CHILD MALTREATMENT: WHAT ATTITUDINAL FACTORS OF COMMITMENT, CONFIDENCE, AND CONCERN PREDICT REPORTING PRACTICES OF PRESERVICE SPEECH-LANGUAGE PATHOLOGISTS?

by

Alan Fitzgerald Smith

Liberty University

A Dissertation Presented in Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

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APPROVED BY:

Amanda Rockinson-Szapkiw, Ed.D., Committee Chair

Lucinda Spaulding, Ph.D., Committee Member

Rhonda Mattingly, Ed.D., Committee Member

Scott Watson, Ph.D., Associate Dean, Advanced Programs
ABSTRACT

The pervasiveness of child maltreatment is a global issue, although its impact on the United States is markedly severe. The mortality rate for children four years of age and younger continues to rise annually, with an especially alarming increase present for children with disabilities. Although inservice and preservice educators, including speech-language pathologists, are mandated to report suspected maltreatment, several obstacles appear to hinder their actions. Understanding the factors that predict an individuals’ likelihood of reporting malfeasance may help minimize maltreatment occurrence and child mortality. Preservice speech-language pathologists attending accredited programs in the United States were surveyed regarding their attitudes (e.g., commitment, confidence, and concern) toward child maltreatment, including the likelihood they will report alleged abuse and neglect. The study controlled for ethnicity and gender. The results of the survey were analyzed using hierarchical multiple regression and showed the strength of the relationship between the predictor variables (e.g., commitment, confidence, and concern), including the covariates (e.g., gender and ethnicity) on the criterion variable (e.g., reporting practices). The results of the study suggested that the attitudinal dimensions of commitment and concern, including the covariate gender, have a statistically significant contribution to the likelihood that preservice speech-language pathologists will report alleged child maltreatment.

Keywords: child maltreatment, abuse, neglect, speech-language pathology, reporting practices, theory of reasoned action
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CHAPTER ONE: INTRODUCTION

The Child Abuse Prevention and Treatment Act (CAPTA), (42 U.S.C. §5101) defines child abuse and neglect as “any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation” of an infant or child, including “imminent risk of serious harm” (U.S. Department of Health and Human Services, 2011, p.15). The categories of maltreatment include child neglect, psychological abuse, physical abuse, and sexual abuse. Child labor malfeasance has also been identified as a category, but is infrequently cited in the literature. Discussion appears isolated with respect to developing countries as opposed to developed countries (Fakunmoju et al., 2013).

Child maltreatment is a chronic issue. Estimates for 2012 in the United States suggest approximately 686,000 children were abused or neglected, with around 78.5% experiencing neglect, 17.6% suffering physical abuse, 9.1% identified as victims of sexual abuse, and 10% were victims of other types of maltreatment including threatened abuse, parent’s drug/alcohol abuse, or lack of supervision (U.S. Department of Health and Human Services, 2012). The gestalt consequences of child maltreatment are largely cumulative, and include poor physical health, poor mental health, decreased educational/occupational achievement, and involvement in the criminal justice system (Snow, 2009). Child maltreatment also results in a high daily mortality rate of children under the age of four years, particularly those with disabilities (Jones et al., 2012; U.S. Department of Health and Human Services, 2012). The most current statistics on child maltreatment indicate that around 13% of children suffering abuse and/or neglect also possess some type of disabling condition (U.S. Department of Health and Human Services, 2012). Although the literature does not appear to isolate the number of children who share both communicative impairments and maltreatment experiences, it is known that “children who have
experienced maltreatment and prenatal alcohol exposure frequently exhibit expressive and receptive language difficulties” (Hyter, 2012, p.32). Moreover, approximately 7-8% of cumulative children in Kindergarten carry a diagnosis of specific language impairment and the prevalence of speech sound disorders in children is around 8-9% in the United States (National Institute on Deafness and Other Communication Disorders, 2014).

Children with communication challenges rarely present with singular issues but often with multifaceted needs. “A child with a language impairment may also struggle with sensory modulation deficits, trauma history, fetal alcohol syndrome, cognitive impairment, a history of being maltreated, and/or inadequate care-giving” (Hyter & Way, 2007, p.157). This list is not exhaustive but dynamic in nature.

Speech-language pathologists may serve both preventative and promulgative roles when considering alleged misconduct. Their roles may be considered preventative due to the education and support provided to parents and caregivers regarding development and how they can best counter communicative challenges. Their roles may be considered promulgative due to the professional responsibility mandated of all such providers to report possible abusive/neglectful acts. In adherence to the aforementioned obligation, the Theory of Reasoned Action, developed by Ajzen and Fishbein (1977), provides a foundational framework aligning speech-language pathologists’ attitudes toward child maltreatment with the volitional act of reporting.

This study utilized a predictive correlational design to test the Theory of Reasoned Action to determine if there was a relationship between the attitudinal factors of commitment, confidence, and concern toward child maltreatment and the associated reporting practices of preservice speech-language pathologists.
Chapter one includes the background, the problem statement, the purpose statement, and significance for this study. In addition, the research questions and variables are identified. The chapter concludes with a definition of terms.

**Background**

Part C of the *Individuals with Disabilities Education Improvement Act* (IDEIA) was developed to address the developmental needs of children from birth to age three years (IDEA, 2004). Part C services are provided within the context of the community with most services occurring in the child’s home. Children who qualify for early intervention services through Part C must exhibit significant developmental delays in one or more of the following domains: cognition, communication, physical development, social-emotional development, or adaptive maturation (Tomasello, Manning, & Dulmus, 2013). There are a variety of reasons as to why children are either eligible or ineligible for Part C services; however, the primary etiologies for increased likelihood centers on biological/medical risk factors (e.g., established medical conditions; syndromes) or environmental influences (e.g., low socioeconomic status) (Paul & Roth, 2011). “The greater the number of risk factors, the greater the developmental risk to the child” (Paul & Roth, 2011, p.332).

Numerous individuals may be involved in the specialized care provided to children and their families via Part C including: developmental interventionists, psychologists, service coordinators, dieticians, teachers of the deaf and hard-of-hearing, and teachers of the visually impaired. The triad of skilled service professionals most likely to work in early intervention include speech-language pathologists, occupational therapists, and physical therapists (Rosenberg, Robinson, Shaw, & Ellison, 2013). Given the community-based relationships and the one-on-one interaction with the families they serve, skilled therapy providers may be
instrumental in breaking the cycle of maltreatment. This is especially true regarding speech-language pathology as it is the most commonly provided service. The data shows that more than one-quarter of cumulative speech-language pathologists provide early intervention services (Rosenberg, et al., 2013; Brook, 2013). A speech-language pathologist is the “professional who engages in clinical services, prevention, advocacy, education, administration, and research in the areas of communication and swallowing across the life span from infancy through geriatrics” (American Speech-Language-Hearing Association, 2007, p.1). Additionally, the training provided to preservice speech-language pathologists is grounded in biological, physical, neurological, and developmental bases. Moreover, an emphasis is placed on learning how to listen empathically but objectively, and to “hold in abeyance a desire to fix things and document improvement” (Spillers, 2007, p.196). As a profession, speech-language pathologists are uniquely positioned to assist in both the detection and prevention of child maltreatment as expressive and receptive language deficits are often co-morbidly associated with both child neglect and abuse (Snow, 2009). “Children with disabilities lack understanding of what they are experiencing, the language and communication skills to convey that they are being harmed, and sufficient self-advocacy and self-protection skills to stop the maltreatment” (Johnson, 2012, p.7).

Educational preparation for speech-language pathologists is, at its core, aligned with a commitment to clinical competence. Competence as it relates to professional practice is connected with an ability to make appropriate decisions that are situation specific (Govaerts, 2008). This requires a greater focus on application rather than on typical content mastery and has certainly become the impetus for graduate level speech therapy training programs in the United States.

Certified speech-language pathologists hold either a master’s or doctoral degree from an
accredited academic program and must have completed at minimum 375 supervised clinical clock hours providing both diagnostic and therapeutic services via face-to-face contact; 25 hours must be spent in clinical observation (Council for Clinical Certification in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2013). Certified speech-language pathologists must also complete at minimum 36 semester credit hours of graduate level course work “sufficient in depth and breadth to achieve specified knowledge and skills outcomes” pertinent to the scope of practice in speech therapy (Council for Clinical Certification in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2013, ¶10).

Foundational to the practice of speech-language pathology, and certainly consistent with the tenets of competence are the applications of craft-based knowledge (e.g., practical knowledge) and evidence-based practice (e.g., empirically supported practice). The difference between the two approaches to knowledge is that the initial centers on clinical judgment and purposeful-volitional control derived from years of practice, whereas the latter is grounded in empirically based resources (Justice, 2010). The ability to achieve homeostasis between the two polar points is reflected in expertise, maturation, continuing education, and the bent of an individual’s locus of control, whether internal or external. The decision to report alleged child maltreatment however, is uniquely an individually based choice that should be informed by both practical and empirical data. From a practical viewpoint, inservice (professional) speech-language pathologists may gain knowledge from their day-to-day clinical interactions with clientele. Inservice speech-language pathologists may also glean knowledge on child maltreatment by electing to engage in self-guided study on the topic as part of their annual or biannual continuing education licensure requirements. From a practical viewpoint, preservice
(student) speech-language pathologists may gain knowledge from their externships afforded them during their graduate studies as guided by mentoring inservice speech-language pathologists. They may also receive a rudimentary introduction to the topic of child maltreatment, although it is not mandated by ASHA nor itemized as a primary pedagogical area of focus. The intent of this study is to make an empirical contribution to the scant knowledge base currently available in effort to benefit both inservice and preservice speech-language pathologists.

A paucity of research exists with regard to child maltreatment and professional speech-language pathology practices (Hyter, 2007). There is even less research available that examines preservice SLPs’ views on child abuse and neglect. The body of work available on child maltreatment in general appears to center on preservice and inservice educators (Bunting, Lazenbatt, & Wallace, 2010; Fraser, Mathews, Walsh, Chen, & Dunne, 2010; Kenny, 2004; McKee & Dillenburger, 2009). Nonetheless, physicians—collectively, pediatricians—singularly, pediatric nurses, and other general medical personnel are also heavily represented in the literature (Bunting et al., 2010). Irrespective though of all professional or academic associations, underreporting of child maltreatment was deemed largely apathetic following an international assessment of peer-reviewed articles published between 1995-2005 (Bunting et al., 2010).

Various influences serve as hindrances to reporting practices including “reporters’ characteristics, beliefs, attitudes, cultural factors, self-confidence, as well as social and institutional supports” (Feng, Huang, & Wang, 2010, p.125). “Cultural background (ethnicity) may influence an individual’s perception of maltreatment or willingness/unwillingness to report it” (Choo, Walsh, Marret, Chinna, & Tey, 2013, p.102). There also appears to be a lack of
training not only regarding the signs of child maltreatment, but also on how to best report alleged misacts from both academic (preservice) as well as occupational (inservice) personnel, including students (Bunting et al., 2010; Fraser et al., 2010; Kenny, 2004; McKee & Dillenburger, 2009). With regard to gender, “females have been found to be less tolerant of physical, emotional, and sexual abuse than males” but “are no more likely to report abuse” than their male counterparts (Bunting et al., 2010, p.193). Reporting discrepancies of child abuse and neglect per physicians’ practices were attributed to insufficient training during medical school and/or subsequent residency assignments (Starling, Heisler, Paulson, & Youmans, 2009). One study found that approximately 43% of physicians had at some point “made a conscious decision not to report despite their suspicions” (Bunting et al., 2010, p.191). A random sampling of pediatricians in North Carolina found that around 10 percent had at some point in time suspected but not reported child maltreatment (Bunting et al., 2010). Moreover, “medical professionals sometimes fail to recognize cases of abusive head trauma” (Wood, et al., 2010, p.409). Educators are also implicated regarding their lack of reporting. One study found that many educators neither suspected nor reported any type of abuse, while one-fifth of “Australian teachers indicated they had suspected child abuse or neglect as some time in their careers but had decided not to report the incident” (Bunting et al, 2010, p.191).

A selective and critical review of the literature using a Boolean approach was completed targeting the following keywords: child, abuse, neglect, maltreatment, speech, pathology, therapy, inservice, preservice, reporting, underreporting, and practices. A total of five databases were used and included Cochrane Library, EBSCOhost/CINAHL, Google Scholar, Science Direct, and ASHAWire. To date, there is no available research specific to the reporting practices of speech-language pathologists whether classified as inservice or preservice. Moreover, due to
the recurring theme noted in the literature highlighting a lack of pedagogical training across disciplines regarding child maltreatment and reporting methodology, further research appears necessary (Bunting et al., 2010; Fraser, et al., 2010; Kenny, 2004; McGarry & Buckley, 2013; McKee & Dillenburger, 2009; Starling et al., 2009; Walsh et al., 2008; Walsh et al., 2012). As such, a gap in the literature appears present regarding preservice speech-language pathologists’ reporting of child maltreatment and associated influences.

