof" is needed before a report should be made, and lack of understanding of what constitutes maltreatment (Kenny, 2004).

Background

*Child Maltreatment in Military Communities*

Child maltreatment is a significant public health concern in both military and civilian populations. There are mixed data regarding the prevalence of child maltreatment in military families compared to civilian families (Chamberlain, Stander, & Merrill, 2003; McCarroll, Ursano, Fan, & Newby, 2004; Rentz et al., 2006; Rentz et al., 2008). The reasons for the conflicting reports include methodological differences, lack of a standardized method for recording child abuse reports within the Department of Defense (DoD) and across the nation,
utilization of different data sources and datasets, and variations in the definitions of abuse and neglect between the two populations (Chamberlain, Standler, & Merrill, 2003; Rentz et al, 2008).

Although it remains unclear how the incidence of child maltreatment in military families compares to civilian rates of child maltreatment, what is clear is that child maltreatment is a significant problem in the military community and there are several correlates of child maltreatment unique to the military family.

Maltreatment Risk Factors for Military Families

In general, the risk factors for child maltreatment are not as prevalent in military families as in nonmilitary families. Military families receive healthcare and housing at least partially funded by the government, and all are financially supported by at least one employed family member. Military members are required to pass aptitude tests and may be discharged for drug and alcohol problems. Some early research suggested that the authoritarian employment contexts and high levels of exposure to violence at work might predispose military parents to domestic violence (Dubanoski & McIntosh, 1984, as cited in Chamberlain, Standler, & Merrill, 2003).

Other risk factors for child abuse specific to the military include those challenges military families face that make them more vulnerable during high levels of stress: financial burdens among junior enlisted members, long family separations, frequent moves, and isolation from family, friends, and relatives. Perhaps the most salient and contemporary factors are frequent family separations, specifically deployments, and being stationed in an overseas, foreign environment.
Separation and Deployment

For military families, separations are inherent. Since September 11th, 2001, over 1 million U.S. troops have been mobilized and deployed to active theaters of conflict in Afghanistan and Iraq. Forty-four percent of deployment eligible active duty service members and 38% of deployment eligible reserve force members have nearly 1.9 million dependent children among them; two-thirds of these children are 5 years of age or younger (Lamberg, 2008). Although military families have been found to demonstrate high levels of resilience, most of the studies supporting this notion predate the current conflicts (Lamberg, 2008).

Deployments pose unique challenges and are associated with stress for the active duty member, the nondeployed spouse, and children (Gibbs et al., 2007). The impact and stress of war may occur before, during, and after deployment and extend beyond the military member to include stress and emotional upheaval for his or her family (McNulty, 2003; Rentz et al., 2007). With the current no-end-in-sight war pace, the pressures and stresses placed on military members and their families due to repeated deployments and extended separations is mounting. Marital collapse, combat stress, post traumatic stress disorder, and family violence, including spouse abuse and child maltreatment, are emergent concerns within United States military communities around the world (Lamberg, 2008; Rentz et al., 2007).

Stress can occur for the service member as the result of combat-related situations. Both physical and emotional injuries can linger throughout the deployment and negatively affect interactions between the service member and family unit upon return. Many times the mental health effects of combat may not emerge for several months after deployment. In a screening of 88,235 United States soldiers, Milliken, Auchterlonie, and Hoge, (2007) found a four-fold
increase in interpersonal conflicts six months after returning from combat. This underscores the lasting effects of deployment stress on the spouse and children as well.

Deployments are associated with behavior problems in children and can exacerbate parental stress. Evidence suggests that fighting, defiance, fear, depression, anxiety, and school difficulties are common among children of military families whose fathers are absent (McNulty, 2003). Typically children’s behavioral responses and mental health status during noncombat or routine deployments relate to levels of concurrent family stressors (Chartrand & Siegel, 2007). Less is known about children from U.S. military families during times of war. Research on the response of children and military families during Operation Desert Storm demonstrated an increase in depressive symptoms and sadness in children (Rosen & Teitelbaum, 1993).

Chartrand, Frank, White and Shope (2008) described the effects of wartime military deployments on the behavior of young children in military families. In a cross-sectional study at child care centers on a large Marine Corps base, they found that children age three or older with a deployed parent exhibit increased behavioral symptoms compared with peers without a deployed parent after controlling for caregiver stress and depressive symptoms.

The current war is markedly different from prior conflicts due to repeated deployments, in-depth media coverage, and more frequent communication with the deployed services member. As a result, the “home front” is on the frontlines in way that has never occurred before and may be an additional source of family stress.

Finally, deployments are associated with increased stress on the parent remaining at home as they become de facto single parents: Disruption of family roles, uncertainty of the service members safety, inability to plan for the future can all contribute to a heightened sense of
loneliness, depression, and difficulty making decisions (Gibbs et al., 2007; McNulty, 2003). Moreover, nearly 39% of child maltreatment in the United States occurs at the hand of the mother (as cited in Gaudiosi, 2009). Because the majority of military members are male, the remaining stressed parent is most often the child’s mother.

Consequently, deployment of the active duty member is associated with a significant increase in the incidence of child maltreatment in military families (Chamberlain et al., 2003; McNulty, 2003; Rentz et al., 2007). Rentz and colleagues (2007) reported that among military personnel with at least one dependent, the rate of child maltreatment in military families’ increases by approximately 30% for each 1% increase in the percentage of active-duty personnel departing to or returning from operation-related deployments. In Army enlisted ranks, the rate of child maltreatment increased 42% during deployments; and the rate of moderate or severe child maltreatment was more than 60% greater during deployments (Gibbs et al., 2007).

Overseas Environment

Being stationed overseas in isolated locations often places additional stress on both deployed and nondeployed families due to the high operational tempo, social isolation, and a paucity of family support programs (Chamberlain et al., 2003; McNulty, 2003). Children in military families are even more vulnerable in a foreign country where they do not have access to child protective services.

Child Maltreatment in U.S. Military Families in Japan

Currently, Japan-based Marines deploy regularly at 3-month intervals; sustaining 10-month and 12-month deployment periods. In addition, Marines living in Japan experience repeated deployments during their tour. A typical Marine will expect a combat-related
redeployment after the required 7-month dwell time at home; however, noncombat related deployments do not have this safety net. In fact, the mission for many Marines includes frequent short-term duty to other foreign nations for periods of two to six weeks or more. This process leaves behind nearly 8,000 dependents in single-parent homes at any given time. In addition, the U.S. military population in Japan is transient in nature, which contributes additional stress for both the active duty service member and family. Of additional concern is the absence of a formal Child Protective Service (CPS) agency.

McNulty (2003) reported that U.S. military families stationed in Japan reported stressors atypical of military families living in the United States, including higher cost of living, limited and substandard housing options, considerable language barrier, over-crowded living conditions, limited spousal employment opportunities, and difficulty communicating with family members in the United States due to the significant time difference. As a result of these stressors, military families reported higher levels of stress that was manifested as higher healthcare needs. Of the 299 families assessed, 28% were found by the investigator to be “high risk” for stress, poor coping, and untoward healthcare outcomes. Furthermore, caretakers with children reported higher levels of stress, and families with children had more acute care visits during deployments compared to nondeployed families. Moreover there were significantly more maternal visits for psychiatric intervention for deployed families (p < .001). McNulty further described the number of spouses who exhibited sadness, anger, or signs of depression while stationed overseas for both deployed and nondeployed families as “alarming.”

There is a paucity of family support services for the number of Marine Corps families living in Japan. Although all active duty military families have free health care, there are a
limited number of services available to mitigate the stresses associated with the environment and military lifestyle; not enough per capita (Lee, 2008). For example, a family member wishing to see a mental health provider may wait as long as eight weeks for an acute visit. In addition, many families don’t utilize the services offered. The reasons for this are not explicit; however, the stigma associated with seeking help, particularly for mental health issues, is germane to the Marine Corps culture.

Unfortunately, this high tempo, high-stress environment has produced several untoward outcomes. During Fiscal Year 2007 there were 38 substantiated cases of child abuse cases within the Marine Corps community in Japan, up from 25 cases the previous year. This figure included six abuse-related deaths. Fiscal year 2008 has fared no better, with 118 reported cases of child maltreatment, 42 substantiated cases, and three abuse-related deaths (Shane Arnett [Marine Corps Community Services], personal communication, February 10, 2009).

The Role of Educators in Preventing Child Maltreatment

School professionals are in a unique role to recognize and report child maltreatment, because they have access to children and expertise in child development. In schools, children are seen on a daily basis and can be observed for signs and symptoms of maltreatment. In some instances, school staff may be the only professionals involved in a child’s care and in the best position to detect maltreatment. Therefore, schools provide a logical setting for implementing child maltreatment prevention programs.

In the United States, more than half of the reports to child protective services come from professionals, with the most frequent reports made by educational personnel (as cited in Gaudiosi, 2009). However, school personnel also fail to report many cases of suspected
maltreatment each year; and many educators are not entirely clear what the indicators of child abuse and neglect are or how to report suspected maltreatment (Gilbert et al., 2009a; Kenny, 2001, 2004; Webster, O’Toole, O’Toole, & Lucal, 2005). Reporting suspicions of maltreatment is imperative because it allows child protective authorities to become involved before a child is seriously injured or killed.

Despite the important role teachers and other school professionals have in identifying and reporting abuse, training for many mandated reporting professionals, including teachers, is often lacking. Inadequate preparation for professionals is “immeasurable in terms of missed abuse and subsequent childhood morbidity and mortality” (Botash, 2003, p. 239). Kenny (2001) found that most teachers reported their training in child abuse to be minimal and felt unprepared to report child abuse.

In reviewing the literature, several barriers to the identification and reporting of child maltreatment were identified, including: (a) lack of adequate training, (b) ambiguous interpretations of the law, (c) conflicting school policies, and (d) ethical concerns. Educating school professionals about the many dimensions of child maltreatment seems of paramount importance. In fact, it has been demonstrated that training and supporting school professionals can improve detection of child maltreatment to bridge the gap between the identified cases of child maltreatment in the system and the actual phenomenon of child maltreatment (Cerezo & Pons- Salvador, 2004).