**Theoretical Framework**

The premise of this study centered on examination of the relationships between the attitudinal factors of commitment, confidence, and concern toward child maltreatment, and the associated reporting practices of preservice speech-language pathologists. The paramount factor for consideration in this study was the primal act of volitional control. The ability to weigh evidence and arrive at a decision based on review of the data directly correlates with Ajzen and Fishbein’s (1977) Theory of Reasoned Action. According to the theory, “attitudinal predictors correspond with behavioral criterion” with respect to the terms of the action, target, context, and timeframe (Ajzen & Fishbein, 1977, p.890). The theory further posits that behavioral interplay is the target and not necessarily the outcome that results from the behavior as intention may beget uncertainty in some instances (Ajzen, 1985; Sheppard, Hartwick, & Warshaw, 1988). The Theory of Reasoned Action contends the probability is high that a person will engage in a behavior when he or she intends to perform the said behavior. Nonetheless, attitudes coupled with subjective norms or opinions from others may dissuade intent thwarting engagement of the behavioral act. For example, a person may elect to purchase a home by applying for a loan. However, perspectives from friends, family members, and even the media may significantly alter the individual’s decision. Regardless, the final choice rests upon the lender, and so the Theory of
Reasoned Action counters itself to a degree. The variables that extend beyond the purposeful scope of the individual’s intent and therefore do not apply to volitional control are considered contrary to the theory’s focus (Sheppard, Hartwick, & Warshaw, 1988). As such, application of the theory to child maltreatment becomes an issue of safety and not about comfort and convenience. Thus, the Theory of Reasoned Action was the theoretical framework that guided this study.

Problem Statement

The pervasiveness of child maltreatment is a global issue and its prevalence in the United States is markedly severe. The most current literature suggests that around five children die each day in the United States secondary to child maltreatment, with 80% of those approximating four years of age or younger (U.S. Department of Health and Human Services, 2012). The prevalence of child abuse and neglect on children with disabilities is also quite substantial (Jones et al., 2012). Inservice and preservice speech-language pathologists, as mandated reporters of suspected abuse, have the opportunity to assist in reducing the overall number of children identified as victims of abuse and neglect via both promulgative and preventative means. There are, however, several obstacles that appear to hinder their actions. Like other educational and medical professionals, speech-language pathologists feel they possess “insufficient knowledge of the indicators of abuse or how to report suspicions,” “fear incorrectly reporting a child as being maltreated and the consequences of that action,” and “lack confidence in child protective services to investigate the report or protect the child effectively” (Johnson, 2012, p.4).

Educational personnel are “often considered the largest source of professional underreporting as schools are “not adequately prepared to deal with child abuse and neglect; teachers often do not know the signs of abuse and neglect; they struggle with differentiating parental excuses from
normal parental disciplines; and often assume someone else will report” (Krase, 2013, p.148).

Whereas the literature may assimilate speech-language pathologists into the cumulative educational personnel category, they are not teachers, nor do they all singularly work in educational settings. A review of ASHA’s summary membership and affiliation counts for 2013 (n = 124,772) found that around 55.9% were employed in educational settings; 38.8% were employed in health care settings; and 18.8% were employed in private practice (Where do Audiologists and Speech-Language Pathologists Work, 2014). Nonetheless, “educational personnel generally consist of individuals who are employed by public and private schools and charged with the education of children” (Krase, 2013, p.147). Certainly, speech-language pathologists align with this definition and share many commonalities regarding the groups’ concerns about reporting suspected maltreatment.

An improved understanding of the factors that contribute to and predict reporting malfeasance, especially as they relate to attitudes toward child maltreatment, would be beneficial in the training of future speech-language pathologists. The Theory of Reasoned Action (Azjen & Fishbein, 1977) provides insight regarding the attitudinal factors of commitment, confidence, and concern and whether or not an individual’s decision to report is predicated on one or more of the aforementioned variables. Additional predictive variables beyond attitude were considered, as the Theory of Reasoned Action posits, “behaviors are driven directly by intentions toward a behavior” and “intentions are driven directly by attitudes and perceived norms related to the behavior” (Orr, Thrush, & Plaut, 2013, p.e62490). However, the literature on demographic variables that influence reporting cannot be ignored; thus, covariates for this study included ethnicity and gender (Bunting et al., 2010; Choo et al., 2013). The study is further warranted, given speech-language pathologists’ daily connections to children with disabilities, the increased
likelihood that children with disabilities come from impoverished homes, and the early intervention (home/community) setting in which a large majority of speech-language pathologists are employed (Emerson & Parish, 2010; Rosenberg, Robinson, Shaw, & Ellison, 2013).

Purpose Statement

The purpose of this predictive correlational study was to test the Theory of Reasoned Action that relates attitudinal factors and reporting practices of preservice speech-language pathologists, while controlling for demographic variables. The study utilized a convenience sample of first and second year Master’s level preservice speech-language pathologists attending accredited training programs across the United States. Programs were accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA). The criterion variable ($\hat{Y}$) was defined as the preservice speech-language pathologists’ decision to report or not to report suspected maltreatment. Covariates and three predictor variables—demographics ($X_1$), commitment ($X_2$), confidence ($X_3$), and concern ($X_4$)—were used and entered into the regression equation $\hat{Y} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$; this design and analysis is consistent with previous studies focusing on reporting childhood maltreatment (Choo et al., 2013; Walsh, Rassafiani, Mathews, Farrell, & Butler, 2012). Figure 1.1 presents an example block diagram whereby the criterion variable and the three predictor variables and two covariates (demographics) are partitioned. Each predictor variable was entered singularly into the predictive model consistent with previous studies (Choo et al., 2013; Walsh et al., 2012).
Figure 1.1. Partitioning between the criterion and predictor variables

The first predictor variable, commitment, was defined as an individual’s understanding and obligation to volitionally respond to alleged acts of maltreatment as mandated by their scope of practice and professional roles and responsibilities (Walsh et al., 2012). Commitment was measured via self-report on a survey. The second predictor variable, confidence, aligns with an individual’s certainty or assurance that reported acts of suspected maltreatment will be acted upon by higher administrative personnel including child protective services (Walsh et al., 2012). Confidence was also measured via self-report on a survey. The third predictor, concern, was defined as an individual’s emotional response regarding the possible consequences related to notification of a possible maltreatment occurrence (Walsh et al., 2012). The predictor variable, concern, was measured using a self-report survey. Demographic variables served as covariates and were measured via a self-report survey and included gender and ethnicity. The two demographic variables were chosen based on their relationship to the underreporting practices of educators established in the literature (Bunting et al., 2010; Choo et al., 2013). The relationship between the criterion variable and the predictor variables assisted in determining which attitudinal factor(s) explain(s) the greatest variance in a student’s reporting practices and which demographic information serves to moderate the overall outcome. This was measured by
grouping predictor variables (i.e., commitment, confidence, and concern) with demographic variables (i.e., gender and ethnicity) and then identifying the relationship each group had on the students’ reporting practices.

**Significance of the Study**

The research that exists on child abuse and neglect as it relates to the teaching profession is quite robust (Bunting et al., 2010; Fraser et al., 2010; Kenny, 2004; McKee & Dillenburger, 2009. This is especially true with regard to the primary and early childhood settings. Chronic, repeated acts of violence toward children, including their exposure to such exploits, can significantly impact their development and their ability to acquire knowledge (McKee & Dillenburger, 2012). The dangers of longitudinal abuse and neglect have been shown to damage a child’s ability to self-regulate, resulting in a hypersensitivity to and an increased perception of danger, including an excitatory stress response in the brain (Haskett, Stelter, Proffit, & Nice, 2012; McKee & Dillenburger, 2012). Moreover, the ability to identify both subtle and salient signs and symptoms of child abuse and neglect is warranted, as the aforementioned subtypes of maltreatment are often difficult to distinguish (Jonson-Reid, Kohl, & Drake, 2012). Educators, including speech-language pathologists, must demonstrate an ability to make associations between their students’ behaviors on a long-term continuum. “Assessment of behavior is important given that one of the most consistent findings across the child maltreatment literature demonstrates that abused and neglected children exhibit more emotional, behavioral, and academic problems than their non-maltreated peers” (Martin, Cromer, & Freyd, 2010, p.246). This study serves to further advance the need for graduate level speech pathology programs to include discussion about child maltreatment, including detection and prevention, in their program of studies.
The research questions for this study queried:

**RQ1**: Will there be a statistically significant relationship between preservice speech-language pathologists’ reporting practices and their attitudes toward maltreatment (i.e., commitment, confidence, and concern) while controlling for demographic variables (i.e., gender and ethnicity)?

**RQ1a**: Will there be a statistically significant contribution from the demographic variables (i.e., gender and ethnicity) to the model for predicting preservice speech-language pathologists’ reporting practices?

**RQ1b**: Will there be a statistically significant contribution from the attitudinal factor, commitment, to the model for predicting preservice speech-language pathologists’ reporting practices?

**RQ1c**: Will there be a statistically significant contribution from the attitudinal factor, confidence, to the model for predicting preservice speech-language pathologists’ reporting practices?

**RQ1d**: Will there be a statistically significant contribution from the attitudinal factor, concern, to the model for predicting preservice speech-language pathologists’ reporting practices?

**Research Hypotheses**

The following are the research hypotheses:

**H1**: There will be a statistically significant relationship between preservice speech-language pathologists’ reporting practices and their attitudes toward maltreatment (i.e.,...
commitment, confidence, and concern) while controlling for demographic variables (i.e., gender and ethnicity).

**H_{1a}:** The demographic variables (i.e., gender and ethnicity) will significantly contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

**H_{1b}:** The attitudinal factor, commitment, will statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

**H_{1c}:** The attitudinal factor, confidence, will statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

**H_{1d}:** The attitudinal factor, concern, will statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

### Null Hypotheses

The following are the null hypotheses:

**H_{01}:** There will be no statistically significant relationship between preservice speech-language pathologists’ reporting practices and their attitudes toward maltreatment (i.e., commitment, confidence, and concern) while controlling for demographic variables (i.e., gender and ethnicity).

**H_{01a}:** The demographic variables (i.e., gender and ethnicity) will not significantly contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

**H_{01b}:** The attitudinal factor, commitment, will not statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

**H_{01c}:** The attitudinal factor, confidence, will not statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.
\( H_{0\text{ld}} \): The attitudinal factor, concern, will not statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

**Identification of Variables**

The criterion variable for this study was defined as preservice speech-language pathologists’ reporting practices of suspected maltreatment scenarios, using ten vignettes adapted from the work of Giovannoni and Becerra (1979) and Rabb (1981), and ten dermatologically-based images of possible child maltreatment. All ten vignettes consisted of variations of child maltreatment, including types; five of the images depicted child maltreatment, while five presented as mimics of child maltreatment. A rating scale provided was based on a seven point Likert-type scale with possible scores ranging from one (definitely would not report) to seven (definitely would report). Reporting practice is paramount when it comes to the safety and security of children who are at risk for maltreatment, who are suspected of being maltreated, or who are actively suffering abuse and neglect. There is a decreased awareness of reporting protocols among educators, including early childhood specialists (McKee & Dillenburger, 2009).

A primary tenant of the Theory of Reasoned Action, attitudes, may be expressed as a person’s views about a particular behavior or behaviors (e.g., child maltreatment) (Miller, 2005). Attitude may also be defined as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor” and “directed either toward an object or behavior” (Walsh et al., 2012, pp.492-493). Attitudes toward maltreatment may be further delineated into three subcategories: commitment, confidence, and concern. These subcategories served as predictor variables \((X_2, X_3, \text{and } X_4)\) and were instrumental in determining the greatest level of variance per the criterion variable \((\bar{Y})\). The instrument used to assess preservice speech-language pathologists’ attitudes toward child maltreatment was the *Teacher Reporting Attitude*
Scale (TRAS) (Choo et al., 2013; Walsh et al., 2012). The TRAS is a 14-item instrument used to assess teachers’ attitudes toward reporting child abuse and neglect and isolates the said dimensions of commitment, confidence, and concern. There are six questions related to commitment; three questions related to confidence; and five questions related to concern. The TRAS was modified to reflect the population group studied and was used with permission from its creators (see Appendix E). A rating scale provided was based on a seven point Likert-type scale, with possible scores ranging from one (strongly disagree) to seven (strongly agree).

Predictor variable ($X_1$) comprised the demographic elements of gender and ethnicity. This variable served to assist in determining the greatest level of variance per the criterion variable ($\hat{Y}$). Gender and ethnicity were chosen as categorical variables as neither possess intrinsically-based order and have been used in previous studies examining underreporting practices of child maltreatment in educators (Bunting et al., 2010; Choo et al., 2013). Specifically, the research suggests that cultural background (ethnicity) may influence an individual’s perception of maltreatment or willingness/unwillingness to report it” (Choo et al., 2013, p. 102). With regard to gender, “females have been found to be less tolerant of physical, emotional, and sexual abuse than males” but “are no more likely to report abuse” than their male counterparts (Bunting et al., 2010, p.193).

**Definitions**

Ecological Systems Theory: This theory postulates that a child’s development occurs along a continuum where families serve as proximal influences and where peers, school, and communities serve as distal controls; attachment is bidirectional (Schweiger & O’Brien, 2005; Zielinski & Bradshaw, 2006)
Microsystem: The immediate settings or environments specific to the child (Schweiger & O’Brien, 2005).

Mesosystem: This system includes the link between school, peers, family, and others specific to the child (Schweiger & O’Brien, 2005).

Exosystem: This branch of the Ecological Systems Theory references those settings not experienced by the child directly but that influence the microsystem (e.g., community) (Schweiger & O’Brien, 2005).