Teacher education regarding child maltreatment preparedness must include appropriate knowledge of the legal definitions and clinical presentations of child maltreatment, an understanding of the various types of maltreatment, the ability to discriminate between typical
child behaviors and common indicators of maltreatment, as well as the ability to identify adults or family members who may be perpetrators of child maltreatment (Hinkelman & Bruno, 2008; Kenny, 2004; Pearl, 2005). Hinkelman and Bruno (2008) suggest a community approach to child maltreatment education in which a coalition of school professionals, health professionals and child protective services ensure that school personnel have adequate, comprehensive training.

Training programs and interventions focusing on increasing reporting of suspected child maltreatment will be stronger if based on empirical research (Hinkelman & Bruno, 2008; Kenny, 2004). For example, teachers within an overseas military community should be aware of risk factors specific to this population. Finally, because most school professionals are concerned about what may happen to them and the children and families involved after a report is made, these worries must be addressed. Therefore, training for school professionals should also include information on the options for medical and psychosocial treatment for those affected by maltreatment. One problem in providing more training for professionals is that they are already over-stretched in their work. The use of an online, self-paced tutorial may address this issue.

Educators’ Roles in Preventing Child Maltreatment in the U.S. Military Community in Japan

United States military families stationed in Japan have a paucity of resources aimed at mitigating the negative aspects of military life. Marine Corps Community Services (MCCS), in cooperation with the Counseling and Advocacy Program (CAP), provide services for families designed to combat the stresses involved with deployment and other adverse aspects of military life in Japan that may contribute to the prevention of child maltreatment. However, these services are few and poorly utilized (Rentz et al., 2007). In addition, children who are victims of neglect or abuse are often less visible within the healthcare system. Although approximately 10% of all
children who come in contact with pediatric or other primary care providers will have been exposed to maltreatment during the prior year, very few will present with injuries or clinical symptoms directly caused by maltreatment (Gilbert et al., 2009a). In fact, healthcare professionals contribute only a small proportion of reports to child-protection agencies (Gilbert et al., 2009a). Moreover, many healthcare providers are not adequately trained to recognize the signs and symptoms of maltreatment (Starling, Heisler, Paulson, & Youmans, 2009). Starling and colleagues reported that compared to pediatric physicians, family practice and emergency room physicians had received a paucity of child maltreatment training during their residency. Unfortunately, family practice and general practitioners comprise the majority of physician and non-physician providers for the Marine Corps community in Japan.

The Department of Defense Dependents Schools (DoDDS) educators and ancillary school personnel with direct student contact in Japan have a significant amount of contact with military children and are in a prime position to recognize and respond to at risk and maltreated children. In fact, physical abuse and sexual abuse is most common in school aged children (Gilbert, 2009a; Hinkelman & Bruno, 2008). Furthermore, neglect, the most common form of maltreatment, occurs most frequently in children under the age of 11 (Joffe, Giardino, & Sullivan, 2005). Thirty-eight percent of deaths from maltreatment are caused by neglect alone, and 26% are due to abuse; thus the importance of recognition and response for these children is especially urgent. Moreover, many maltreated children display recognizable signs and symptoms that include physical and emotional aspects, as well as academic difficulties which are detected best by the school professional.
Educators and supporting staff from DoDDS complete child maltreatment training annually. This training involves an hour in-service administered by “trained” lay staff from the Counseling and Advocacy Program (CAP). The material covered is antiquated and does not include the most recent research applicable to the at-risk military family. Kenny (2007) and Lanning, Ballard, and Robinson (1999) reported similar training discrepancies: Schools often implement child maltreatment awareness or prevention programs in which the content of those programs and the level of training given to personnel presenting those programs are not clearly understood. Further, prevention programs are often implemented but not independently evaluated (Carter, Bannon, Limbert, Docherty, & Barlow, 2006; MacMillan et al., 2009). In the U.S. military community in Japan, it is clear from the increasing number of child abuse cases that the current level of training is not enough.

**Definitions**

**Child Maltreatment**

By definition, child maltreatment includes four major types: neglect, physical abuse, sexual abuse, and emotional maltreatment. Each state has its own definition of abuse and neglect based on minimal standards set by Federal law. The Federal Child Abuse Prevention and Treatment Act (CAPTA) (P.L. 93-247; 42 USCA §5106g), as amended by the Keeping Children and Families Safe Act of 2003 (P.L. 108-36), defines child maltreatment as: (a) any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or (b) an act or failure to act which presents an imminent risk of serious harm (as cited in DiLillo, Perry, & Fortier, 2006). Leventhal (2005) offers the following comprehensive definitions:
• **Neglect** is defined as acts of *omission* and includes the failure to provide adequate nutrition, clothing, shelter, or supervision. Neglect also includes abandonment, the failure to ensure that the child receives adequate healthcare, dental care, or education. Neglect can be a single event, but is often a pattern of unsafe or inadequate care. Neglect represents a deficiency on the part of the caregiver or parent to provide for a child in a manner that promotes healthy growth and development.

• **Physical abuse** is defined as acts of *commission* toward the child by a parent or caregiver. Such acts result in harm to the child, or intend to harm the child even though there may be no actual harm or only minor injury. It can include injuries that occur when a child is punished severely (corporal punishment) or when a parent loses control and shakes a crying infant.

• **Sexual abuse** is the “involvement of adults, older children, or adolescents in sexual activities with children who cannot give appropriate consent and who do not understand the significance of what is happening to them” (Leventhal, 2005, p. 2). These activities typically violate family or social taboos. Examples of sexual abuse include sexual touching of the genitalia, oral sex, and attempted or actual sexual intercourse. Sexual abuse also encompasses the inclusion of children in pornography. When sexually abusive behaviors occur between two children (i.e., an adolescent victimizes a younger child) some authors have proposed a 5-year age difference (or greater) between the victim and perpetrator for the act to be considered sexual abuse (Yates, 1991, as cited in Ricci & Wientzen, 2005).
- Emotional abuse, also known as psychological maltreatment, is defined as a repeated pattern of damaging interactions between the parent/s or caregiver/s and child that become “typical of the relationship” (Leventhal, 2005, p. 2). This form of maltreatment occurs when a child repeatedly feels that he or she is unwanted, unloved, or worthless. Emotional abuse can include constant criticism, threats, belittling, and ridiculing, actively rejecting the child or ignoring the child’s emotional needs. Emotional maltreatment is often accompanied by other forms of maltreatment, and may, in fact, be the most common form of child maltreatment. However, children are infrequently reported to child protective agencies for emotional maltreatment.

Military Family

For the purposes of this paper, a military family includes an active duty service member and his or her dependents. Military dependents are the spouse(s), children, and possibly other familial relationship categories of a sponsoring military member for purposes of pay as well as special benefits, privileges and rights.

Military Deployment

A military deployment is the movement of an individual or entire military unit away from home, to another location to accomplish a task or mission. The mission may be as routine as providing training or as dangerous as a war.

DoDDS

The Department of Defense Education Activity (DoDEA) is a Department of Defense field activity operating under the direction, authority, and control of the Undersecretary of Defense for Personnel and Readiness and the Deputy Undersecretary of Defense for Military
Community and Family Policy. There are three educational systems within DoDEA: Department of Defense Dependent Schools (DoDDS)-Pacific, DoDDS-Europe, and Domestic Dependent Elementary and Secondary Schools (DDESS). The DoDDS-Pacific encompasses four pacific school districts: Guam, Japan, Korea, and Okinawa; 45 schools and 24,000 students affiliated with 18 military installations.

_Educators, School Professionals and School Personnel with Direct Student Contact_

Elementary school educators (teachers) and school professionals within the military community in Japan include all DoDDS general and special educators, school counselors, school nurses, and school administrative staff such as the principal and assistant principal, employed at one of the elementary schools located within the Marine Corps community in Japan. Direct student contact staff members include teacher aides and other administrative personnel.

_Significance to Nursing_

Like all healthcare providers, pediatric nurses and pediatric nurse practitioners have played key roles in preventing and responding to child maltreatment. These roles traditionally included identifying and reporting cases of suspected child maltreatment, providing a comprehensive healthcare evaluation, and implementing an efficacious treatment plan. Historically, pediatric healthcare providers have paved the way for improvements in diagnosing many forms of child abuse and neglect, including nonorganic failure to thrive, child sexual abuse, and other, rarer, forms of maltreatment. Moreover, it was the efforts of pediatricians and other pediatric healthcare providers that have led to a clearer understanding of how child maltreatment can cause immediate death or severe disability. Perhaps the most critical role of pediatric healthcare providers is advocacy aimed at raising awareness and preventing child
maltreatment at the institutional, community, or societal level. Because advocacy can mean many different things, Bross and Krugman (2009) offer the following range of activities to frame the challenge and potential of pediatric maltreatment advocacy: (a) membership and active participation in professional organizations; (b) involvement with locally relevant legislation; (c) forming lasting partnerships with parents and family, and consistent promotion of anticipatory guidance with patients and families; (d) active involvement with public education and the formation of strong working relationships with the media; (e) involvement and support of both academic and private foundation programs aimed at child maltreatment prevention or child welfare promotion; (f) promotion and involvement in courtroom and appellate legal advocacy; and, (g) awareness and involvement in state, federal, and international legislation for children and families. Without sustained pediatric advocacy, many advances in children’s health, and more specifically, the prevention of child maltreatment, will not be realized.

Because nurses and nurse practitioners are respected professionals within their community, this status can be parlayed into effective advocacy for the development of evidenced-based policies and programs to support families and prevent child maltreatment and other harm to children. The new doctor of nursing practice (DNP) focus on the health of populations can effectively educate and train other key child care professionals. In fact, the National Association of Pediatric Nurse Practitioners (NAPNAP) encourages pediatric nurse practitioners to serve as educational resources to healthcare and related professionals regarding the prevention, identification, and management of child maltreatment (NAPNAP, 2007). The DNP is even more central to child maltreatment at this population level.
An equally important role in pediatric healthcare professionals in the area of child maltreatment is research. Kerns (1998) and Theodore and Runyan (1999) summarized the most significant needs for research in child maltreatment for the future, which included a focus on effective methods of training and valuable curriculum development. The doctorally prepared pediatric nurse practitioner will be uniquely positioned to respond to child maltreatment issues on many levels, especially in the realm of research. The underpinnings of the DNP education focuses on evidence based practice, the critique and analysis of scientific research, and finally, the translation of knowledge generated from research into clinical practice. These concepts and skills will be invaluable to child maltreatment prevention research and advocacy efforts.

**Purpose**

The purpose of this practice inquiry project was to explore the development, design and pilot testing of a web-based tutorial for DoDDS elementary school teachers, professionals, and ancillary school staff with direct student contact within the Marine Corps community in Japan specifically relating to child maltreatment. The intervention is based on recent literature, founded in the stress and coping model of child maltreatment, and grounded in the framework for the prevention of child maltreatment from MacMillan et al. (2009). The tutorial focused on recognizing and responding to child maltreatment in military families residing in an overseas duty location.

It was hypothesized that participating in this web-based, child maltreatment tutorial would significantly improve the participants’ knowledge and awareness of risk factors and signs and symptoms of child maltreatment, and increase their understanding and confidence regarding reporting procedures for children in military families. In addition, it was further hypothesized
that participants would report that a web-based, self-paced tutorial is a convenient and efficient means for maltreatment education.
Conclusion

This chapter summarized the magnitude of the problem of child maltreatment in the United States and in United States’ military communities, domestic and abroad, including risk factors unique to this population. The crucial role that educators, school professionals, and other school personnel with direct student contact have in terms of recognizing and reporting child maltreatment was highlighted, including barriers to accomplishing this responsibility, such as ineffectual training. In addition, this chapter discussed the role of the doctorally prepared pediatric nurse practitioner in responding to child maltreatment including multidisciplinary education and training efforts. Finally, the chapter outlined the purpose of the practice inquiry project to explore the development and pilot testing of a web-based tutorial regarding child maltreatment for school personnel within the military community in Japan.
CHAPTER TWO: THEORETICAL UNDERPINNINGS OF CHILD MALTREATMENT

Introduction

This chapter will present the theoretical models and framework used to understand the phenomenon of child maltreatment and inform tutorial development. First, the stress and coping model of child maltreatment (Hillson & Kuiper, 1994) is posited as an appropriate model to comprehend the occurrence of child abuse and neglect within the military community. The framework of child maltreatment prevention and associated impairment (MacMillan et al., 2009) is presented as a means to identify the current services and gaps which lead to the creation of the web-based child maltreatment tutorial. Finally, this chapter will present two models of on-line teaching and learning; both founded in constructivist theory, which were used to inform the website and tutorial development.

Stress and Coping Model of Child Maltreatment

The understanding of how abuse and neglect occur in families has changed over time. Initial models generally posited a single antecedent factor. For example, the perpetrator model, prominent in the 1970’s, focused on parental psychopathology as the sole factor causally related to maltreatment. Child-based models focused on characteristics of children, such as prolonged crying, hyperactivity, and disobedience that were aversive to their parents or caregivers, thus placing the children at risk. Ecological models focused on socioeconomic disadvantage as a significant factor (Hillson & Kuiper, 1994; Levanthal, 2005).

An optimal framework of child maltreatment should focus on the abnormalities in the parent-child relationship in the context of an ecological model of parenting (Levanthal, 2005). Indeed, the evolution of many theoretical approaches to child maltreatment has progressed to the
point of complex, multifactorial models that incorporate parental, child, and ecological variables (DiLillo, Perry, & Fortier, 2006; Gibbs, Martin, Kupper, & Johnson, 2007; Hillson & Kuiper, 1994; Levanthal, 2005). These recent theories however, all converge on the notion that caregiver stress plays a critical role in determining child maltreatment. Accordingly, the current study posits that the stress and coping model of child maltreatment as described by Hillson and Kuiper (1994) is an appropriate model for understanding the causes of child maltreatment within the military community. In brief, the stress and coping model of child maltreatment suggests that functional appraisals of potential stressors and facilitative coping strategies will most often facilitate healthy interactions between caregiver and child, while dysfunctional appraisals and coping strategies will increase the likelihood of maltreatment. Availability and utilization of external support sources are also integral to this model. Using this model to understand child maltreatment in U.S. military families living in Japan, one could hypothesize that the stress associated with deployments, coupled with the stresses imposed by living in an overseas environment; both described as risk factors for abuse and neglect in the prior chapter; in the face of inadequate external support services or ineffective coping strategies, could be triggers, or antecedent factors for the occurrence of maltreatment.

A Framework for Prevention of Child Maltreatment

A framework for prevention of child maltreatment has been posited by MacMillan et al., (2009) that addresses interventions aimed at prevention of child maltreatment (Figure 1).
FIGURE 1. MacMillan Prevention Framework with IOM Criteria (MacMillan et al., 2009)
This framework is vital to understand how a child maltreatment tutorial for teachers could contribute to child maltreatment prevention efforts. The prevention categories within the framework were developed by the Institute of Medicine (IOM) in 1994 (as cited in Springer & Phillips, 2007) as universal, selected, and indicated. Each category will be described below.

**Universal Prevention**

“Universal” prevention strategies often seek to strengthen family functioning. The philosophy of universal prevention is that keeping children safe from maltreatment is the responsibility of the entire community. The long-term goal of such strategies is to educate the entire community to create social change that is intolerant of child maltreatment (Bates & Hudson, 2005). Universal prevention efforts target an entire population, such as all new parents. For example, abusive head trauma education for new parents before discharge from the hospital has been shown to reduce the incidence of shaken baby syndrome by nearly 50% (Dias et al., 2005). In the military community in Japan, universal prevention efforts include the New Parent Support Program and screening all new mothers for post-partum depression.

**Selected Prevention**

“Selected” prevention efforts focus on high risk groups such as teenage mothers or premature infants. In the military community, selected prevention efforts include support groups for spouses of deployed service members and the Exception Family Member Program for those families with special needs children.

**Indicated Prevention**

“Indicated” prevention interventions are synonymous with treatment; aiming to prevent recurrences of abuse or neglect and minimize potential sequelae. Examples include rehabilitative
services for abusive parents and parent support groups for the non-offender parent of children who have been sexually abused.

Empirical data, clinical experience, and sound theory regarding the etiology of the problem of maltreatment within any community should guide prevention efforts (Daro & Donnelly, 2002). While there is a paucity of evidence on the effectiveness of universal and selected prevention strategies for child maltreatment, there is even less evidence on the effectiveness of interventions for responding to cases of child maltreatment (MacMillan et al., 2009). Using this approach, a web-based tutorial for school-based mandated reporters regarding child maltreatment, which focuses on the specific risks for military families living overseas, can be considered a universal prevention intervention, because the impact of the tutorial, although targeted at a selected subpopulation of the community, extends beyond that population to include the military community as a whole. In fact, increasing knowledge of child maltreatment risk factors, improving awareness of the signs and symptoms of child abuse and neglect, and informing the largest group of mandated reporters about the responsibilities and procedures of reporting suspected cases of child maltreatment, has the potential to reduce the incidence of child maltreatment within the military community in Japan. Moreover, this intervention can also be considered both a selected and indicated prevention intervention by increasing teacher awareness of at-risk students and families, improving their ability to recognize signs and symptoms of ongoing maltreatment, and increase their confidence and proficiency in reporting their suspicions.
Learning Theories

Constructivism

Constructivist learning and teaching principles were used to guide the development of the child maltreatment tutorial. Magnussen (2008) describes the use of constructivist principles in an e-learning environment. Constructivism is a psychological theory of knowledge that challenges how traditional learning theories account for what learners have learned and how they have learned it. This theory redirects the onus of learning from the educator to the learner, placing the educator in the role of facilitator of learning rather than a deliverer of information. The constructivist view is that all learning is built by individuals and is not a passive process. Several recurring themes emerge from the constructivist literature regarding the essential characteristics that influence learning: (a) learners construct their own learning, (b) new learning depends on current understanding, (c) learning is facilitated by social interaction, or interactivity, and (d) meaningful learning occurs within authentic learning tasks (Liu, 2003). Because the emphasis is on students/participants building upon their prior knowledge, it is imperative that the tutorial constantly assesses the knowledge that the students have gained. Two models of learning that specifically target the online learner and e-learning environment and utilize constructivist principles were chosen to inform the development of the child maltreatment tutorial: WeBTAS (Janicki & Liegel, 2001) and the R2D2 model from Bonk and Zhang (2008). The WeBTAS model was developed to help instructors facilitate a more effective and meaningful on-line learning experience for the student, and the R2D2 model focuses more on the utilization of available online technology to enhance different styles of learning. Each model will be described below.
The tutorial design was facilitated by the on-line learning concepts posited by Janicki and Liegel (2001). Janicki and Liegel describe the development of a model for a web-based tutorial authoring tool (WeBTAS) based on a combination of instructional design concepts from the educational and instructional technology fields and those of the information systems and web-based design researchers. The goal was to provide instructors with a tool that would assist them in the development of more effective learning modules. To provide a sound foundation for learning, a series of instructional design concepts were included in the model. These concepts were chosen as they repetitively surfaced as the “keys to effective learning” in research and combined learning theories from behavioral psychology, cognitive theory and resource-based theories of learning, including constructivist principles (Janicki & Liegel, 2001, p. 62). In addition, these instructional design concepts capitalize on the web's interactivity in their implementation. These design concepts include: (a) the instructor as a facilitator, (b) a process for ongoing testing, (c) the use of a variety of presentation styles, (d) the ability to solicit student feedback, (e) the use of multiple exercises, (f) clear navigation (g) the use of hands-on problems (h) easy access to help screens, (i) a learner controlled pace, and (j) a consistent layout.

Moreover, the tutorial developer is encouraged to embed the following five components within the tutorial design: (a) learning objectives, (b) prerequisite knowledge (c) at least three different styles of presenting learning content, (d) permitting the learner to control the pace and direction of the lesson, and (e) provisions for feedback and testing.