 Macrosystem: This system consists of the wider society including social policies, legislation, cultural and societal perceptions (Schweiger & O’Brien, 2005).

Chronosystem: The passage of time of development as a child moves within the various systems in Bronfenbrenner’s model; historical background (Liao & Hong, 2011).

Theory of Reasoned Action: This theory centers on the evolving relationships between attitudes and subjective norms and their influences on behavior (Ajzen & Fishbein, 1977).

Commitment: This term constitutes an individual’s understanding and obligation to volitionally respond to alleged acts of maltreatment; scope of practice, professional roles, professional responsibilities are also included (Walsh et al., 2012)

Confidence: This term aligns with an individual’s certainty or assurance that reported acts of suspected maltreatment will be acted upon by higher administrative personnel including child protective services (Walsh et al., 2012).

Concern: This term reflects an individual’s emotional response regarding the possible consequences related to notification of a possible maltreatment occurrence (Walsh et al., 2012).
Research Summary

This study utilized a quantitative, correlational research design to test the Theory of Reasoned Action to determine if there is a predictive relationship between preservice speech-language pathologists’ attitudes toward child maltreatment and their reporting practices. Correlational studies are aligned with determining relationships between predictor and criterion variables and regression analysis centers on prediction (Tabachnick & Fidell, 2013). Multiple regression analysis also allows for inclusion of more than one predictor variable to forecast scores on the criterion variable (Warner, 2013). There are several types of multiple regression analyses. Standard multiple regression requires that all predictor variables be entered into the regression equation simultaneously thusly affording an outcome for the entire set of predictors (Tabachnick & Fidell, 2013; Warner, 2013). Hierarchical regression analysis uses blocks aligned with either theoretical constructs or researcher preference. As such, a researcher may “run a series of multiple regression analyses” whereby one or more predictor variables are added to the model and “the predictive usefulness” is analyzed (Warner, 2013, p.560). Statistical regression is a third type of multiple regression analysis. This approach may utilize three different versions, including forward selection, backward deletion, and stepwise regression; however, the premise of these techniques regarding entry of variables relies heavily on statistical criteria (Tabachnick & Fidell, 2013). For this study, a hierarchical approach was used, as there were a total of three predictor variables (e.g., commitment, confidence, and concern) and two covariates (e.g., ethnicity and gender), and the purpose was to determine how each predictor variable or variables “added to the equation at its own point of entry” (Tabachnick & Fidell, 2013, p.137).
The study utilized a convenience sample of 148 Master’s level preservice speech-language pathologists attending accredited training programs across the United States. Participants were recruited via email blast invitation sent out to the respective program directors of each participant’s accredited program. Participants were asked to complete an online survey administered using Google Docs and accessible via the participants’ personal computer systems. The instrument comprised three sections: a demographic section; an attitude measurement section examining the three predictors variables of commitment, confidence, and concern; and ten vignettes and ten dermatologically-based images used to assess reporting practices of preservice speech-language pathologists.
CHAPTER TWO: REVIEW OF THE LITERATURE

The universality of child maltreatment is a global public health issue. However, its prevalence in the United States is markedly severe. The 2012 Report on Child Maltreatment estimates that around 6.3 million children in the United States were referred to child protective services (CPS) due to alleged abuse or neglect (U.S. Department of Health and Human Services, 2012). Of the 6.3 million children referred, around 62% were investigated by CPS (U.S. Department of Health and Human Services, 2012). “A referral can be screened out (not investigated) for a number of reasons, including: the referral did not concern abuse or neglect, the referral did not contain enough information to allow for investigation, or the children were the responsibility of a different agency or jurisdiction” (Timmer & Urquiza, 2014, p.3). Further review of the aforementioned 62%, identified 686,000 unique victims of child maltreatment, including 1,640 fatalities (U.S. Department of Health and Human Services, 2012). Approximately 46.7% of the victims were less than five years of age (U.S. Department of Health and Human Services, 2012). Parents’ unrealistic expectations regarding child behavior and associated development, including those with delays, have also been identified as a contributing risk factor (del Vecchio, Pochtar, & Rhoades, 2013). The literature suggests that “parents use more physical, punitive, and less nurturing strategies with language delayed children than do parents of typically developing children” (del Vecchio et al., 2013, ¶21). Certainly, this does not necessarily equate with maltreatment in every case. Nonetheless, the implications aligning developmental delay or disability and child abuse or neglect must not be overlooked as approximately 13% of victims also have a disability (U.S. Department of Health and Human Services, 2012).
Language development is a multidimensional construct that occurs along a longitudinal continuum. Descriptors unique to language and communication center on such terms as systematic, complex, intentional, and multifaceted. Parents who are more verbally expressive, use richer language, and embrace literacy on a routine basis tend to rear children with more progressive language abilities (Cates et al., 2012). Children with language impairments possess an increased propensity toward social and emotional problems—including behavioral difficulties—when compared with age-matched peers (Conti-Ramsden, Mok, Pickles, & Durkin, 2013). As such, parents with children who are language delayed or disabled may be unable to effectively use such implements when reprimanding or disciplining (del Vecchio, et al., 2013). The addition of other concomitant developmental delays or complex diagnoses serves to confound relationship issues within the context of the family. This increases the likelihood of the occurrence of possible child maltreatment.

Child maltreatment has been shown to impact an individual’s maturation, quality of life, mental health, physical health, and ability to function within society (Choo et al., 2013; Draper et al., 2008; Hyter, 2012). The trauma associated with such acts has been described as complex and is often chronic, progressively intense, invasive, and shameful for many victims (Briere, & Spinazzola, 2005). A child may often experience maltreatment on a daily basis spanning several weeks, months, or years (Jaudes & Mackey-Bilaver, 2008). Mental sequelae associated with abuse and neglect may include depressive and anxiety disorders; sexual dysfunctions; feeding and eating disorders; and substance-related diagnoses (Draper et al., 2008). Specific examples noted in the literature largely center on depression and posttraumatic stress disorder (Hopton & Huta, 2013). As such, adults who were abused as children tend to live alone, have a higher prevalence of divorce, and are approximately four times more likely to describe themselves as
being unhappy (Draper, 2008). Additional psychosocial consequences also include: feelings of helplessness and a sense of disregard for a person’s boundaries and will (Hopton & Huta, 2013). Moreover, individuals adapting to complex trauma must also cope with violation of their identity, credence, and value (van der Volk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005). A strong association is also noted between childhood maltreatment and substance abuse occurrence later in life, including smoking cigarettes (Appleyard, Berlin, Rosanbalm, & Dodge, 2011; Draper, 2008). Conversely, substance abuse problems have also been linked to child victimization (Appleyard, et al., 2013). The possibility of revictimization must also be considered when a person has been assaulted, including flashbacks and “the memory imprint of particular experiences” (van der Volk, et al., 2005, p.396). Physical health maladies and somatic symptoms have also been aligned with child maltreatment history, including chronic fatigue syndrome, chronic pain, diabetes, headaches, and cardiovascular disease, especially in women (Draper et al., 2008). Lastly, neurobiological changes in brain development have also been identified. Dysregulation secondary to the stressors associated with maltreatment appears to impact serotonin production, and the sympathetic nervous and limbic systems (Hopton & Huta, 2013).

An awareness that child maltreatment occurs is not the issue (U.S. Department of Health and Human Services, 2012). The ongoing dilemma centers on early detection, identification, and prevention. Victims of child abuse and/or neglect are (a) likely to fall in the age range from birth-to-five years, and (b) be at higher risk of need requiring a skilled therapeutic service (i.e., speech therapy) due to significant developmental delay or disability (Brook, 2013; Jones, et al., 2012; Rosenberg, et al., 2013; U.S. Department of Health and Human Services, 2012). The American Speech-Language-Hearing Association (ASHA) mandates that applicants for
certification be able to interpret, integrate, and synthesize diagnostic information (including case histories) in order to arrive at appropriate recommendations for intervention (American Speech-Language-Hearing Association, 2013a). Within this standard of practice, speech-language pathologists must utilize the community-based relationships and the one-on-one interactions with the children and families they serve in order to educate and intervene should maltreatment be suspected. In order to carry out this mandate, speech-language pathologists must be aware of the varied signs of child abuse and/or neglect but also be knowledgeable regarding the reporting practices of their individual states.

Chapter two defines child maltreatment, the associated laws undergirding reporting practices, and reporting malfeasance across educational and medical professions. A comprehensive overview of speech therapy and early intervention is also provided. The remaining sections of the chapter highlight the theoretical framework on which the study is based including a review of the targeted variables under investigation.

**Maltreatment: Types and Definitions**

The *Child Abuse Prevention and Treatment Act* (CAPTA), (42 U.S.C. §5101) defines child abuse and neglect as “any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation” of an infant or child including “imminent risk of serious harm” (U.S. Department of Health and Human Services, 2011, p.15). CAPTA was initially passed by the United States Congress in 1974 and amended in 2010. As a federal law, CAPTA was created to define child maltreatment, but to also guide state legislatures in the development of policies, regulations, and implementation of programs (Child Welfare Information Gateway, 2012). The federal government provides a minimum set of guidelines that individual states must follow; however,
the primary responsibility for the protection of children resides within each singular state (Child Welfare Information Gateway, 2012). The definition of child abuse and neglect “refers specifically to parents and caregivers” and defines a “child as a person who is younger than 18 or who is not an emancipated minor” (Child Welfare Information Gateway, 2012, ¶2).

In the United States, most states recognize four primary types of maltreatment including: physical abuse, sexual abuse, psychological abuse, and neglect. Within the auspices of CAPTA’s definition of maltreatment is embedded the notion of complex trauma. Complex trauma is identified in the literature as repetitive subjection to traumatic events and the resultant effects of such exposure on a child’s development (Hyter, 2007). With regard to maltreatment, it often includes the repetitive exposure to childhood sexual, physical, and/or psychological abuse, usually within the contexts of social and emotional harm and neglect (Briere & Scott, 2012). Table 2.1 provides civil definitions of maltreatment used by CPS when considering intervention.
Table 2.1

Child Maltreatment Definitions

<table>
<thead>
<tr>
<th>Maltreatment Type</th>
<th>Civil Definition</th>
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<tbody>
<tr>
<td>Physical Abuse</td>
<td>“Non-accidental physical injury as a result of punching, beating, kicking, biting, shaking, throwing, stabbing, choking, hitting, burning, or otherwise harming a child” regardless of intention (Child Welfare Information Gateway, 2013, p.3).</td>
</tr>
<tr>
<td>Neglect</td>
<td>“Failure to provide for the child’s basic needs including: physical (food, shelter, supervision), medical (medical, mental treatment), educational (education and special education), and emotional (inattention, permitting substance abuse, lack of psychological care)” (Child Welfare Information Gateway, 2013, p.3).</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>“Includes activities by a parent or caregiver such as fondling a child’s genitals, penetration, incest, rape, sodomy, indecent exposure, and exploitation through prostitution or the production of pornographic materials” (Child Welfare Information Gateway, 2013, p.4).</td>
</tr>
<tr>
<td>Psychological Abuse</td>
<td>“A pattern of behavior that impairs a child’s emotional development or sense of self-worth: constant criticism, threats, or rejection, as well as withholding love, support, or guidance” (Child Welfare Information Gateway, 2013, p.4).</td>
</tr>
</tbody>
</table>

Speech-Language Pathology and Early Intervention

In the United States, the field of speech pathology presents as a bimodal occupation wherein its clinicians are trained in both medical and educational models. As such, their scope of practice affords them a greater appreciation of both fields, allowing transfer across job settings either singularly or simultaneously. The Individuals with Disabilities Education Improvement Act (IDEIA, 2004), specifically Part C, addresses services to children from birth to age three years and their families (early intervention). Speech therapy is the most commonly provided
therapy to children in this age range with more than one-quarter of cumulative speech-language pathologists identified as service providers (Rosenberg et al., 2013; Brook, 2013).

Early intervention is critical for children with disabilities and their families, as early detection is linked with increased therapy benefit, improved family support, and decreased costs to schools and communities (Bruder, 2010). Children who are deemed eligible for early intervention services fall into one of three categories: those with significant developmental delay(s), those with confirmed disabilities and subsequent delay(s), and those with an established risk condition that has a known likelihood of resulting in a developmental delay (Kentucky Cabinet for Health and Family Services, 2011).

Speech-language pathologists’ caseloads may contain an increased number of children with a history of maltreatment as an association appears to exist between maltreatment and children who have an ongoing need for therapeutic intervention, particularly those interventions offered by speech-language pathologists. The literature suggests children with disabilities and who have significantly delayed cognitive and/or language skills are at an increased risk for abuse (Westby, 2007). Children born prematurely are more likely to need skilled therapeutic services and are also at risk of being abused (Westby, 2007).

Speech-language pathologists are uniquely positioned to recognize and report suspected abuse given the proximity the profession shares with children age birth to five years who are often at-risk (Jones et al., 2012; U.S. Department of Health and Human Services, 2012). As a profession, they possess an “in-depth knowledge of children with disabilities; observe and interact with children over extended periods of time; understand children’s typical communication and behavior patterns; have access to children’s records; and work collaboratively with other adults who interact with the children such as teachers, parents, aides,
or administrators” (Johnson, 2012, p.4). Nonetheless, knowledge is limited unless action is applied. As such, speech-language pathologists must possess an appreciation of both state and federal laws guiding reporting practices when maltreatment is suspected. Substandard adherence to the laws governing reporting practices may fail to protect the children the laws are designed to serve, may introduce bias into the treatment of parents, and may waste valuable CPS reserves (Levi & Crowell, 2011).