The web-based child maltreatment tutorial included many of these concepts including: the instructor as facilitator through the presentation of relevant, accessible information; a process
of on-going testing through the use of section mini-quizzes; a variety of presentation styles including stories, case-vignettes, video, audio, and written text; the use of multiple exercises including case-based quizzes, mini-quizzes with learner feedback, hyperlinks to external information, and pre- and post testing of information; and finally: explicit objectives, clear navigation, a leaner controlled pace, and a consistent layout. Table 1 highlights the WeBTAS concepts within the child maltreatment tutorial.

TABLE 1. WeBTAS Components in Child Maltreatment Tutorial

<table>
<thead>
<tr>
<th>WeBTAS Concepts</th>
<th>Child Maltreatment Tutorial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor as facilitator</td>
<td>Presentation of relevant, easily accessible information</td>
</tr>
<tr>
<td>A process of on-going testing</td>
<td>Section mini-quizzes with immediate feedback mechanism</td>
</tr>
<tr>
<td>A variety of presentation styles</td>
<td>Locally relevant stories, case-vignettes, video, audio, and written text</td>
</tr>
<tr>
<td>The use of multiple exercises with provisions for feedback</td>
<td>Case-based quizzes, mini-quizzes with immediate feedback, hyperlinks to external information supporting tutorial content, and pre- and post testing of information</td>
</tr>
<tr>
<td>Other (embedded) components</td>
<td>Explicit objectives, clear navigation, a leaner controlled pace, and a consistent layout</td>
</tr>
</tbody>
</table>

**R2D2**

Bonk and Zhang (2008) presented the Read, Reflect, Display, and Do (R2D2) model, which aligns well with various learning styles, including constructivism, and multiple intelligence measures. The R2D2 model has a special focus on the application of emerging learning technologies and blended learning. The model also advocates a dynamic approach to online learning that encourages instructors, designers, and learners to strategically select diverse
learning activities, incorporated in various sequences in order to best complement the goals of the program. In addition, choosing activities that integrate the four types of learning activities (reading, reflecting, displaying, and doing) and target auditory or verbal, reflective or observational, visual, and tactile or kinesthetic learners can facilitate a more successful learning experience. This information was used to guide web-site construction and layout, as well as the tutorial design. Table 1 highlights how each phase of the R2D2 model was used to inform the child maltreatment web-site and tutorial.

TABLE 2. Learning Preferences, Activities and Technologies in R2D2

<table>
<thead>
<tr>
<th>Phase and Type of Learner</th>
<th>Learning Preferences and Activities</th>
<th>Technology Tools Used in Child Maltreatment Tutorial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read: Auditory and verbal learners</td>
<td>These learners prefer words, sounds, and spoken or written explanations</td>
<td>PowerPoint text, FAQ, Resources, audiovisual of child abuse expert, coffee house video</td>
</tr>
<tr>
<td>Reflect: Reflective and observational learners</td>
<td>These learners prefer to observe different perspectives, reflect through self testing, review and summary writing</td>
<td>Section mini-quizzes, different perspectives through hyperlinks to news articles and abuse expert</td>
</tr>
<tr>
<td>Display: Visual learners</td>
<td>Visual learners prefer diagrams, maps, flowcharts, pictures, films and demonstrations</td>
<td>Video presentations, hyperlinks</td>
</tr>
<tr>
<td>Do: Tactile and kinesthetic learners</td>
<td>These learners prefer to role play, stories and scenarios, multisensory activities</td>
<td>Local stores, case-vignette mini-quizzes, videos</td>
</tr>
</tbody>
</table>

Conclusion

This chapter outlined the theoretical underpinnings of child maltreatment and child maltreatment prevention. The stress and coping model of child maltreatment as described by Hillson and Kuiper (1994) was posited as an appropriate model to understand the origins of child maltreatment within a military community, suggesting that the risk factors of deployment and
living in an overseas environment are antecedent variables to the occurrence of child maltreatment. A framework for the prevention of child maltreatment developed by MacMillan et al., (2009), which uses constructs from the IOM, was discussed in the context of the current interventions in the military community in Japan and included the child maltreatment web-based tutorial within this prevention framework. Finally, constructivist learning principles in the context of two web-based teaching/learning models were discussed as informing the learning process for, as well as the development of, the child maltreatment web-based tutorial design.
CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

This exploratory intervention study used a quasi-experimental, one-group, pre-test-post-test design to determine the effectiveness of a web-based educational intervention relating to child maltreatment. Participants’ pre-test scores on a test of child maltreatment risk factors, signs and symptoms of maltreatment, and reporting procedures within the U.S. military community in Japan, were compared to post-test scores on an identical test after viewing the tutorial.

The independent variable was the web-based child maltreatment tutorial with a categorical or nominal level of measurement. The dependent variable was participant child maltreatment knowledge (measured with an assessment tool), and the level of measurement was continuous or ratio. It was hypothesized that participating in this web-based, child maltreatment tutorial would significantly improve the participants’ knowledge, awareness of risk factors, signs and symptoms of child maltreatment, and increase their understanding and confidence regarding reporting procedures for children in military families. In addition, it was further hypothesized that participants would report that a web-based, self-paced tutorial is a convenient and efficient means for maltreatment education.

The main outcome measures included comparison of pre-test and post-test scores to determine the effectiveness of the tutorial to increase user knowledge. In addition, process measures related to the tutorial and web-based format were assessed.

Setting and Sample

A sample of convenience was recruited from the DoDDS school districts in Japan, specifically targeting elementary school teachers, professionals and direct student contact staff members. Adult educators, school professionals and school employees with direct student
contact; employed within the school district on a Marine Corps installation, an ability to read and understand English, and Internet access were criteria for inclusion. Non-English speaking elementary school teachers, school professionals, or supporting staff with direct student contact; persons less than 18 years of age; lack of Internet access; school teachers, school professionals, or supporting staff with direct student contact employed in a school district other than DoDDS, or on a non-Marine Corps military installation were excluded from participating. The rationale for recruiting this population was an attempt to separate the Marine Corps schools and families from the Air Force schools and families. The reasons for this include markedly different operational tempos between the two services and different methods of responding to child maltreatment, impacting family vulnerability differently.

Recruitment and Consent Procedures

Potential participants were initially contacted in one of three ways: face-to-face, newspaper advertisement, and email. In each case, interested potential participants were asked to follow up the initial contact by contacting the PI via phone or email for eligibility screening. A study advertisement was placed in the local Stars and Stripes newspaper. Interested potential participants were instructed to call or email the PI for eligibility screening. The PI was personally familiar with several potential participants as a result of her membership within the school community and larger military community. Eligible professional and personal acquaintances of the PI were contacted in person or via email. Potential participants contacted in person were given a business card containing a brief description of the study and the principal investigator’s (PI’s) contact information, including phone number and email address. Interested potential participants were invited to call or email the PI for eligibility screening. Eligible professional and
personal acquaintances were also contacted by the PI via email. An email version of the business card was attached to the email. Interested potential participants were invited to call or email the PI for eligibility screening.

**Recruitment and Eligibility Screening**

A recruitment script was used to explain the project to interested individuals when they made contact with the PI. The PI read the recruitment script over the phone or distributed it via email. For those individuals indicating a desire to participate, eligibility screening was conducted immediately by phone or by subsequent email. Subsequently, the PI read or emailed all eligible participants the Website Access Information. The Website Access Information contained the web-site IP address, a user name and password. Those eligible and willing to participating in the study could access the tutorial website from any computer with internet access.

An *a priori* sample size calculation was done using G POWER 2. Using an effect size of 0.6 (Kenny, 2007), an alpha of 0.05, and a power of 0.8, the recommended sample size to demonstrate a statistically significant difference between pre-test and post-test scores was 36. To accommodate for any dropouts, a sample size of 40 was set as the goal.

**Instruments**

**Questionnaire and Formative Evaluation**

The “Tutorial Participant Questionnaire and Formative Evaluation” was constructed by the author to obtain demographic information and participant feedback about the structure of the tutorial. The questionnaire included five questions regarding participant occupation, years of experience, gender, age, and ethnic background. The formative evaluation section included one question for participants to rate their computer skills (novice, experienced, expert) and nine
statements about the structure of the tutorial (i.e., “I like the self paced nature of the tutorial”) which were documented on a Likert scale (5-point: strongly agree to strongly disagree) with forced response. Four open-ended questions regarding the subjects’ perceptions of the tutorial were included (i.e., What was the most important piece of information you learned? What did you like best? What did you like least? How could this tutorial be improved?). The questionnaire and formative evaluation questions were presented as part of the post-test after viewing the tutorial (Appendix A).

**Pre-test and Post-tests**

These tests contained the same 20 multiple choice or true/false (T/F) questions and assessed information covered in the tutorial including statistics, signs of maltreatment, and reporting procedures (Appendix A). Questions were constructed in consultation with a nationally recognized child abuse expert from Florida International University, a licensed child psychologist and military family expert, a Special Agent from the Naval Criminal Investigative Service, and the Judge Advocate, Chief of General Law, from the 18th Wing Group, Kadena Air Base, to ensure the accuracy of the information and that the content was reflective of the domain of interest. Psychometric measures of reliability or validity were not performed.

**Mini-quizzes**

Each section of the tutorial was followed by a mini-quiz ranging from three to five multiple choice or True-False questions (Figure 2). The quizzes highlighted the main points of each tutorial section with the exception of Section 4: Wrap-up and Case Vignettes (Figure 3). This mini-quiz consisted of realistic case-studies which followed with the question: What should
FIGURE 2. Screen Shot of Mini-Quiz
FIGURE 3. Screen Shot of Case Vignette

you do? For each question, the subjects were presented with a multiple choice response list. The quizzes provided participants with immediate feedback for both right and wrong responses. When participants chose the correct answer, a “You are correct!” slide appeared; for each wrong response chosen, a “Sorry, you are wrong” slide appeared along with the correct answer and rationale (Figure 4). The responses to the self quizzes were not recorded or measured by the PI.
FIGURE 4. Screen Shot of Quiz Feedback: Wrong Answer

Methods

Interested, eligible participants were given the IP address to access the tutorial website and instructions, including username and password, to log-on to the tutorial. After reading the website introduction and viewing a short video and photo gallery, participants were directed to the Disclosure Form. If the "I agree" link was selected, participants were taken to the log-in screen where they entered the username and password supplied by the PI. Once logged in, the subject was taken to the About Page, where instructions for navigating the website were
displayed (Figure 5). This page contained the Table of Contents which included links to the pre-test and post-test. In addition, the links to each tutorial section were presented. Participants were instructed to take the pre-test, view each tutorial section, and then complete the post-test before logging out. As participants worked through each tutorial section, they were able to test their knowledge through mini-quizzes. A link to Resources and Frequently Asked Questions (FAQ) were also contained in the Table of Contents.

FIGURE 5. Screen Shot of About Page

Data Collection Procedures

Results of the pre-test and post-test (the post-test included the Tutorial Participant Questionnaire and Formative Evaluation) were collected through links from the website to
Survey Monkey. Each participant generated one pre-test and one post-test. The pre-test and post-tests for each participant were linked together by the unique password each participant was given to log-on to the website.

Data Analysis Plan

All data (excluding open-ended questions) collected though Survey Monkey were entered into SPSS (2006) for analysis. Test scores (based on the number of correct responses) for both tests were calculated for each participant. The mean score on the pre-test was then compared to the mean score on the post-test (paired samples) using the Wilcoxon signed rank test. An alpha level of 0.05 was used for significance. Descriptive statistics, including percentages and frequencies were calculated for the demographic information and formative evaluation using SPSS. Rejection of the null hypothesis was set at alpha of 0.05.

Human Subjects Protection

The research project was reviewed and approved by the University of Arizona’s Human Subjects Protection Program. Informed consent was obtained through an embedded disclosure form (Appendix B) after the participant logged on to the tutorial web site. Participants were not able to access the tutorial or any data collection forms without clicking on the “I Agree” button on the disclosure form, which indicated they understood the terms of their participation.

No personal identifying information was collected or stored (i.e., name, social security number, IP address). Participants were able to view the website and complete the tests from any computer with Internet access, offering complete anonymity.
The collected data, stored in Survey Monkey, remain in a totally encrypted environment. Through Survey Monkey, data were password protected, available only to the PI. The PI opted to omit IP address collection to offer more participant protection.

Due to the sensitive nature of the website content, participants were provided with information to access a local mental health provider if needed. In addition, contact information for the Provost Marshal’s Office on each base was made available in several places (on the website and within the tutorial) in the event any participant had an immediate concern regarding the welfare of a child.

Conclusion

This chapter reviewed the study methodology including design, measures, sample, and setting. Procedures for participant contact, recruitment, and consent were reported. Finally, expected outcomes were presented.
CHAPTER FOUR: RESULTS

This chapter presents the results and conclusions of the present study. Percentages for the demographic and formative evaluation data, as well as prominent themes from the open-ended questions are also presented.

Sample

Of the 51 individuals recruited who received user names and passwords, 33 participants completed the pre-test, and 30 completed the post-test. The demographic information collected from the respondents revealed that 57% of participants were teachers; 67% were female, between the ages of 30 and 39 (43%) and 73% were Caucasian. Most (83%) rated their computer skills as experienced.

Data Preparation

The participants with missing post-tests were excluded from the data analysis. Two participants with completed tests were excluded from the test score data analysis as their pre-test scores were unusually low and considered outliers. There were four missing answers from the completed pre-tests, and three missing answers from the completed post-test. There was no pattern to the missing data, and each missing answer was different for each survey. Consequently, mean substitution was used to replace these values.

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

Table 3 presents the calculated mean scores for both the pre-test and post-test and corresponding ranges. Appendix C provides a tabular report comparing the percentage of correct responses for each question on the pre-test and post-test.
TABLE 3. Pre-test and Post-test Scores: Means and Corresponding Ranges

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>25th %</th>
<th>50th %</th>
<th>Median</th>
<th>75th %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test Scores</td>
<td>28</td>
<td>14.57</td>
<td>3.48</td>
<td>8</td>
<td>19</td>
<td>11.50</td>
<td>15.00</td>
<td>17.00</td>
<td></td>
</tr>
<tr>
<td>Post-test Scores</td>
<td>28</td>
<td>18.04</td>
<td>1.90</td>
<td>11</td>
<td>20</td>
<td>17.00</td>
<td>18.00</td>
<td>19.00</td>
<td></td>
</tr>
</tbody>
</table>

The Kolmogorov-Smirnov (K-S) test was used to determine whether the test scores were normally distributed. The K-S test demonstrated that the scores on the pre-test, $D (28) = 0.19$, $p < 0.05$ and the scores on the post-test, $D (28) = 0.21$, $p = 0.003$, were both significantly non-normal. In light of these results, it was determined that the data required non-parametric data analysis (Field, 2005, pp. 94-95) Thus, the appropriate statistical test was a Wilcoxon signed rank test, the nonparametric equivalent of the dependent $t$-test, to compare the means of these two related samples (Field, 2005, pp. 534-542).

Pre-test scores ($M = 14.57$, $SD = 3.48$) were significantly lower than post-test scores ($M = 18.04$, $SD = 1.90$); $z = -4.32$, $p < 0.001$, $r = -0.578$. Tables 4 and 5 summarize the SPSS output for the Wilcoxon signed rank test. These results indicate that there was a significant improvement in test scores after viewing the tutorial, as measured by higher scores on the post-test compared to the pre-test (Field, 2005, p. 539).

TABLE 4. Wilcoxon Signed Ranks Test: Ranks

<table>
<thead>
<tr>
<th>Pre-Mean score - Post-Mean score</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Ranks</td>
<td>24a</td>
<td>13.44</td>
<td>322.50</td>
</tr>
<tr>
<td>Positive Ranks</td>
<td>1b</td>
<td>2.50</td>
<td>2.50</td>
</tr>
<tr>
<td>Ties</td>
<td>3c</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[^a\] PreMean score < PostMean score
\[^b\] PreMean score > PostMean score
\[^c\] PreMean score = PostMean score
### TABLE 5. Test Statistics for Wilcoxon Signed Ranks Test

<table>
<thead>
<tr>
<th></th>
<th>PreMean score-PostMean score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Z</strong></td>
<td>-4.323&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

<sup>a</sup> Based on positive ranks  
<sup>b</sup> Wilcoxon Signed Ranks Test

Using Cohen’s effect size criteria, the effect size was large ($r = -0.578$), which represents a large change in level of knowledge from the pre-test to the post-test (Field, 2005, p. 541). Moreover, a large statistical effect size aligns with a reliable instrument. In addition, the large statistical effect size was achieved with a smaller sample size than calculated. Although this study never reached the targeted sample size of 40 based on the *a priori* sample size calculation, the current sample size of 28 was adequately powered to demonstrate a statistically significant difference between the mean scores on the pre-test compared to the post-test ($z = -4.32, p < 0.001, r = -0.58$). Finally, the large effect size strengthens the validity of the instrument.

**Rejection of the Null Hypothesis**

Since the p value of < 0.001 was less than the alpha of .05, the PI rejected the null hypothesis and concluded that there was a relationship between the web-based tutorial and participant knowledge. Specifically, there was a difference between the mean pre-test knowledge score and the mean post-test knowledge score among the participants viewing the tutorial. An examination of the difference between pre-test and post-test means showed that the tutorial resulted in improved knowledge test scores.

Of note, one question was consistently answered incorrectly on both the pre-test (75% of respondents answered incorrectly) and post-test (77% of respondents answered incorrectly). In response to “A report of child abuse or neglect can be made by: a) email, b) telephone, c) mail,
d) fax, or e) all of the above; the most common response was: e) “all of the above”. In fact, reports of suspected maltreatment in Japan can only be made by telephone. It can be concluded that this important piece of information was inadequately addressed within the tutorial.

Formative Evaluation of Web-based Tutorial

Results of the Formative Evaluation demonstrated generally positive findings. The majority of participants indicated that they liked the multimedia graphics and interactivity of the tutorial (97% agreed or strongly agreed); thought the quizzes were helpful (100% agreed or strongly agreed); felt the material was relevant to their profession (100% agreed or strongly agreed); indicated that the case studies and stories enhanced their understanding of the material (100% agree or strongly agree). In regards to the website itself, responses reinforced the need to improve the website navigation instructions and ease of navigation. Seventeen percent of respondents did not find the instructions for navigating the website easy to find. Thirteen percent felt that navigating the website was difficult. Although most participants liked the self-paced nature of the tutorial (100% agreed or strongly agreed), 30% indicated they were undecided or felt the material would be better presented in person.

Qualitative Findings: Responses to Open-Ended Questions

The PI continually analyzed the responses to the open-ended questions for themes during the data collection process using the framework method described by Pope, Ziebland, and Mays (2000). For the question, “What is the most important piece of information you learned,” several themes emerged. Most of the responses involved the child maltreatment statistics, risk factors in the military, and specifics of reporting laws. In response to the question: “What do you like best?” the most common responses were the real life examples and the interactivity of the
website (quizzes, videos, hyperlinks to more information). To the question “What did you like least?” the most common answer was the long load times for each tutorial section, or other technical issue (hyperlinks not working right). Three participants indicated they did not like the graphic nature of the pictures. One participant found the child abuse expert highlighted in the tutorial videos as unprofessional and distracting. Finally, in response to the question “How could this tutorial be improved?” the most common response was to shorten the time to download the presentations (Appendix D).

Conclusion

This chapter reviewed the results of the present exploratory study. This study was designed to evaluate the impact of a web-based tutorial on knowledge of child maltreatment on the part of school-based mandated reporters. A statistically significant increase in test scores (pre-test to post-test) was demonstrated using the Wilcoxon signed rank test for paired samples supporting an increase in knowledge after viewing the tutorial. Furthermore, the large effect size strengthened our confidence in the validity of the pre-test and post-test. Analysis of the qualitative data indicated that most participants found the tutorial to be informative and relevant and liked the web-based, self-paced format, but indicated some of the technical pieces of the tutorial could be improved including shortening the time it takes the tutorial sections to load.
CHAPTER FIVE: DISCUSSION

Discussion

This exploratory, quasi-experimental pilot study provided empirical evidence demonstrating that a web-based child maltreatment tutorial could be an effective means for increasing knowledge of child maltreatment for school-based mandated reporters in the military community in Japan. School-based mandated reporters significantly increased their test scores after viewing the tutorial, indicating that the online tutorial was effective, but also highlighting the lack of child maltreatment information possessed by participants before the training.