**Speech-Language Pathology, the Law, and Ethical Codes**

The federal government maintains that individual states should align their laws according to both civil and criminal statutes. While appearing complex on the surface, a degree of autonomy is present. This level of independence allows individual states to largely determine their own definitions of maltreatment and who is required to report abuse and/or neglect (Gostin & Kim, 2012). While the laws may vary slightly from state-to-state, best practice patterns suggest any person who suspects abuse and/or neglect should contact a local CPS office. There are 18 states that currently require any adult who suspects child maltreatment to report the offence (Gostin & Kim, 2012). Other states limit reporting practices to individuals who have frequent interactions with children including but not limited to: teachers, social workers, physicians, child care providers, and mental health professionals (Gostin & Kim, 2012).

Anecdotally, speech-language pathologists are generally considered to fall under the category of teacher and in many cases, the category of special education teacher. In addition to the difficulty of determining the identity of a mandated reporter, states and individuals alike must also grapple with identification of the requisite steps to follow when reporting alleged malfeasance, and the possibility of litigious action should the assumed perpetrator be found innocent (Gostin & Kim, 2012; Schols, Ruiter, & Ory, 2013). Nonetheless, educators and other professional (i.e., speech-
language pathologists) and paraprofessional (i.e., teaching assistants) personnel are routinely identified as such.

Certified speech-language pathologists hold a Certificate of Clinical Competence (CCC) indicating they have exceeded the minimum requirements for state licensure and adhere to the standards set by ASHA’s Council for Clinical Certification in Audiology and Speech-Language Pathology (CFCC). Standard VIII identifies the parameters that must be followed to maintain an individual’s certification and includes compliance with ASHA’s Code of Ethics (Council for Clinical Certification in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2013). The Code of Ethics provides both principles of ethics and rules of ethics and are considered fundamental to the practice of speech therapy. The principles address the aspirational and inspirational moral behaviors of professional activity (American Speech-Language-Hearing Association, 2010). The “rules of ethics are specific statements of minimally acceptable professional conduct or of prohibitions and are applicable to all individuals” (American Speech-Language-Hearing Association, 2010, ¶6).

ASHA’s Code of Ethics covertly informs the practice of speech therapy as it relates to child maltreatment. Principle I maintains “individuals shall honor their responsibility to hold paramount the welfare of persons they serve professionally or who are participants in research and scholarly activities, and they shall treat animals involved in research in a humane manner” (American Speech-Language-Hearing Association, 2010. ¶7). Rules M and N of principle I maintains: “individuals shall adequately maintain and appropriately secure records of professional services rendered . . . and shall allow access to these records only when authorized or when required by law” and “individuals shall not reveal, without authorization, any
professional or personal information about identified persons served professionally…unless doing so is necessary to protect the welfare of the person or of the community or is otherwise required by law” (American Speech-Language-Hearing Association, 2010. ¶20-21).

**Speech-Language Pathology and Reporting Malfeasance**

Early identification and intervention are plausible and necessary as child abuse and/or neglect is rarely an isolated event (Jaudes & Mackey-Bilaver, 2008). From an international perspective, underreporting of child maltreatment appears to be a chronic issue that crosses both settings and occupations. Table 2.2 presents an international perspective of child maltreatment underreporting practices that crosses both medical and educational professions.
Table 2.2

*International Child Maltreatment Underreporting Practices*

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Underreporting Example</th>
</tr>
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<tbody>
<tr>
<td>School-Based Professionals</td>
<td>Many professionals neither suspected nor reported any type of abuse; reporting rate for recognized abuse was 52% (Bunting et al., 2010).</td>
</tr>
<tr>
<td>School-Based Professionals</td>
<td>Bunting et al., found “a fifth of (Australian) teachers indicated that they had suspected child abuse or neglect, at some time in their careers but had decided not to report the incident” (2010, pp. 190-191).</td>
</tr>
<tr>
<td>Physicians</td>
<td>One study found approximately 43% of physicians had at some point “made a conscious decision not to report despite their suspicions” (Bunting et al., 2010, p.191).</td>
</tr>
<tr>
<td>Pediatric Nurses</td>
<td>Three in ten (Sweden) nurses who suspected child abuse actually followed through to report their concern (Bunting et al., 2010).</td>
</tr>
<tr>
<td>Pediatricians</td>
<td>A random sampling of physicians (North Carolina) found that around 10% had at some point in time suspected but not reported child maltreatment (Bunting et al., 2010).</td>
</tr>
<tr>
<td>General Medical Personnel</td>
<td>“Two in five professionals reported not having seen, or suspected at least one case of child physical abuse in their careers” (Bunting, et al., 2010, p.191).</td>
</tr>
<tr>
<td>General Medical Personnel</td>
<td>Of the 60% of medical personnel who had seen at least one possible case of physical abuse, only 47% reported their suspicion (Bunting, et al., 2010).</td>
</tr>
<tr>
<td>Physicians</td>
<td>“Medical professionals sometimes fail to recognize cases of abusive head trauma” (Wood, Hall, Schilling, Keren, Mitra, &amp; Rubin, 2010, p.409).</td>
</tr>
</tbody>
</table>

The data on the underreporting of child maltreatment as it relates to speech-language pathology is sparse. Like other educational and medical professionals, speech-language
Speech-language pathologists feel they possess “insufficient knowledge of the indicators of abuse or how to report suspicions,” “fear incorrectly reporting a child as being maltreated and the consequences of that action,” and “lack confidence in child protective services to investigate the report or protect the child effectively” (Johnson, 2012, p.4). Speech-language pathologists must also factor into their decisions to report, a family’s cultural practices (Westby, 2007). They must also remain cognizant of possible abuse and/or neglect when working with minority and immigrant families. Speech-language pathologists are often hesitant to report suspected maltreatment in such cases because they fear to be labeled as racist or because they have acclimated to the varied levels of poverty witnessed on a daily basis (Westby, 2007).

The issue of underreporting is an established fact that must be considered when aligning the fields of speech therapy and education. Approximately 56% of speech-language pathologists identify their work setting as school-based (either private or public) (American Speech-Language-Hearing Association, 2013b). While the 2012 Report on Child Maltreatment identified 686,000 unique victims of child maltreatment, including 1,640 fatalities, there is reason to believe this value is an underestimate (U.S. Department of Health and Human Services, 2012). Child maltreatment is not restricted to community or societal level (Levi & Portwood, 2011). However, risk factors such as notably poorer economic and social conditions as well as the amalgamation of life stressors, serves to increase the likelihood of maltreatment occurrence (Levi & Portwood, 2011). As such, it is plausible to consider the aforementioned number of victims as an estimate, owing to the results of a large study (N = 9,953) that reported 21% of women and 31% of men indicated they had been physically abused as children (Levi & Portwood, 2011). Moreover, underreporting can delay treatment, especially with younger
children as they are often unable to articulate abuse and/or neglect, and also because they are developmentally immature (Feng et al., 2012).

A final referent to reporting practices, specific to the field of education, centers on unsubstantiated reporting. Due to the daily interaction educators have with students, it is not surprising they tend to report abuse and/or neglect on a more frequent basis (King & Scott, 2014). The study did not isolate out speech-language pathologists. Nonetheless, unsubstantiated reports from educators, police officers, social workers, and medical professionals occurred at a rate of: 18.4%, 11.1%, 9.5%, and 7.6% respectively” (King & Scott, 2014,). The increase in unsubstantiated referrals appears tied to the characteristics reported as suspect abuse. Educators’ referrals to CPS consist of child-based issues centering on emotional and behavioral problems (King & Scott, 2014). Referrals to CPS outside of education center more on family-based risk factors: caregiver mental health problems and single-parent families (King & Scott, 2014).

**Theoretical Framework**

The premise of this study centered on examination of the relationships between the attitudinal factors of commitment, confidence, and concern toward child maltreatment and the associated reporting practices of preservice speech-language pathologists. The paramount factor for consideration in this study was the primal act of volitional control. The ability to weigh evidence and arrive at a decision based on review of the data directly correlates with Ajzen and Fishbein’s (1977) Theory of Reasoned Action. Whereas child maltreatment frequently occurs at the hand of one or more caregivers, an application of how the Theory of Reasoned Action is informed by the family dynamic is warranted (Jaudes & Mackey-Bilaver, 2008; U.S. Department of Health and Human Services, 2012). To this end, Bronfenbrenner’s Ecological Systems Theory (1976) is discussed.
Ecological Systems Theory

A prevailing commonality as to the reason some children suffer maltreatment appears to be largely tied to family dysfunction. The family has been described as the “most important social institution for the upbringing, education, and protection of children” and the “family environment is the key factor that influences a child’s health, behavior, social well-being, intellect, and moral, emotional, and physical development” (Lukman et al., 2011, p.7). Contextual factors such as low socioeconomic status, having siblings who are close in age, and living in poorer, less affluent neighborhoods also appear implicated in the discussion of child maltreatment and child development (Zielinski & Bradshaw, 2006).

The ecological systems theory as developed by Urie Bronfenbrenner (1976) expands the aforementioned concepts and highlights the importance of the family and its connection to the neighborhood and beyond. The theory suggests development is interrelated involving a given child, his or her family, their neighborhood, and the larger community in which the child resides (Bronfenbrenner, 1976; Greenfield, 2012). Furthermore, the theory postulates that a child’s development occurs along a continuum where families serve as proximal influences and where peers, schools, and communities serve as distal controls, although attachment is bidirectional (Schweiger & O’Brien, 2005; Zielinski & Bradshaw, 2006). The child’s environment is seen as interactive where the systems “are nested within one another” and where there is “interdependent interaction of the systems as the major dynamic, shaping the context in which the individual directly experiences social reality” (Algood, Hong, Gourdine, & Williams, 2011, p.1143). Thus, an individual’s collective life experiences and interactions may possess both positive and negative associations as one matures from infant to child; child to adolescent; and adolescent to adult.
The speech-language pathologist plays a critical role in a child’s community, as he or she is included as a member outside of the child and his or her family. Additional participants in the child’s community may include teachers, school administrators, daycare workers, other therapists, foundations, and health agencies (Leonard, 2011). Speech-language pathologists may fall under one or more headings and serve concomitant roles other than those listed. They play a vital role in desisting the cycle of abuse by intervening when abuse or neglect are present or suspected (Hyter, 2012). This is especially true with regard to early intervention and the associated skilled services provided. A closer look at Bronfenbrenner’s (1976) theory highlights the importance of how a speech-language pathologist melds into a given family’s structure. Educators possess unique relationships with the children they serve and sometimes their families. Speech-language pathologists, working in early intervention, possess unique relationships both with the child and his or her family due to their close proximity working in the child’s home.

There are approximately five levels or hierarchical links embedded in Bronfenbrenner’s systems theory: the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem (Liao & Hong, 2011; Hong, Kral, Espelage, & Allen-Meares, 2012). Both top-down and bottom-up approaches have been presented in the literature when applying the theory to child maltreatment with bi-directionality noted. The child is an integral part of the social construct and the family is shaped by various factors commensurate of each level (Algood, et al., 2011).

The microsystem is an immediate setting involving the child and other participants engaging in shifting roles (e.g., parent, teacher, student) for varied periods of time (Bronfenbrenner, 1976). At this level, maltreatment centers on child and parent relationships and possible domestic violence in the home (Algood et al., 2011). The mesosystem comprises the
interrelationships of the child at various positions in time (Bronfenbrenner, 1976). The mesosystem is a system of microsystems; a collection of several microsystems (Bronfenbrenner, 1976). The amalgamation of microsystems is consistent with and further supports the bi-directional nature of the ecological systems theory. The exosystem is an extension of the mesosystem embracing the concrete social structures and determining or delimiting events (Bronfenbrenner, 1976). The exosystem is comprised of at least two settings where both informal and formal interactions connect (Bronfenbrenner, 1976). Areas of concern with regard to child maltreatment potential related to the exosystem include: parent stress related to income, social-emotional status, social network, and neighborhood setting (Algood et al., 2011; Boyer & Halbrook, 2011). The macrosystem comprises both culture and subculture institutions as impacted by the other three aforementioned levels (Bronfenbrenner, 1976). Again, as with the other systems, there is bi-directionality specifically with the exosystem but extending to the microsystem. “There is a need for policy-makers to consider culture both as a potential risk or protective factor for potential abuse of children with disabilities” (Algood et al., 2011, p.1145). The macrosystem emphasizes expectations specific to cultural practices and might include a parent’s ability or lack thereof to implement discipline in an appropriate manner.

The chronosystem is collectively considered the passage of time as the child moves within the various systems impacted by both history and social change (Bronfenbrenner, 1976). The chronosystem timeline can also reference death, war, maturation, puberty, and/or economic cycles (Papalia, Olds, & Feldman, 2009).

An ongoing theme present in Bronfenbrenner’s theory includes the application of transition as one vacillates within the model consistent with bi-directionality. The issue of transition has been described as both a normative and non-normative process in the literature
(Volling, 2012). Two examples of normative transitions include a child’s graduation from eighth grade to high school or physiological maturation consistent with puberty. A non-normative transition could include the ongoing experiences a child suffers when he or she is being maltreated at the hand of someone connected to them at the level of their microsystem.