The web-based format of the tutorial, informed by constructivist learning principles utilizing two web-based teaching models, the WeBTAS and R2D2, was generally well liked by participants. The WeBTAS model was used in conjunction with the R2D2 model to facilitate a more effective and meaningful on-line learning experience for the participants by utilizing different forms of online technology to address different learning needs and styles. These models informed both the website development and layout, and tutorial design including the use of the section quizzes, case-vignettes, local stories, hyperlinks, videos, pictures and music. Although the long load times for certain tutorial sections were commonly cited as problematic, the majority of participants commented favorably about all aspects of the tutorial.

It was posited that a web-based child maltreatment tutorial could fit within the prevention framework described by MacMillan et al. (2009) as a universal, selective, and indicated prevention intervention. Increasing knowledge of child maltreatment in frontline workers regularly in contact with children and families, especially teachers and other school-based mandated reporters, may improve the identification, recognition and reporting of child
maltreatment cases. Although the findings of the study support a statistically significant increase in knowledge among participants (school-based mandated reporters), these results do not indicate that this web-based tutorial can increase recognition or reporting, thereby preventing or decreasing child maltreatment in military families on Okinawa.

Significance of Results to Nursing Practice

There is agreement in the literature that all mandated reporters, including school-based reporters, need better education and on-going training aimed at abuse and neglect identification and reporting. The literature also identifies a need for empirical evidence supporting the effectiveness of selected educational interventions (Gilbert, et al., 2009a; Hinkelman & Bruno, 2008; Kenny, 2004). Moreover, an interprofessional approach is recommended to not only improve the substance and dissemination of essential child maltreatment information; such as recognition and reporting, but to encourage a community-based coalition of child abuse experts and child welfare advocates (Crosson-Tower, 2003; Hinkelman & Bruno, 2008; Rauth-Farley & Stevens, 2005). A constructivist-oriented web-based tutorial approach to child maltreatment prevention through the educational community, the largest group of mandated reporters, may offer protection through intervention for children and families. In fact, these sentiments were recently reaffirmed at the Every Child Matters Education Fund rally by child welfare advocates and lawmakers in Washington DC on October 21st, 2009. Among the recommendations presented to federal lawmakers was the need to improve federal and state educational standards to improve the recognition and reporting of child abuse and neglect in mandated reporters. The current web-based child maltreatment tutorial could be an effective means of meeting this recommendation within a single school, school district, or military installation. Although the
tutorial was the work of a single professional, a pediatric nurse practitioner, the tutorial was constructed with the input of many disciplines: educators, child psychologists, law enforcement personnel, legal professionals, military leaders, and healthcare providers.

It is certainly within the scope of practice for the doctorally prepared pediatric nurse practitioner (DNP) to contribute to school–based and, indeed, community-based maltreatment education programs and advocacy efforts. The DNP is prepared to make the transition from providing care at the individual level to promoting health at the population level which is the type of work required for successful child maltreatment prevention interventions. For example, as a consultant, these professionals could network at the school or district level to guide and improve child abuse educational strategies based on sound theory, empirical evidence, and clinical experience. In the military community, this type of coalition is vital (Bowen, Martin, Mancini, & Nelson, 2000) for any intervention to be successful. The doctorally prepared nurse practitioner is particularly valuable in this collaborative role. Educated to critically analyze the literature and incorporate evidence into practice, including translational research at many levels, the DNP can not only tailor the educational content, but ensure that the best intervention is chosen and disseminated in the most successful way.

Strengths and Limitations

Strengths of this study include the use of a pre-test in this one group, quasi-experimental study. The use of a pre-test helps strengthen the likelihood that the results (increased knowledge) were the result of the tutorial. Furthermore, and perhaps more importantly, this study helped increase awareness and knowledge of the risk factors and signs and symptoms of maltreatment in military families in the majority of participants.
The limitations of the study include the use of nonprobability sampling and small sample size. A convenience sample within a relatively small overseas military community was recruited to participate in this study. In addition, many of the participants were known to and selected by the PI. This may have introduced sampling bias and represents a threat to external validity because the findings from the relatively small sample size of mostly Caucasian, female; DoDDS teachers in Japan are not readily generalizable to other populations. Furthermore the sample included only those DoDDS personnel employed on a Marine Corps installation, further limiting the generalizability of the results to other military service branches. A possible threat to the internal validity of the study includes a testing threat. The performance on the post-test may have been influenced by the pre-test as the time interval was relatively short. However, the pre-test and post-test questions were presented in different orders and the answers were randomly ordered on each survey for each participant to decrease this threat. On the other hand, the pre-test could have provided a sort of scaffolding that made participants more attentive to relevant information.

Another limitation of this study would be the use of an instrument (pre-test/post-test) which was not validated nor tested for reliability. However, because this research was designed to study the impact of a web-based tutorial regarding knowledge of child maltreatment on the part of school based mandated reporters, and the results confirmed that knowledge increased as demonstrated by an improvement in scores with a large effect size (z = -4.32, p < 0.001, r = -0.58), reliability was strengthened, given that reliable instruments introduce less error into statistical measurement and resulting analysis (Fairchild, n.d.). The large effect size also contributed to strengthening confidence in the validity of the pre-test/post-test. In addition, the
use of multiple assessment modalities of data collection to address the domain of interest, perhaps collecting self-reported assessment of child maltreatment knowledge in addition to the pre-and post-test, would have strengthened the study’s conclusions. Finally, the lack of control group is a limitation; a more rigorous research design would have helped rule out plausible rival hypotheses and strengthened the study’s conclusion.

Suggestions for Improving the Project and Future Considerations

The majority of participants commented favorably about the website and tutorial. This web-based platform offers convenient, easy access, at anytime, from anywhere, and permits the communication of relevant, accurate information about a serious and significant issue facing today’s military families: child maltreatment. This format also allows for independent learning for teachers and other school-based mandated reporters with varying learning styles. This type of approach may be useful in schools and school districts where little room exists for time away from the classroom for required annual training or training of new employees. Moreover, the content could be easily modified and tailored for any school district serving military families. In addition, the Internet and associated web-based technologies offers both instructor and learner multiple opportunities for rich, unique experiences not available in the traditional classroom/training setting. However, there are areas of the website and tutorial that could be improved.

Evaluation of an online educational course should include a critical evaluation of the site and course content. While several website evaluation criteria exist, I chose the “Criteria for Evaluating Web Sites” from the Southern Regional Education Board (n.d.) which includes evaluation of the course content for accuracy, appropriateness, and scope; and evaluation of the
technical aspects of the site including navigation, presentation, and usability. In addition, evaluation of these criteria must be an early and ongoing priority.

The content and information of the website and tutorial were assessed for accuracy, appropriateness, and scope by the PI in consultation with several subject matter experts. However, the technical aspects of the website (construction and tutorial design), although designed in consultation with an experienced webmaster, could be significantly improved. Of note, these issues were identified by the PI before any participants viewed the site. In fact, budgetary constraints prohibited ideal website construction, which impacted optimal performance of the site and, as a consequence, the tutorial. Having one PowerPoint slide per web page would not only improve the aesthetics of the site, but eliminate the frustratingly long load times reported by participants as an area for improvement. Another issue identified by the PI and also indicated by several participants as an area in need of improvement was the malfunction of hyperlinks within the tutorial. While programmed to open in a new window, this only occurred inconsistently for many users. If the hyperlink did not open a new browser, the participant was forced to start that section over. The quiz and flash conversion software (PowerQuizPoint; Power Flashpoint) posed additional constrains on the presentation of the tutorial. The quiz program would not support the addition of multiple quizzes throughout the tutorial. Rather the program collated them at the end of the presentation, prohibiting testing and feedback at the appropriate intervals through the presentation. This idiosyncrasy forced the PI to divide the tutorial into four separate sections.

It would be important to conduct psychometric tests of reliability and validity on the pre-test /post-test before using this instrument for future tutorial evaluations. Other considerations for
the website and tutorial would be to offer continuing education credits or a certificate of completion for all viewers. The addition of a Blog to answer questions and increase networking between individual in different schools and districts may be appealing if the tutorial were continued.

Conclusion

The education and training of teachers and other school-based mandated reporters is an important part of child maltreatment prevention (Crosson-Towers, 2003) and a DNP is well positioned to address this need within a community. While the DNP may continue to provide child maltreatment prevention measures on an individual level, it is at the community level where the DNP can exact the biggest difference. The DNP can be a leader within the community, educated to identify health risks and promote wellness on all levels, even for the most vulnerable populations within a community. Trained to develop interventions based on sound theory and empirical data or evaluate current interventions for effectiveness, the DNP can be instrumental in the education and training of school-based mandated reporters. The current study demonstrated how the DNP, as part of an interprofessional team of community professionals, evaluated current literature and empirical data, employed models and frameworks of health promotion and risk reduction, utilized constructivist learning theory in conjunction with website development and web-based learning models, to create an effective web-based child maltreatment tutorial for mandated reporters within a military community.
APPENDIX A: POST-TEST WITH DEMOGRAPHIC AND FORMATIVE EVALUATION
Child Maltreatment Posttest

1. Tutorial Posttest

This test will be compared to the pretest and used by the investigator to determine the effectiveness of the tutorial format and material presented. Thank you for your participation!

1. Please type your password here.

2. In the military community on Okinawa, all of the following are mandated reporters except:
   - [ ] Teachers
   - [ ] Military service members
   - [ ] Healthcare providers
   - [ ] Retail store clerks

3. If a parent fails to provide adequate shelter and clothing for a child, this may be considered:
   - [ ] Neglect
   - [ ] Sexual Abuse
   - [ ] Physical Abuse
   - [ ] Emotional Abuse

4. The most commonly identified perpetrators of child abuse are:
   - [ ] Child care workers
   - [ ] Individuals unknown to the child
   - [ ] Parents
   - [ ] Foster parents

5. All reports of suspected child abuse or neglect in the military community Okinawa must be made to the Provost Marshal Office (PMO).
   - [ ] True
   - [ ] False

6. If you fail to make a report of abuse as a mandated reporter:
   - [ ] No action will be taken; it is optional
   - [ ] You must take a course on child abuse reporting
   - [ ] You may be prosecuted under military or civilian law
Child Maltreatment Posttest

7. Any non-accidental injury that results from acts on the part of the child's caretaker is better understood as:
   - [ ] Neglect
   - [ ] Sexual Abuse
   - [ ] Physical Abuse
   - [ ] Emotional Abuse

8. Reports of suspected abuse or neglect can be done:
   - [ ] Monday through Friday, 0900 to 1700
   - [ ] All days until 2100
   - [ ] 24 hours per day, every day
   - [ ] Only on business days, not on holidays or over extended weekend liberties

9. Child maltreatment includes (check all that apply):
   - [ ] Physical abuse
   - [ ] Neglect
   - [ ] Sexual abuse
   - [ ] Emotional/psychological abuse
   - [ ] All of the above

10. A report of child abuse or neglect on Okinawa can be made by (check all that apply):
    - [ ] E-mail
    - [ ] Telephone
    - [ ] Mail
    - [ ] Fax
    - [ ] All of the above

11. If you make a report of abuse in good faith and it proves unfounded:
    - [ ] You can be sued successfully by the family
    - [ ] No legal action can be taken against you
    - [ ] Naval Criminal Investigative Services will contact you and press charges
Child Maltreatment Posttest

12. There are approximately _______ victims of child abuse each year.
   - 800,000
   - 100,000
   - 500,000
   - 80,000

13. Children ______ disclose abuse to others.
   - Rarely
   - Often
   - Always

14. The risk factors associated with child maltreatment are multifactorial including parent, child, and social factors?
   - True
   - False

15. The incidence of child maltreatment in military families _______ during deployments.
   - Increases
   - Decreases
   - Remains stable

16. One of the biggest indicators that a child has been sexually abused is:
   - Sleep disturbances
   - Sexualized behavior
   - Bed wetting
   - Aggressive behavior

17. Children may recant their disclosure of abuse due to (check all correct responses to this question):
   - Their dishonesty
   - Pressure from family members
   - Fear of consequences
   - Poor moral conscience
Child Maltreatment Posttest

18. If you are informed by a child that he is being abused, but you believe that a previous report of abuse was made, your best course of action is:
   □ Report the abuse yourself
   □ Do not repeat the report; it has already been made

19. The incidence of child maltreatment in military families is much less than civilian families?
   □ True
   □ False

20. You must have ______ of abuse or neglect before you report it.
   □ Evidence
   □ Suspicion
   □ Photographs

21. Terrorizing, shaming, and degrading a child repeatedly such that it affects his or her self esteem is:
   □ Physical abuse
   □ Emotional abuse
   □ Sexual abuse
   □ Neglect

2. Demographic Data

Please take a few minutes to respond to the following questions.

1. What is your current occupation?
   □ Teacher
   □ School professional (for example: school nurse, social worker/counselor)
   □ Daycare provider
   □ Healthcare provider
   □ Active duty military member
   □ Other
### Child Maltreatment Posttest

2. How long have you been in your profession?
- □ Less than 5 years
- □ 5 to 10 years
- □ More than 10 years

3. What is your gender?
- □ Female
- □ Male

4. What is your age in years?
- □ 20-29
- □ 30-39
- □ 40-49
- □ 50 or older

5. What is your ethnic background?
- □ Caucasian
- □ Black/African American
- □ Hispanic
- □ Asian
- □ Other

### Formative Evaluation

Please answer the following questions about the web-based nature of the tutorial. Your answers will help improve the quality and efficiency of the content presented.

1. How would you rate your computer skills?
- □ Novice/beginner
- □ Experienced
- □ Expert
Child Maltreatment Posttest

2. The multimedia graphics and interactivity of the tutorial supported my learning.
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Undecided
   - [ ] Agree
   - [ ] Strongly agree

3. The quizzes within the tutorial were helpful.
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Undecided
   - [ ] Agree
   - [ ] Strongly agree

4. The material presented is relevant to my profession.
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Undecided
   - [ ] Agree
   - [ ] Strongly agree

5. The case studies and stories within the tutorial helped me understand the material presented.
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Undecided
   - [ ] Agree
   - [ ] Strongly agree
<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. The instructions for navigating the website were clear and easy to find.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. The website was easy to access.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. It was easy to navigate through the tutorial.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I liked the self paced nature of the tutorial.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Child Maltreatment Posttest

10. The material would be better served as an in-person presentation by an expert.
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Undecided
   - [ ] Agree
   - [ ] Strongly agree

11. What is the most important piece of information you learned?

12. What did you like best?

13. What did you like least?

14. How could this tutorial be improved?
APPENDIX B: SUBJECT DISCLOSURE FORM
Title of Project: Child Maltreatment in Military Families: A Web-Based Tutorial for Mandated Reporters

You are being invited to voluntarily participate in the above-titled research study. The purpose of the study is to pilot a web-based tutorial designed to increase the recognition and reporting of child maltreatment within military families living overseas. The tutorial is intended for school teachers, school professionals, and other direct student contact staff members within the DoDDS Okinawa school district. You are eligible to participate because you are over the age of 18, employed at a school within the DoDDS Okinawa school district, have direct contact with students, have the ability to read and understand English, and have Internet access.

If you agree to participate, your participation will involve taking a 20-question pre-test about child maltreatment recognition, risk factors, and reporting processes; completing a 1-hour educational tutorial; and then taking a 20-question post-test. Following your agreement to participate by checking the “I Agree” box at the bottom of the screen, you will be directed to the introductory web page where you will view a short slide show and log-on to the site with the username and password provided to you for your participation only. The same password will be used to access the tests. Additional questions relating to the nature of the web-site, the web-based teaching methods, and information related to your occupation, age, gender, and ethnic background will be asked at the end of the tutorial. This information may help the principal investigator improve the web-site and teaching methods. The tutorial can be accessed from any computer. You may logon to the web-site at anytime with the password provided; logoff and log back in at your convenience. It should take about 1 hour and 20 minutes to complete the tutorial and both tests.

Any questions you have will be answered by the principal investigator via phone or email (contact information below) and you may withdraw from the study at any time by logging off the website or closing your browser. There is no cost to you except for your time. A risk to participation may include emotional or psychological distress from viewing the content of the tutorial. Although the benefits for participating may not be readily apparent, your participation will contribute to a greater awareness of child maltreatment in the military community on Okinawa. More importantly, early detection of child maltreatment and early intervention can help to minimize the likelihood of further violence and prevent long-term health and social consequences.

Only the principal investigator will have access to the information that you provide in the tests or in questions, but your confidentiality is protected since your name will not be available to the principal investigator. Any other identifying information, like school setting, will not be revealed in any reports that result from this project. All information collected will be password protected and secured within an encrypted environment within the website. You may decide when to begin or to stop the study at any time. Your decision not to participate or your decision to discontinue your participation will have no effect on your employment.
You can call the Principal Investigator to tell her about a concern or complaint about this research study. The Principal Investigator, Lorri Marie Phipps, DNP Candidate, MSN, RN, CPNP can be called at DSN-622-8321, or (520)-908-7418. If you have questions about your rights as a research subject you may call the University of Arizona Human Subjects Protection Program office at (520) 626-6721. If you have questions, complaints, or concerns about the research and cannot reach the Principal Investigator; or want to talk to someone other than the Investigator, you may call the University of Arizona Human Subjects Protection Program office. (If out of state use the toll-free number 1-866-278-1455.) If you would like to contact the Human Subjects Protection Program via the web (this can be anonymous), please visit http://www.irb.arizona.edu/contact/.

Due to the sensitive nature of the material in the tutorial, some content may be disturbing to some viewers. If you feel distressed after viewing the tutorial, please contact the Counseling and Advocacy Program at Camp Foster. The Counseling and Advocacy Program (CAP) is part of Marine Corps Community Services (MCCS); designed to provide support, education, networking, and improve the quality of life for families on Okinawa. The services offered through CAP include prevention-based programs (i.e., New Parent Support program) as well as active intervention programs (i.e., counseling). The Family Advocacy Program, which provides child abuse and neglect education for Marine Corps Base, Camp S.D. Butler, Okinawa, Japan, falls under CAP. To schedule an appointment for counseling, individuals or families can get an immediate, walk-in consultation at the CAP on Camp Foster (2nd floor of building 439, Camp Foster, between the hours of 0800-1100, or 1300-1600 Monday through Friday). For any questions or for more information, please call 645-2915. http://www.mccsokinawa.com/mccs.asp?id=174.

If, after viewing the tutorial, you have concerns about a child that may be, or has been maltreated, please call the Provost Marshals Office (PMO) on your base immediately. PMO can be called 24 hours a day, 7 days per week.

Camps Foster/Lester: 645-3504
Camps Courtney/McToureous: 622-9608
Camp Kinser: 637-2804

If you think this is an emergency (i.e., the child is injured): call 911.

By viewing the tutorial and answering the questions on the pre-test and post-test, you are giving permission for the investigator to use your information for research purposes. If you agree to these terms, click on the “I agree” button below and you will proceed to the next page. If you do not agree to these terms, click the “I do not agree” button and you will be redirected to your home page.

Thank you.