Belsky (1993) advanced Bronfenbrenner’s model and “assumes that multiple levels of risk, ranging from individual characteristics to larger socio-environmental variables must be taken into account when attempting to understand the antecedents of child maltreatment” (Begle, Dumas, & Hanson, 2010, p. 209) (see Table 2.3). As suggested, his approach is consistent with Bronfenbrenner’s; however, it reduces the descriptors from five to three domains: a developmental-psychological domain, an immediate domain, and a broader domain. Table 2.3 provides an overview of Belsky’s model relating his three developmental-ecological domains with their associated abusive risk markers.
Table 2.3

*Developmental-Ecological Domains and Abusive Risk Markers*

<table>
<thead>
<tr>
<th>Developmental-Ecological Domains</th>
<th>Abusive Risk Markers</th>
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<tr>
<td>Developmental-Psychological Domain (Caregiver Markers)</td>
<td>Examples of caregiver markers include: the caregiver was abused as a child; the parent reported being stressed; parent control attributions; and the parent’s level of satisfaction (Begle, et al., 2010).</td>
</tr>
<tr>
<td>Developmental-Psychological Domain (Child Markers)</td>
<td>Examples of child markers include: the child’s age; the child’s physical health; and the presence of child disruptive behaviors (Begle, et al., 2010).</td>
</tr>
<tr>
<td>Immediate Domain</td>
<td>This domain contains: socio-demographic characteristics; home disorganization; family size; household space; and caregiver-child interactions (Begle, et al., 2010).</td>
</tr>
<tr>
<td>Broad Domain</td>
<td>Examples of the broad domain include: neighborhood characteristics; available resources; involvement in the neighborhood; and access to a peer network (Begle, et al., 2010).</td>
</tr>
</tbody>
</table>

Maltreatment has been described as both a global health issue and a universal social problem (Pietrantonio et al., 2013). Bronfenbrenner’s ecological systems theory and Belsky’s developmental-ecological domains serve to inform how abusive and neglectful acts can longitudinally affect the children and families served by practicing speech-language pathologists. The focus centers on the bi-directionality of both models. Whereas abuse and neglect are rarely isolated events, it becomes necessary to thwart repetitive misacts before morbidity gives way to mortality. Improved reporting practices across professionals and disciplines may aid in reducing victimization. Underreporting of child maltreatment is a significant problem identified in the literature (Bunting et al., 2010; Choo et al., 2013; Feng et al., 2010; Fraser et al., 2010; Kenny, 2004; McKee & Dillenburger, 2009).
An improved understanding of the factors that contribute to and predict reporting malfeasance appears warranted. The tenets of the Theory of Reasoned Action (TRA) directly align with a person’s attitudes and his or her actions, such as reporting child maltreatment (Ajzen & Fishbein, 1977). As such, TRA provides a theoretical framework for this study.

Theory of Reasoned Action

The Theory of Reasoned Action (TRA) was developed in the 1970s by Icek Ajzen and Martin Fishbein. TRA served as the study’s framework as its focus is largely aligned with operational-construct sampling. TRA is also considered a vital component of the various systems housed within Bronfenbrenner’s (1976) theory given the behaviors present at each level are likely influenced by corresponding attitudes and subjective norms. The rationale behind theory-based investigations serves to “gain understanding of real-world manifestations of theoretical constructs” (Gall et al., 2007, p.183). As such, the impetus driving TRA centers on the use of volitional control coupled with personal and social factors, and how such factors influence an individual’s decision-making processes. TRA is housed under the tenets of social psychology. The theory maintains that “attitudinal predictors correspond with behavioral criterion” with respect to the terms of the action, target, context, and timeframe (Ajzen & Fishbein, 1977, p.890); facilitating intent is the objective. Intention is described as “an individual’s motivation in his/her cognizant plan/decision to exert an effort in performing a specific behavior” (Han, Hsu, & Sheu, 2010, p.326). TRA presents as a theory that has been widely used crossing numerous disciplines: instant messaging (Peslak, Ceccucci, & Sendall, 2010); exercise science (Burak, Rosenthal, & Richardson, 2013); ethics (Celuch & Dill, 2011); the media (Cingel & Krcmar, 2013); teachers’ use of technology in the classroom (Teo, 2013);
and physicians’ communication with parents about vaccinations (Roberto, Krieger, Katz, Goei, & Jain, 2011).

The theory suggests that behavioral interplay is the target and not necessarily the outcome. Therefore, a person’s intent or reason for carrying out a decision or action is the most critical factor. This is vitally important with regard to behavior as intention may beget uncertainty in some instances (Ajzen, 1985; Sheppard, Hartwick, & Warshaw, 1988). TRA contends the probability is high a person will engage in a behavior when he or she intends to perform the said behavior. For example, a person is likely to engage in physical exercise if he or she intends to perform the act. However, the individual’s attitudes toward exercise, coupled with subjective norms or opinions from others, may dissuade intent thwarting engagement of the behavior, in this case, physical exercise. The variables that extend beyond the purposeful scope of the individual’s intent and therefore do not apply to volitional control are considered contrary to the theory’s focus (Sheppard et al., 1988). As such, application of the theory to child maltreatment becomes an issue of safety and is not about comfort and convenience. The focus is tied to personal convictions about child maltreatment and the social discord driving most belief patterns as they pertain to the acts of abuse (Han et al., 2010). Moreover, a type of balance is achieved when considering the principles of TRA adjacent to the dimensions of commitment, confidence, and concern (Choo et al., 2013; Walsh et al., 2012).

**Theory of Planned Behavior**

The Theory of Planned Behavior (TPB) was created as an extension of TRA and was developed by Icek Azjen in the 1980s. “TPB is a more comprehensive version of TRA and allows us to examine the influence of personal determinants and social surroundings as well as non-volitional determinants on intention” (Han et al., 2010, p.326). The principal disparity
between TRA and TPB centers on the addition of behavioral control. The inclusion of behavioral control counters TRA’s use of volitional control by adding an element of non-volition or circumstances extending beyond the person’s faculties. “Because all human behaviors cannot be categorized as truly volitional, TRA was expanded to explain those behaviors where individuals are less able to make choices” (Burak et al., 2013, p.1437). For example, an individual may wish (volition) to stay at an expensive hotel; however, their resources (monies) may not allow the expenditure. Han et al. (2010) suggest that TPB would be more appropriate in “predicting the hotel customer’s behavior as “non-volitional factors” must be considered that may “possibly diminish the ability/opportunity to make the decision to stay at the expensive hotel (p.326). With regard to child maltreatment, it can be argued that TRA is a more appropriate theory to test given the fact that speech-language pathologists are mandated to report maltreatment, even suspected maltreatment. A lack of evidence, poor administrative support, or simply fear of reporting abuse are not sufficient enough considerations to thwart an individual’s decision to report or not report abuse.

**Behavioral Intention**

The tenets of TRA consist of two elements that collectively comprise behavioral intention. These elements include attitudes and subjective norms. TRA suggests intention is an immediate antecedent of behavior (Celuch et al., 2011). As an extension or subtype of attitude one may also include the dimensions of commitment, confidence, and concern (Choo et al., 2013; Walsh et al., 2012).

**Attitudes.** An individual’s attitude toward a behavior is described as “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Han et al., 2010, p.326). The level of knowledge about the behavior is also
implicated. The antecedents of an individual’s attitudes are their beliefs and their own metacognitive analyses concerning their views (Burak et al., 2013). When considering child maltreatment, a speech-language pathologist’s attitudes toward abuse, even reporting practices, can be identified by simply creating a list (Burak et al., 2013; Han et al., 2010). The list may serve to identify how the person “feels about the behavior and is generally measured as a favorable or unfavorable mindset” (Peslak et al., 2010, p.267). The individual may also reflect on previous experiences. A person’s “positive attitude toward a certain behavior strengthens his/her intention to perform the behavior” (Han, et al., 2010, p.326). As stated previously, “attitudinal predictors correspond with behavioral criterion” (Ajzen & Fishbein, 1977, p.890). A word of caution is noted with regard to attitudinally-based research studies whereby a greater importance is placed on ascertaining specific qualitative definitions of attitudes as opposed to objects or things (Walsh et al., 2012).

Commitment. A certain level of commitment is necessary when one considers its application from an attitudinal perspective related to child maltreatment and reporting practices. Commitment is facilitated by understanding and knowledge. Commitment is aligned with professional responsibility. As previously suggested, educators and speech-language pathologists alike are mandated to report suspected abusive practices; however a lack of comprehension does not appear implicated at least superficially. Educators have been paralleled with assuming the front lines of the child maltreatment battle due to their frequent day-to-day contact with children. They also share this duty given the established association that children with communication challenges are also at risk for maltreatment (Hyter, 2007). Awareness is present regarding what should be done; however, appropriate actions are not always engaged or
completed in a timely manner. Previous studies note that both negative and positive attitudes toward reporting practices appear to influence an individual’s behavior (Walsh et al., 2012).

**Confidence.** “Confidence among teachers in being able to identify abuse is clearly fundamental to an effective system of child protection monitoring in schools” (McGarry & Buckley, 2013, p.83). It can be said that confidence is tied to knowledge and also to a degree of faith in the law enforcement system to investigate alleged misacts. A review of the literature to date suggests an increased need on accountability and improved training on child maltreatment and related issues (McGarry & Buckley, 2013; Walsh et al., 2008; Walsh et al., 2012). This need is directly associated with confidence, as educators must be able to trust that their reports will be fully investigated and that CPS will effectively respond (Walsh et al., 2012). Nonetheless, the literature is clear that training alone may not bridge the gap of uncertainty regarding whether one should or should not report suspected malfeasance (Bunting et al., 2010; McGarry & Buckley, 2013).

**Concern.** The element of concern as it relates to attitudes towards child maltreatment appears aligned with an individual’s emotional response. Concern about what may happen as a result of reporting an alleged act is also a part of this attitudinal element (Choo et al., 2013). The literature suggests that teachers with less actual teaching experience and lower qualifications were more likely to fail to report abuse than their counterparts (Choo et al., 2013). This in no way suggests that less experienced, less educated teachers care less about what happens outside the school walls, but it does highlight a need for greater preparatory instruction. Consistent themes noted in the current literature on child maltreatment instruction as it relates to trainee teachers centers on awareness-raising training, training both pre- and post-qualification, recognition of abuse concerns and how to report suspicions, and child protection procedures
described as inconsistent (McGarry & Buckley, 2013). Whereas teachers by-and-large feel less prepared to recognize and report abuse, it is ironic that school districts have likened to “well-established venues for delivering (child abuse) prevention messages” because they “have access to nearly the entire universe of children and families” with many having already “accepted the responsibility for this prevention task” (Finkelhor, 2009, p.186). The notion is implied that educators and their programs are good at helping students as young as preschool aged discern stranger-danger and appropriate touch but themselves report difficulty identifying existent and in some cases on-going abusive practices. The fields of education and speech therapy are helping professions; however, the roles and responsibilities of both occupations extend beyond the classroom walls.

**Subjective norms.** The second element preceding behavioral intent as it relates to TRA is the notion of subjective norms. The term subjective implies opinion. It is “an individual’s view about what significant others think the individual should do in a given context” (Celuch et al., 2011, p.202). The term subjective also implies social and social begets influence. “In studies of attitudes and behavior, the dependent variable is one that is shaped by social forces, not only private preferences” (Mastead, 2011, p.367). From the perspective of the graduate student, subjective norms could be aligned with the student’s preceptor, a mentor, social media, the media in general, or a professor. It is the judged behavior of a given social circle (Peslak, Ceccucci, & Sendall, 2010). The subjective norm is considered secondary to the person’s attitude and may be considered consistent with referent beliefs (Burak et al., 2013; Han, et al., 2010). A person’s subjective norms are influenced by their motivations to please another person (Celuch et al., 2011).
This study utilized a correlational research design to test TRA to determine if there was a predictive relationship between preservice speech-language pathologists’ attitudes toward child maltreatment and their reporting practices. A synopsis of TRA centers on volitional control guided by attitudes and subjective norms. Whereas the core of this study focused on child abuse and neglect and reporting malfeasance, the element of subjective norms or opinions may be factored out. This is an appropriate course of action, as safety—including the possibility of death—is a consideration. The primary tenet of TRA—attitudes—was assessed using a 14-item instrument that isolates out the dimensions of commitment, confidence, and concern. Participants utilized a seven-point rating scale. Reporting practices were assessed using ten vignettes and ten dermatologically based images of possible child maltreatment. Respondents again utilized a seven-point rating scale. The demographic variables of gender and ethnicity served as covariates as previous research has identified their possible influence on reporting practices (Bunting et al., 2010; Choo et al., 2013).

Summary of the Literature

Child maltreatment is both a universal and an international malady that appears present in both developing and developed countries. Maligned behaviors are suggestively chronic, cumulative, and frequently occur at the hand of one or both parents (e.g., guardians/caregivers) (Jaudes & Mackey-Bilaver, 2008; U.S. Department of Health and Human Services, 2012).

A copious amount of research has been completed with regard to child maltreatment and the field of education (Bunting, Lazenbatt, & Wallace, 2010; Fraser, Mathews, Walsh, Chen, & Dunne, 2010; Kenny, 2004; McKee & Dillenburger, 2009). Educators as a professional group are among a large sector of the workforce mandated as reporters of alleged abusive acts. Although delegated with such a pivotal task, many personnel fail to report (Choo et al., 2013;
Educators have also been identified collectively as the most likely group to report concerns to CPS that are later classified as unsubstantiated (King & Scott, 2014). Educators appear—without fault—to over rely on child-based issues without factoring in adequately family-based markers as well (King & Scott, 2014). Nonetheless, research has shown that various influences serve as hindrances to reporting practice including “reporters’ characteristics, beliefs, attitudes, cultural factors, self-confidence, as well as social and institutional supports” (Feng et al., 2010, p.125). There also appears to be a lack of training as to the signs of child maltreatment but also reporting practices from both an academic (preservice) viewpoint as well as occupational (inservice) setting (Bunting et al., 2010; Fraser et al., 2010; Kenny, 2004; McKee & Dillenburger, 2009).

As previously mentioned, there has been an abundance of research as to why teachers fail to report; however, a paucity of research exists with regard to child maltreatment and speech therapy practices (Hyter, 2007). McGarry and Buckley (2013) suggest that further preparation as to the various facets of child maltreatment should be implemented in the pedagogical practices of university training programs. While this suggestion is highlighted in terms of preservice educators, the premise holds true also for preservice speech-language pathologists.

Speech-language pathology is the most commonly provided service in the arena of early intervention (birth-to-three population) with more than one-quarter of cumulative speech-language pathologists employed in this setting (Rosenberg, Robinson, Shaw, & Ellison, 2013; Brook, 2013). Given the current statistics regarding child maltreatment including morbidity and mortality, and the fact that many of those same children also have disabling conditions, serves to further validate the importance of this study. Owing to the work of McGarry and Buckley (2013), emphasis should center on preservice speech-language pathologists.
Electing to report or keep silent about suspected abuse is a volitional behavior or purposeful action. As such, the Theory of Reasoned Action (TRA) appears most appropriate in serving as the theoretical framework for this study. TRA emphasizes four distinct domains: attitudes, subjective norms, behavioral intention, and behavior. A working synopsis of TRA implies that “an individual’s behavior is best predicted by his or her behavior intentions, and these intentions are best predicted by both attitudes and subjective norms” (Roberto et al., 2011, p.309). TRA and the Theory of Planned Behavior (TPB) have been used in a variety of studies to help explain how attitudes are linked to behavioral outcomes (Burak, Rosenthal, & Richardson, 2013; Cingel & Krcmar, 2013; Celuch & Dill, 2011; Peslak, Ceccucci, & Sendall, 2010; Roberto, Krieger, Katz, Goei, & Jain, 2011; Teo, 2013). The theory has been intermittently applied child maltreatment and the field of education; specific emphasis has centered on work completed internationally. Feng et al. (2010) reviewed the reporting practices of kindergarten teachers in Taiwan and found once social norms were removed that “attitudes toward discipline, punishments for perpetrators, and professional responsibility explained 22.4% of the groups’ variance” (p.124.). A second study that incorporated TRA or its extension theory, TPB, involved a review of Dutch teachers’ child abuse detection and reporting behaviors (Schols et al., 2013). The study identified a lack of knowledge as the most deficient area when considering whether or not to report alleged abuse (Schols et al., 2013). To date, there are no peer-reviewed studies that have examined TRA, child maltreatment, reporting practices, and preservice and/or inservice speech-language pathologists. As such, this theory serves to operationalize the variables being studied—commitment, confidence, concern, and the demographic covariates of gender and ethnicity—as they relate to speech therapy (Bunting et al., 2010; Choo et al., 2013). With regard to ethnicity, the research suggests that cultural
background (ethnicity) may influence an individual’s perceptions toward maltreatment and their reporting practices (Choo et al., 2013). With regard to gender, females are less tolerant toward maltreatment but are as equally likely to report abuse and/or neglect as their male peers (Bunting et al., 2010). Table 2.4 provides a link between the current literature on child maltreatment, the field of education, and the field of speech therapy. Table 2.4 further highlights the appropriateness of this study, including the gap in the literature.
Table 2.4

*Child Maltreatment, Speech-Language Pathology, and Education*

<table>
<thead>
<tr>
<th>Child Maltreatment</th>
<th>Speech Therapy</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>46.7% of maltreated victims were less than five years of age (U.S. Department of Health and Human Services, 2012)</td>
<td>More than one-quarter of cumulative speech-language pathologists are employed as early intervention providers (birth-to-three years) (Rosenberg, et al., 2013; Brook, 2013)</td>
<td>Educators fail to appropriately report substantiated claims (Choo, et al., 2013; Feng, et al., 2012; King &amp; Scott, 2014; Walsh, et al., 2012)</td>
</tr>
<tr>
<td>Minimal research exists regarding speech-language pathologists’ reporting practices (Hyter, 2007)</td>
<td>Speech-language pathologists are not reporting due to fear, associated consequences, and lack of confidence (Johnson, 2012)</td>
<td>Educators are not reporting due to: reporters’ characteristics, beliefs, attitudes, cultural factors, self-confidence, and social and institutional supports” (Feng, et al., 2010).</td>
</tr>
<tr>
<td>Speech-language pathologists are not reporting due to insufficient knowledge of the indicators of abuse or how to report suspicions (Johnson, 2012)</td>
<td></td>
<td>Educators are not reporting due to a lack of training as to the signs of child maltreatment (Bunting, et al., 2010; Fraser, et al., 2010; Kenny, 2004; McKee &amp; Dillenburger, 2009)</td>
</tr>
<tr>
<td>There are no studies that highlight the specific need for pedagogical training regarding child maltreatment in speech-language pathology graduate programs.</td>
<td></td>
<td>Lack of pedagogical training across disciplines regarding child maltreatment and reporting methodology (Bunting et al., 2010; Fraser, et al., 2010; Kenny, 2004; McGarry &amp; Buckley,</td>
</tr>
</tbody>
</table>

59
Conclusion

As such, the intent of this predictive correlational study was to test the Theory of Reasoned Action to determine if there is a relationship between attitudes toward child maltreatment and reporting practices of preservice speech-language pathologists while controlling for gender and ethnicity. The predictor variables were generally defined as attitudes toward child neglect and abuse, including commitment, confidence, and concern (Choo et al., 2013; Walsh et al., 2012). The control variables included gender and ethnicity. The criterion variable was defined as the preservice speech-language pathologists’ decision to report or not to report suspected maltreatment.
CHAPTER THREE: METHODOLOGY

The purpose of this non-experimental multivariate correlational study was to test the Theory of Reasoned Action to determine if there is a predictive relationship between preservice speech-language pathologists’ attitudes (e.g., commitment, confidence, and concern) toward child maltreatment and their reporting practices while controlling for gender and ethnicity. Master’s level students attending accredited programs throughout the United States were recruited to complete a survey measuring the relationship their attitudes toward child maltreatment have on their reporting practices. A hierarchical multiple regression analysis was completed. Chapter three presents the study design, the research questions and hypotheses, the participants and the setting, and the instruments, procedures, and analyses planned for the study.

Design

A predictive, correlational design was used to test the Theory of Reasoned Action (Ajzen & Fishbein, 1977) by exploring predictive relationships among variables (e.g., commitment, confidence, and concern) and the covariates (e.g., ethnicity and gender). There is a greater possibility that the outcomes of correlational research will be significant if the foundation of the design is based in theory and on the results of preceding research (Gall et al., 2007). Predictive research is routinely used in the fields of education and social science and is often differentiated based on the type of information being investigated (Gall et al., 2007). For the purpose of this study, the information being gleaned is “consistent with the extent to which a criterion behavior pattern can be predicted” (Gall et al., 2007, p.342). Child maltreatment has been frequently studied; however, emphasis has centered on preservice and inservice educators and not speech-language pathologists or speech-language pathology graduate students (Feng et al., 2010; Kenny, 2004; Martin, Cromer, & Freyd, 2010; McKee & Dillenburger, 2012; Walsh et al., 2008).
To date, there is no available research specific to the reporting practices of speech-language pathologists whether classified as inservice or preservice. Secondary sources suggest reasons as to why speech-language pathologists may fail to report alleged maltreatment (Johnson, 2012). Due to the recurring theme noted in the literature highlighting a lack of pedagogical training across disciplines regarding child maltreatment and reporting methodology, further research appears implicated (Bunting et al., 2010; Fraser et al., 2010; Kenny, 2004; McGarry & Buckley, 2013; McKee & Dillenburger, 2009; Starling et al., 2009; Walsh et al., 2008; Walsh et al., 2012. Hyter (2007) stressed the importance regarding speech-language pathologists’ awareness of child maltreatment and its impact on children with disabilities but did not examine reporting practices. Hyter and Way (2007) contend that “a child with a language impairment may also struggle with sensory modulation deficits, trauma history, fetal alcohol syndrome, cognitive impairment, a history of being maltreated, and/or inadequate care-giving” but did not investigate attitudes (p.157). As such, a gap in the literature appears present regarding preservice speech-language pathologists’ attitudes toward child maltreatment and their reporting practices.

Questions and Hypotheses

The research questions for this study queried:

**RQ1:** Will there be a statistically significant relationship between preservice speech-language pathologists’ reporting practices and their attitudes toward maltreatment (i.e., commitment, confidence, and concern) while controlling for demographic variables (i.e., gender and ethnicity)?
RQ1a: Will there be a statistically significant contribution from the demographic variables (i.e., gender and ethnicity) to the model for predicting preservice speech-language pathologists’ reporting practices?

RQ1b: Will there be a statistically significant contribution from the attitudinal factor, commitment, to the model for predicting preservice speech-language pathologists’ reporting practices?

RQ1c: Will there be a statistically significant contribution from the attitudinal factor, confidence, to the model for predicting preservice speech-language pathologists’ reporting practices?

RQ1d: Will there be a statistically significant contribution from the attitudinal factor, concern, to the model for predicting preservice speech-language pathologists’ reporting practices?

Research Hypotheses

The following are the research hypotheses:

H1: There will be a statistically significant relationship between preservice speech-language pathologists’ reporting practices and their attitudes toward maltreatment (i.e., commitment, confidence, and concern) while controlling for demographic variables (i.e., gender and ethnicity).

H1a: The demographic variables (i.e., gender and ethnicity) will significantly contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

H1b: The attitudinal factor, commitment, will statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.
\( H_{1c} \): The attitudinal factor, confidence, will statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

\( H_{1d} \): The attitudinal factor, concern, will statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

**Null Hypotheses**

The following are the null hypotheses:

\( H_{01} \): There will be no statistically significant relationship between preservice speech-language pathologists’ reporting practices and their attitudes toward maltreatment (i.e., commitment, confidence, and concern) while controlling for demographic variables (i.e., gender and ethnicity).

\( H_{01a} \): The demographic variables (i.e., gender and ethnicity) will not significantly contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

\( H_{01b} \): The attitudinal factor, commitment, will not statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

\( H_{01c} \): The attitudinal factor, confidence, will not statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

\( H_{01d} \): The attitudinal factor, concern, will not statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.

**Participants**

For the purpose of this study, a convenience sample of 148 Master’s level preservice speech-language pathologists attending accredited training programs across the United States was utilized. This number accounts for those participants removed from the sample following
data screening. Programs in the United States are accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA). Accreditation is a voluntary process. The CAA is charged with formulating standards, evaluating programs, and granting certificates of accreditation (American Speech-Language-Hearing Association, 2013a). Programs that are accredited by the CAA also share an agreement for recognition by the National Council for Accreditation of Teacher Education (NCATE) (American Speech-Language-Hearing Association, 2008).

A convenience sample was used due to availability (Warner, 2013). Participants were recruited via email blast sent out to the various program directors of accredited programs throughout the United States. A list of current program directors and their contact information is available to this researcher secondary to membership in the American Speech-Language Hearing Association. The possibility of snowball or chain sampling was also utilized. This type of approach may facilitate “a highly credible sample” (Gall et al., 2007, p.185). Participants were asked to complete an online survey administered using Google Docs. The survey is included in Appendix A. Participants were screened to verify they are current graduate students attending accredited programs and are not undergraduate students, nonstudents, or faculty/staff personnel. Demographic data were embedded in the context of the aforementioned survey. The complete demographic information requested from all participants is listed in Table 3.1.
Table 3.1

*Frequency Statistics*

<table>
<thead>
<tr>
<th>Variables</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>9 (6.0%)</td>
</tr>
<tr>
<td>Female</td>
<td>139 (94.9%)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>Traditional (≤ 25 Years)</td>
<td>97 (65.5%)</td>
</tr>
<tr>
<td>Nontraditional (≥ 25 Years)</td>
<td>51 (34.4%)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>124 (83.7%)</td>
</tr>
<tr>
<td>Non-White, Ethnic/Racial Group</td>
<td>24 (16.2%)</td>
</tr>
<tr>
<td>University Designation</td>
<td></td>
</tr>
<tr>
<td>First-Year Graduate Student</td>
<td>58 (39.1%)</td>
</tr>
<tr>
<td>Second-Year Graduate Student</td>
<td>90 (60.8%)</td>
</tr>
<tr>
<td>Graduate Program Response Rate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>38 (14.7%)</td>
</tr>
<tr>
<td>State Representation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 (48%)</td>
</tr>
</tbody>
</table>

In order for a regression analysis to provide valid and reliable results, the recommended sample size when the study involves more than two predictor variables is $N > 104 + k$; where $N$ is the number of cases and the predictor variables are referenced as $(k)$ (Warner, 2013, p.570). As this study involves three predictor variables and two covariates (demographics) $(k)$, the minimum sample size suggested is $N > 109$. With an $\alpha$ level set at .05, a medium effect size set at $(f^2 = .15)$ and power of .80, a priori calculation suggested a sample size of at least 76. “The higher the correlations among predictors, the larger the sample size that will be needed in order to obtain reasonable narrow confidence intervals for slope estimates” (Warner, 2013, p.570).
Setting

Master’s level preservice speech-language pathologists (graduate students) were invited to participate in this study. Participants were recruited via email blast invitation sent out to the respective program directors of each participant’s accredited program. A total of 257 program directors were contacted and asked to forward an explanatory email to their graduate students. The email included possible risks or benefits of the study, informed consent, and the link to the survey. The survey link remained active for approximately two weeks from the date of the initial email. Participants were able to access the survey and complete it at their leisure during the set timeframe. At the balance of the two-week period, the survey was rendered inactive and no additional data was collected.