Lorri M Phipps
APPENDIX C: COMPARISON OF CORRECT RESPONSES FOR EACH QUESTION
<table>
<thead>
<tr>
<th>Question</th>
<th>Percentage of Correct Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child maltreatment includes (check all that apply):</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-test</td>
</tr>
<tr>
<td></td>
<td>72.7</td>
</tr>
<tr>
<td>The risk factors associated with child maltreatment are multifactorial including parent, child, and social factors?</td>
<td>84.4</td>
</tr>
<tr>
<td>The incidence of child maltreatment in military families is much less than civilian families?</td>
<td>66.7</td>
</tr>
<tr>
<td>All reports of suspected child abuse or neglect in the military community Okinawa must be made to the Provost Marshal Office (PMO).</td>
<td>72.7</td>
</tr>
<tr>
<td>Reports of suspected abuse or neglect can be done:</td>
<td>84.8</td>
</tr>
<tr>
<td>If you fail to make a report of abuse as a mandated reporter:</td>
<td>60.6</td>
</tr>
<tr>
<td>If a parent fails to provide adequate shelter and clothing for a child, this may be considered:</td>
<td>81.8</td>
</tr>
<tr>
<td>Any non-accidental injury that results from acts on the part of the child's caretaker is better understood as:</td>
<td>84.4</td>
</tr>
<tr>
<td>A report of child abuse or neglect on Okinawa can be made by (check all that apply):</td>
<td>25.0</td>
</tr>
<tr>
<td>If you make a report of abuse in good faith and it proves unfounded:</td>
<td>90.9</td>
</tr>
<tr>
<td>The most commonly identified perpetrators of child abuse are:</td>
<td>69.7</td>
</tr>
<tr>
<td>There are approximately _______ victims of child abuse each year</td>
<td>21.2</td>
</tr>
<tr>
<td>In the military community on Okinawa, all of the following are mandated reporters except:</td>
<td>84.8</td>
</tr>
<tr>
<td>Children ______ disclose abuse to others.</td>
<td>81.8</td>
</tr>
<tr>
<td>One of the biggest indicators that a child has been sexually abused is:</td>
<td>48.5</td>
</tr>
<tr>
<td>Children may recant their disclosure of abuse due to (check all correct responses to this question):</td>
<td>84.8</td>
</tr>
<tr>
<td>If you are informed by a child that he is being abused, but you believe that a previous report of abuse was made, your best course of action is:</td>
<td>90.9</td>
</tr>
<tr>
<td>You must have _____ of abuse or neglect before you report it.</td>
<td>84.4</td>
</tr>
<tr>
<td>The incidence of child maltreatment in military families’ _______ during deployments.</td>
<td>75.8</td>
</tr>
<tr>
<td>Terrorizing, shaming, and degrading a child repeatedly such that if affects his or her self esteem is:</td>
<td>93.9</td>
</tr>
</tbody>
</table>
What is the most important piece of information you learned?

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Who the abuse gets reported to and the proper authorities who deal with an off base incidence.</td>
</tr>
<tr>
<td>2.</td>
<td>13% of victims suffer multiple types of abuse</td>
</tr>
<tr>
<td>3.</td>
<td>How to go about reporting child abuse/neglect outside the USA.</td>
</tr>
<tr>
<td>4.</td>
<td>Sexualized behavior is the major indicator of sexual abuse.</td>
</tr>
<tr>
<td>5.</td>
<td>The examples</td>
</tr>
<tr>
<td>6.</td>
<td>Neglect is more deadly than abuse</td>
</tr>
<tr>
<td>7.</td>
<td>The Risk factors</td>
</tr>
<tr>
<td>8.</td>
<td>Abuse is just as common in the military</td>
</tr>
<tr>
<td>9.</td>
<td>Deployment as a risk</td>
</tr>
<tr>
<td>10.</td>
<td>That all military members are mandatory reporters.</td>
</tr>
<tr>
<td>11.</td>
<td>made me more aware</td>
</tr>
<tr>
<td>12.</td>
<td>Anyone can make a difference</td>
</tr>
<tr>
<td>13.</td>
<td>Who and how to report abuse</td>
</tr>
<tr>
<td>14.</td>
<td>I can help!</td>
</tr>
<tr>
<td>15.</td>
<td>More warning signs</td>
</tr>
<tr>
<td>16.</td>
<td>The amount of cases the occur each year</td>
</tr>
<tr>
<td>17.</td>
<td>Specific Military information on abuse</td>
</tr>
<tr>
<td>18.</td>
<td>That you can't be prosecuted after making an abuse report after it is proven false.</td>
</tr>
<tr>
<td>19.</td>
<td>Unique risks associated with military deployments</td>
</tr>
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</table>

What did you like best?

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>The examples, ever though true, made this material seem that much more important to want to learn about and take serious.</td>
</tr>
<tr>
<td>2.</td>
<td>I really liked the way the tutorial made connections to real case studies. The tutorial broke down the paradigms of abuse and gave real faces to the victims and perpetrators. The specificity to the military family was well done. There was a well-balanced blend of article, videos, and pictures to substantiate the facts that were being emphasized.</td>
</tr>
<tr>
<td>3.</td>
<td>The sense of empowerment throughout the presentation.</td>
</tr>
<tr>
<td>4.</td>
<td>The case studies. Though very difficult to read/watch, they drive home the urgency of reporting suspected abuse. Coupled with the signs of child abuse (i.e. what to watch out for) the tutorials were very effective in not only teaching about child abuse, but encouraging action.</td>
</tr>
<tr>
<td>5.</td>
<td>The examples</td>
</tr>
<tr>
<td>6.</td>
<td>The videos</td>
</tr>
<tr>
<td>7.</td>
<td>The stories</td>
</tr>
<tr>
<td>8.</td>
<td>Quizzes</td>
</tr>
<tr>
<td>9.</td>
<td>Real cases</td>
</tr>
<tr>
<td>10.</td>
<td>The information presented was excellent!</td>
</tr>
<tr>
<td>11.</td>
<td>I could go at my own speed</td>
</tr>
<tr>
<td>12.</td>
<td>The lady in the coffee shop, when she saw the child abuser</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>13.</td>
<td>Interactive PowerPoint.</td>
</tr>
<tr>
<td>14.</td>
<td>The look of the site</td>
</tr>
<tr>
<td>15.</td>
<td>That I could click through at my own pace</td>
</tr>
<tr>
<td>16.</td>
<td>The way it was presented</td>
</tr>
<tr>
<td>17.</td>
<td>The interactive site. Self paced. New information I hadn't learned before.</td>
</tr>
<tr>
<td>18.</td>
<td>The real life examples that occurred on Okinawa.</td>
</tr>
<tr>
<td>19.</td>
<td>The links to real cases - these made the reality of child abuse in the military community undeniable.</td>
</tr>
</tbody>
</table>

**What did you like least?**

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1.</td>
<td>How when I was done looking at an article or a video clip and I tried to go back to where I was I would always be sent back to the beginning of that section and have to go through the slides all over again (maybe I was just doing it wrong).</td>
</tr>
<tr>
<td>2.</td>
<td>At times it was hard to navigate, but I am sure that this was only my lack of navigational skills.</td>
</tr>
<tr>
<td>3.</td>
<td>How long it took for each section to load.</td>
</tr>
<tr>
<td>4.</td>
<td>Clicking on the pictures to pull up a link on some of the news stories takes you away from the tutorials and the only way to get back to the slide you were on is to click through the whole section again. It would be better if the links opened in a new window.</td>
</tr>
<tr>
<td>5.</td>
<td>The links didn’t work on section 2</td>
</tr>
<tr>
<td>6.</td>
<td>The facts</td>
</tr>
<tr>
<td>7.</td>
<td>some of the pictures were too graphic</td>
</tr>
<tr>
<td>8.</td>
<td>It took too long for the sections to load</td>
</tr>
<tr>
<td>9.</td>
<td>The pictures</td>
</tr>
<tr>
<td>10.</td>
<td>The graphic pictures. Though understandable they are included.</td>
</tr>
<tr>
<td>11.</td>
<td>Long load time.</td>
</tr>
<tr>
<td>12.</td>
<td>Waiting for the parts to download</td>
</tr>
<tr>
<td>13.</td>
<td>Nothing</td>
</tr>
<tr>
<td>14.</td>
<td>Difficulty navigating the website. I closed myself out accidently. The imbedded quizzes would only mark the correct answer if I clicked on the words, not the letter of the answer.</td>
</tr>
<tr>
<td>15.</td>
<td>How the quizzes would say you have the wrong answer if you clicked on the number rather than the answer.</td>
</tr>
<tr>
<td>16.</td>
<td>The video of the woman - I forgot her name, but the overall tone of the tutorial was serious and professional and her laugh/smiles, tone did not fit. The information that she presented was useful, but her behavior was distracting.</td>
</tr>
</tbody>
</table>

**How could this tutorial be improved?**

<p>| | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>The material itself was very informative and interesting. But what I liked least was the time to download the sections</td>
</tr>
<tr>
<td>2.</td>
<td>Make it available to all DoDEA employees!</td>
</tr>
<tr>
<td>3.</td>
<td>Put in the results for the hearing that took place Oct. 5, 2009. I would like to know what happened to that man who abused the small boy...</td>
</tr>
<tr>
<td>4.</td>
<td>The material wasn’t too long, but the time to download was</td>
</tr>
<tr>
<td>5.</td>
<td>Too slow</td>
</tr>
</tbody>
</table>

83
<p>| | |</p>
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<thead>
<tr>
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<th></th>
</tr>
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<tbody>
<tr>
<td>6.</td>
<td>It’s great the way it is</td>
</tr>
<tr>
<td>7.</td>
<td>Shorten the time to see the presentations</td>
</tr>
<tr>
<td>8.</td>
<td>Not sure, it's really good</td>
</tr>
<tr>
<td>9.</td>
<td>Download faster. Content is great.</td>
</tr>
<tr>
<td>10.</td>
<td>Load time shortened.</td>
</tr>
<tr>
<td>11.</td>
<td>Make the files downloadable to the computer maybe so they run at a normal pace.</td>
</tr>
<tr>
<td>12.</td>
<td>everything was done on a very concise manner</td>
</tr>
<tr>
<td>13.</td>
<td>Make clear the populations your information and questions are focused on. I was unclear on some of the questions if they were about the US, the military in general, or the military base.</td>
</tr>
<tr>
<td>14.</td>
<td>In the quizzes it shouldn’t matter if you click on the number of the answer or the actual answer. Either selection should be accepted or there should be instructions before the quiz explaining that you should click the answer and not the number.</td>
</tr>
<tr>
<td>15.</td>
<td>I had a hard time with some of the navigation - I couldn't get the first portion to download and when I would look at the links, I couldn't get back into the tutorial without starting over from the beginning. After taking the pre-test the Surveymonkey.com website came up and that confused me, but I was able to close it and get back into the tutorial.</td>
</tr>
</tbody>
</table>
REFERENCES


Department of the Navy General Regulations Chapter 11, Section 4. Article 1137: Duties of Individuals (n.d.).