During the 2011-2012 academic year, there were approximately 14,038 preservice speech-language pathology graduate students enrolled in accredited programs throughout the United States (Council on Academic Programs in Communication Sciences and Disorders and American Speech-Language-Hearing Association, 2013). Of the 14,038 students, 4.7% were male; 95.3% were female; 83.6% were white; and 14.3% were non-white, racial/ethnic groups (Council on Academic Programs in Communication Sciences and Disorders and American Speech-Language-Hearing Association, 2013). Approximately 148 graduate students completed the survey in its entirety representing 38 (14.7%) different programs and 24 (48%) different states. It is impossible to know exactly how many graduate students received the actual survey link.

The survey completed by the participants was hosted via Google Docs and was accessible via the participants’ personal computer systems. The survey used is cross-sectional in nature and consistent with single stage sampling allowing data to be collected at one point in time as
opposed to a longitudinal approach (Creswell, 2014). The importance of saliency must not be overlooked. Given the target sample population are preservice speech-language pathologists, there is a high probability that by nature of their choice of profession, they likely perceive child maltreatment to be an important and worthwhile topic to be studied. Saliency is directly related to accuracy and return rate of survey research (Gall et al., 2007).

**Instrumentation**

The survey developed for this study was comprised of three sections: a demographic section; an attitude measurement section examining the three predictors variables of commitment, confidence, and concern; and ten vignettes and ten dermatologically-based images used assess reporting practices of preservice speech-language pathologists. The survey for this study was located within Google Docs. Previous studies investigating child maltreatment (Walsh et al., 2008) provided a Likert-type scale range from one-to-five. By increasing the scale by two range points, there is a greater likelihood variance between participants’ scores will increase. A review of the literature on the use of five, seven, and ten-point scales suggests that five and seven-point scales produced similar mean scores; use of a ten-point scale produced lower mean scores than the five and seven-point scales consistent with an approximate .3 difference \( p = .04 \) (Dawes, 2008).

**Predictor Variables**

The instrument used to measure the predictor variables of commitment, confidence, and concern for this study was based on a validated measure developed to assess teachers’ attitudes toward child maltreatment centering on commitment, confidence, and concern, the *Teacher Reporting Attitude Scale* (TRAS) (Choo et al., 2013; Walsh et al., 2012). The TRAS is a 14-item instrument that has been used to assess teachers’ attitudes toward reporting child abuse and
neglect and assesses the dimensions of commitment, confidence, and concern. There are six items related to the attitude dimension of commitment, confidence includes three items, and concern includes five items. The TRAS was modified to reflect the sample population being studied, substituting educator(s) or teacher(s) with speech-language pathologist(s). The TRAS was used with permission from its developers (see Appendix E). A rating scale provided was based on a seven point Likert-type scale with possible scores ranging from one (strongly disagree) to seven (strongly agree). Three example questions representing the three attitudinal dimensions included: commitment (e.g., Reporting child maltreatment is necessary for the safety of children); confidence (e.g., I believe the current system for reporting child maltreatment is effective in addressing the problem), and concern (e.g., Speech-Language Pathologists who report child maltreatment that is unsubstantiated can get into trouble).

The original TRAS exhibited good construct validity (Walsh et al., 2012). Good internal reliability was noted for each of the aforementioned three dimensions. Cronbach’s α was noted per the following: commitment (.77), confidence (.62), and concern (.66) (Walsh et al., 2012). A total of 14 items comprise the TRAS. Cronbach’s α for the scale in its entirety is (.76), which is within the accepted threshold of 0.70 to 0.95 (Tavakol & Dennick, 2011).

The Likert-type scores for each of the three dimensions of attitude were summed together per each category. Per the developers of TRAS, the lower the score, the greater the degree of likelihood the participant possesses the said dimension. Possible score ranges for each of the following dimensions include: commitment (0-42); confidence (0-21), and concern (0-35). The possible mean for the cumulative section could range from (0-32.6). For the purposes of this study, the Likert-type scale scores were reverse coded in order to facilitate consistency between the criterion and predictor variables. As such, a score of one is equivalent to strongly disagree; a
score of seven is equivalent to strongly agree. Chapter four presents the descriptive statistics per each category including Cronbach’s α per each of the dimension individually but also collectively.

**Criterion Variable**

This researcher developed an instrument that consisted of ten vignettes and ten dermatologically-based images to assess the criterion variable of reporting behaviors. The ten vignettes were adapted from the work of Giovannoni and Becerra (1979) and Rabb (1981); all ten vignettes represented examples of the various types of child maltreatment. The rational for the use of vignettes was that they may represent a more accurate perspective of participants’ decisions rather than using their own accounts of their individual reporting practice patterns (Taylor, 2006). Dermatologically based images were also included. Five of the images depicted child maltreatment while five presented as mimics of child maltreatment. While no previous research has utilized this approach, the rationale for their inclusion was that images are consistent with real-world settings. The ten dermatologically based image examples were used with permission from physicians dually board certified in pediatrics and child abuse pediatrics. Several of the images adhered to bruising patterns consistent with child maltreatment discussed in the literature. “Characteristics predictive of abuse were bruising on the torso, ear, or neck for a child ≤4 years of age and bruising in any region for an infant <4 months of age” (Pierce, Kaczor, Aldridge, O’Flynn, & Lorenz, 2010, p.67).

Participants were asked to assess each vignette and image using a seven-point Likert-type scale with possible scores ranging from one (definitely would not report) to seven (definitely would report). Whereas the vignettes and images included both examples of child abuse/neglect and mimics of maltreatment, this researcher elected to recode the criterion variable data using a
binomial approach. If a participant assigned a score of seven (definitely would report) to a vignette or image that truly depicted child maltreatment, he/she received a score of one. If a participant assigned a different score, a zero was applied. This method followed suit for the other examples including those vignettes and images that served as mimickers. In total, 15 of the 20 vignettes and images depicted child maltreatment. As such, a completely accurate response value would have resulted in 15 Likert-style scores of seven (definitely would report). When recoded, the maximum number of possible scores of one should equal 15. Recoding the criterion variable to reflect scores of either one or zero allowed the researcher to simplify the process of analysis. Moreover, recoding aided in gauging each participants’ accuracy per their reporting practices. Chapter four presents the descriptive statistics including Cronbach’s $\alpha$.

**Control and Extraneous Variables**

The demographic section included both control and extraneous variables. Participants were requested to select the most appropriate answer from a list or type a response in an “other” category. This information was measured using nominal/categorical data. The control variables included participants’ gender and ethnicity. The extraneous variables included participants’ university designation (e.g., 1st year graduate student, faculty), the state (i.e., location) of his/her university, and their age classification (e.g., traditional or nontraditional student). The extraneous variables were included for both data screening and representative purposes. Table 3.2 presents both the control and extraneous variables including their operational definitions, data type, and how they were coded in the study.
Table 3.2

*Control and Extraneous Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operational Definition</th>
<th>Data Type</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>Categorical</td>
<td>1 = Male</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>Nominal</td>
<td>0 = Female</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>White American</td>
<td>Categorical</td>
<td>1 = White</td>
</tr>
<tr>
<td></td>
<td>African American</td>
<td>Nominal</td>
<td>0 = Non-White,</td>
</tr>
<tr>
<td></td>
<td>American Indian</td>
<td></td>
<td>Racial/Ethnic Groups</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pacific Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University Designation</td>
<td>1st Year Graduate Student</td>
<td>Categorical</td>
<td>Not Coded</td>
</tr>
<tr>
<td></td>
<td>2nd Year Graduate Student</td>
<td>Nominal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Faculty</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University Name</td>
<td>“Typed Response”</td>
<td>Nominal</td>
<td>Not Coded</td>
</tr>
<tr>
<td>University State</td>
<td>“Type Response”</td>
<td>Nominal</td>
<td>Not Coded</td>
</tr>
<tr>
<td>Age Classification</td>
<td>Traditional (≤ 25 Years)</td>
<td>Ratio</td>
<td>Not Coded</td>
</tr>
<tr>
<td></td>
<td>Nontraditional (≥ 25 Years)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Validity of the Entire Survey**

In order to establish face and content validity of the modified TRAS and the instrument created to assess reporting behaviors, the survey was submitted to a panel of three expert reviewers for readability, intelligibility, credibility, and purpose assurance. Each reviewer was required to meet, at minimum, the following criteria: hold a Master’s degree in speech therapy, communicative disorders, or education; hold ASHA’s certificate of clinical competence (CCC);
have at least five years of experience serving the pediatric population, particularly age 0-5 years; and utilize English as their primary language. The three reviewers all indicated they were practicing speech-language pathologists holding a Master’s degree in the field and who maintain their CCCs from ASHA. Their respective years of experience included 11, 21, and 28 years serving the pediatric population, and an emphasis that centered on the 0-5 demographic. All experts identified English as their primary language.

Each reviewer was given one week to review the survey located on Google Docs, view its contents, answer the item analysis questions, and make recommendations. Item analysis is used to “evaluate the extent to which questions are consistently understood and answered by individuals” (Dray et al., 2011, p.33). For the purpose of this study, the reviewers were asked to respond to three open-ended items per separate survey questions. As the survey is hosted online, the reviewers typed their responses in provided paragraph allowed text boxes. The open-ended question bank included: (a) How well does the statement, vignette, or image assess the construct it purports to assess?; (b) “When you created your response, what was it you had in mind?” (Dray et al., 2011, p.36); (c) Did the vignette or image depict child maltreatment? If not, why? (d) “Would you reword the statement?” If so, how? (Dray et al., 2011, p.36). Reviewers were required to answer three questions as determined by this researcher. Once feedback was received, content analysis was performed using a feedback sheet in order to systematically analyze the written communication. The reviewers overwhelmingly agreed that 34/36 questions demonstrated strong construct validity. One reviewer questioned whether vignette #5 depicted child maltreatment and thought additional information might be necessary. Another reviewer questioned the ordering of the sentences in vignette #7. Two of the three reviewers indicated that “speech therapy(ist)” should be changed to “speech-language pathology(ist).” The only
change that resulted from the feedback obtained from the reviewers involved the changing of the name of speech therapy(ist) to speech-language pathology(ist). The removal, addition, and modification of the instruments resulted in a survey that may be considered to exhibit strong content validity (see Appendix A).

**Procedures**

A request (via application) was submitted to Liberty University’s Institutional Review Board (IRB) on 6/17/2014. The IRB designated the study as exempt from full commitment review and granted approval for the study on 6/24/2014 (see Appendix B). Once signed documentation was received by this researcher, an email (see Appendix C) detailing the purpose of the study and the associated link was forwarded by this researcher to 257 program directors of accredited speech-language pathology graduate programs throughout the United States. The email also included any risks or benefits, informed consent, and the link to the survey. Details regarding the timeline of the study were also included in the email. Program directors were requested to forward the email detailing the study, including the link, to their first and second year graduate students. Participants were given two weeks to complete the survey. This information was included in the recruitment email along with a suggested amount of time needed to adequately complete the document. A reminder email was sent out to the various program directors one week following the initial email blast reminding them of the study and requesting that they forward the invitation email, including the link, to their respective first and second year graduate students (see Appendix D). No identifying information was collected from the participants. The survey was closed at the end of the second week. The data was then downloaded from Google Docs to Microsoft Excel (for screening and recoding), and then
exported to Statistical Package for the Social Sciences (SPSS) Version 22 for analyses including descriptive statistics and hierarchical multiple regression.

**Data Analysis**

A hierarchical multiple regression was used to analyze the null hypotheses. This approach allows for the researcher to determine predictive correlation between a single criterion variable and multiple predictor variables (Gall et al., 2007). Hierarchical multiple regression is also appropriate as the researcher used blocks to enter the various predictor variables consistent with logic and because the purpose centers on determining how each predictor variable or variables “adds to the (regression) equation at its own point of entry” (Tabachnick & Fidell, 2013, p.137). This method is also routinely used in the fields of education and social sciences to examine predictive models (Gall et al., 2007). An α level set at .05 was utilized. Assumption tests appropriate for multiple regression studies include normality (histogram, probability-probability plot), homoscedasticity (scatterplot), linearity (scatterplot), and extreme outliers (Cook’s Distance and Mahalanobis Distance for the overall data set (Warner, 2013). Possible presence or absence of multicollinearity was tested using the variance-inflation factor (VIF) (Warner, 2013). The Durbin-Watson statistic was also used to assess for independence of residuals.

As previously suggested, this study involves one criterion variable (e.g., reporting practices) and three predictor variables (e.g., commitment, confidence, and concern) and two covariates (e.g., ethnicity and gender). Studies that utilize hierarchical multiple regression analyses place the predictor variables into “blocks” so that their cumulative relationship on the criterion variable may be assessed. The following blocks are suggested in Table 3.3. Additionally, categorical data (e.g., demographics) were dummy coded to allow categorical
variables to be used in the analysis procedures (e.g., male = 1; female = 0; white = 1; non-white, racial/ethnic groups = 0).

Table 3.3

*Data Source Blocks*

<table>
<thead>
<tr>
<th>Data Source Blocks</th>
<th>Predictor Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 1</td>
<td>Demographics</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
</tr>
<tr>
<td></td>
<td>Ethnicity</td>
</tr>
<tr>
<td>Block 2</td>
<td>Commitment</td>
</tr>
<tr>
<td>Block 3</td>
<td>Confidence</td>
</tr>
<tr>
<td>Block 4</td>
<td>Concern</td>
</tr>
</tbody>
</table>

**Summary**

This nonexperimental, multivariate correlational study examined the predictive relationship between preservice speech-language pathologists’ attitudes (e.g., commitment, confidence, and concern) toward child maltreatment and their reporting practices while controlling for gender and ethnicity. A hierarchical multiple regression analysis was chosen over other measures due to the fact that the study involved one criterion variable and three predictor variables and two covariates (demographics). This approach allowed the researcher to determine the overall fit of the model in light of how the predictor variables help explain the total variance.
CHAPTER FOUR: FINDINGS

This study examined the relationship between preservice speech-language pathologists’ reporting practices and their attitudes toward maltreatment (i.e., commitment, confidence, and concern). Demographic variables of gender and ethnicity were controlled for as previous research suggests their possible influence on reporting practices (Bunting et al., 2010; Choo et al., 2013). The research questions for this study queried:

**RQ1:** Will there be a statistically significant relationship between preservice speech-language pathologists’ reporting practices and their attitudes toward maltreatment (i.e., commitment, confidence, and concern) while controlling for demographic variables (i.e., gender and ethnicity)?

**RQ1a:** Will there be a statistically significant contribution from the demographic variables (i.e., gender and ethnicity) to the model for predicting preservice speech-language pathologists’ reporting practices?

**RQ1b:** Will there be a statistically significant contribution from the attitudinal factor, commitment, to the model for predicting preservice speech-language pathologists’ reporting practices?

**RQ1c:** Will there be a statistically significant contribution from the attitudinal factor, confidence, to the model for predicting preservice speech-language pathologists’ reporting practices?

**RQ1d:** Will there be a statistically significant contribution from the attitudinal factor, concern, to the model for predicting preservice speech-language pathologists’ reporting practices?
Chapter four highlights the descriptive data, the appropriate assumption tests as suggested by Warner (2013) for the chosen analysis, and the statistical results.

**Descriptive Data**

Descriptive statistics for the participants ($N = 148$) is presented in Table 4.1. Prior to analyses including assumption testing, all categorical variables were dummy coded (i.e., gender and ethnicity), and the data was screened. A total of 159 responses were collected. Screening of the data necessitated removal of four participants who identified themselves as doctoral level persons; two individuals identified themselves as faculty members; one person completed the survey identifying him/herself as a senior; and four surveys were submitted as incomplete.

Per the 148 participants, this researcher elected to identify participants’ age as either traditional or nontraditional. A student is considered traditional if his/her age is $\leq 25$ years; a student is considered nontraditional if his/her age is $\geq 25$ years (Kenner & Weinerman, 2011). Among the participants, 65.5% ($n = 97$) identified themselves as a traditional student, and 34.4% ($n = 51$) identified themselves as a nontraditional student. Among the participants, 6% ($n = 9$) identified their gender as male and 94.9% ($n = 139$) identified their gender as female. Consistent with the reporting method used by ASHA to code students’ ethnicity, this researcher elected to segment the sample into two groups: white and non-white, racial/ethnic groups. Moreover, 83.7% ($n = 124$) of participants identified themselves as white and 16.2% ($n = 24$) identified themselves within the non-white, racial/ethnic group. These numbers are consistent with the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) (2013) report whereby the speech-language pathology student demographic representation consisted of: 4.7% male; 95.3% female; 83.6% white; and 14.3% non-white, racial/ethnic groups.

The survey was submitted via email to 257 program directors representing accredited programs in speech-language pathology in the United States including the District of Columbia. Around 14.7% (n = 38) of programs were represented in the data as determined per the demographic information requested (i.e., university name). It is impossible to know exactly how many graduate students received the actual survey link. Per the 50 states in the union, including the District of Columbia, representation was present from 48% of states (n = 24). Whereas, this study focused solely on graduate students, 39.1% (n = 58) of participants identified themselves as a first-year graduate student and 60.8% (n = 90) identified themselves as a second-year graduate student. Descriptive statistics for the two covariates are presented in Table 4.1.

Table 4.1

<table>
<thead>
<tr>
<th>Demographic Group</th>
<th>M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>.06 (.240)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.83 (.376)</td>
</tr>
</tbody>
</table>

Participants’ responses to the scales of commitment, confidence, and concern were analyzed as well. The Likert-type scale scores (one = strongly disagree; seven = strongly agree) for each of the three dimensions of attitude were summed together. Possible score ranges for each of the following dimensions included: commitment (0-42); confidence (0-21), and concern (0-35). The dimension of commitment yielded a mean score of 40.69 (SD = 2.01); the dimension of confidence resulted in a mean score was 16.81 (SD = 1.61); and for the dimension of concern, the mean outcome score was 28.04 (SD = 3.47).
Reporting decisions following presentation of both the vignettes and dermatologically-based images also used a Likert-type scale initially with a range where (1 = definitely would not report; 7 = definitely would report). The vignettes and the images included both examples of child abuse/neglect and mimics of maltreatment. If a participant assigned a score of seven (definitely would report) to a vignette or image that truly depicted child maltreatment, he/she received a score of one. If a participant assigned a different score, a zero was applied. This method followed suit for the other examples including those vignettes and images that served as mimickers. In total, 15 of the 20 vignettes and images depicted child maltreatment. As such, a completely accurate response total from each participant would have resulted in 15 Likert-style scores of seven (definitely would report). Thus, with recoding, the maximum possible score was 15 (accurate reporting) and the minimum possible score was zero (inaccurate reporting). As such, the closer a participant’s score was to 15, the more accurately he or she was in reporting actual child maltreatment. Per the total sample, the criterion variable yielded a mean score of 6.5 (SD = 2.81).

**Correlation of Predictor Variables and Reporting Practices**

Table 4.2 presents the results of the correlation analyses. There were weak, positive correlations between the attitudinal dimensions of commitment and confidence on preservice speech-language pathologists’ decisions to report suspected maltreatment ($r = .341, p < .001$) and ($r = .266, p = .001$) respectively. A weak-to-moderate positive association was noted between the attitudinal dimension of concern and the preservice speech-language pathologists’ decision to report suspected maltreatment ($r = .405, p < .001$). A weak positive association was noted with regard to the preservice speech-language pathologists’ gender and his/her reporting practices ($r = .136, p = .05$). There was also a weak negative association between gender and
commitment ($r = -.144, p = .04$). There were weak positive associations present between the three attitudinal dimensions overall ($r = .310, p < .001$), ($r = .339, p < .001$), and ($r = .345, p < .001$). A statistically significant relationship was not apparent per the covariate of ethnicity on the reporting practices of preservice speech-language pathologists. Ethnicity, also did not evidence a statistically significant association with gender or the attitudinal dimensions of commitment, confidence, and concern.

Table 4.2

*Correlation of Criterion and Predictor Variables*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reporting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Gender</td>
<td>.136*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Ethnicity</td>
<td>-.047</td>
<td>-.112</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Commitment</td>
<td>.341**</td>
<td>-.144*</td>
<td>.029</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5. Confidence</td>
<td>.266**</td>
<td>.064</td>
<td>.050</td>
<td>.310**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Concern</td>
<td>.405**</td>
<td>.038</td>
<td>-.031</td>
<td>.339**</td>
<td>.345**</td>
<td></td>
</tr>
</tbody>
</table>

Note: * $p \leq .05$, ** $p \leq .001$

**Assumption Testing**

Assumption tests appropriate for multiple regression studies include: normality (histogram, probability-probability plot), homoscedasticity (scatterplot), linearity (scatterplot), and extreme outliers (Cook’s Distance and Mahalanobis Distance for the overall data set (Warner, 2013). Possible presence or absence of multicollinearity was tested using the variance-inflation factor (TIF) (Warner, 2013). The Durbin-Watson statistic was also used to assess for independence of observations.
There was independence of observations, as assessed by a Durbin-Watson statistic of 1.82. This statistic is a “measure of autocorrelation of errors over the sequence of cases, and if significant indicates non-independence of errors” (Tabachnick & Fidell, 2013, p.128). The Durbin-Watson statistic ranges between zero and four with a value of two indicating no autocorrelation. An approximation between 1.5 and 2.0 is considered acceptable; thus, the likelihood is high that each individual was assessed only one time. One might also conclude from the Durbin-Watson statistic that each participant only completed the survey once. A histogram plotting the regression standardized residual against reporting frequency did not appear to indicate significant deviations from normality. Moreover, a probability-probability plot (p-p plot) evidenced a linear relationship between expected and observed cumulative probabilities. A scatterplot visually presented the overall correlations between variables and supported the assumptions that homoscedasticity and linearity were tenable. The presence of outliers was not problematic, as a maximum Cook’s Distance of .19 suggested no multivariate outliers. A maximum Mahalanobis Distance of 23.24 did not exceed the critical chi-square value. This too, did not suggest an issue with outliers. The variance inflation factor (VIF) values for all variables were less than 10; tolerance values were above .10 indicating no concerns with collinearity.

Good internal reliability was present for two of the three attitudinal dimensions. Cronbach’s $\alpha$ was noted per the following: commitment (.72), confidence (.46), and concern (.77); Cronbach’s $\alpha$ was .78 for the composite score. These numbers are relatively consistent with Walsh et al., 2012 who reported internal reliability scores of commitment (.77), confidence (.62), concern (.66), and the entire scale (.76). Cronbach’s $\alpha$ for the vignettes and dermatologically-based images was .71, indicating good reliability. Due to the low reliability
coefficient, it should be noted though that the results related to the attitudinal dimension of confidence should be interpreted cautiously.

Results of the Hierarchical Regression Model

The primary research question sought to identify whether a statistically significant relationship was present between preservice speech-language pathologists’ reporting practices and their attitudes toward maltreatment (i.e., commitment, confidence, and concern) while controlling for demographic variables (i.e., gender and ethnicity). The variables were placed into four separate blocks resulting in four separate models. Table 4.3 presents the four models.

Table 4.3

<table>
<thead>
<tr>
<th>Model</th>
<th>Predictor Variables</th>
<th>Criterion Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ethnicity + Gender</td>
<td>= Reporting</td>
</tr>
<tr>
<td>2</td>
<td>Ethnicity + Gender + Commitment</td>
<td>= Reporting</td>
</tr>
<tr>
<td>3</td>
<td>Ethnicity + Gender + Commitment + Confidence</td>
<td>= Reporting</td>
</tr>
<tr>
<td>4</td>
<td>Ethnicity + Gender + Commitment + Confidence + Concern</td>
<td>= Reporting</td>
</tr>
</tbody>
</table>

The following sections highlight each of the four models reflective of both the initial research question and sub-questions as well as the related null hypotheses.

Model One

Model One included the covariates ethnicity and gender and examined how these variables added to the regression model for predicting the reporting practices of preservice speech-language pathologists. Research Question 1a asked: “Will there be a statistically significant contribution from the demographic variables (i.e., gender and ethnicity) to the model for predicting preservice speech-language pathologists’ reporting practices?” The related null
hypothesis predicted: “The demographic variables (i.e., gender and ethnicity) will not significantly contribute to the model for predicting preservice speech-language pathologists’ reporting practices?” The overall model was not significant where $F(2, 145) = 1.438, p = .24$ accounting for a variance of only 1.9% for reporting practices. This finding provides evidence to fail to reject the null hypothesis. Table 4.4 demonstrates that neither gender nor ethnicity individually contributed to the predictive model.

Table 4.4

**Hierarchical Regression Model One; Step One**

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1.547</td>
<td>.970</td>
<td>.132</td>
<td>1.596</td>
<td>.113</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>-.243</td>
<td>.619</td>
<td>-.032</td>
<td>-.392</td>
<td>.695</td>
</tr>
</tbody>
</table>

Note: * $p \leq .05$, ** $p \leq .001$, $\alpha = .05$

**Model Two**

Model Two included the covariates of ethnicity and gender and the attitudinal dimension of commitment. Research question 1b asked: “Will there be a statistically significant contribution from the attitudinal factor, commitment, to the model for predicting preservice speech-language pathologists’ reporting practices?” The related null hypothesis predicted: “The attitudinal factor, commitment, will not statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices?” The overall model was significant, $F(3, 144) = 8.649, p < .001$, and accounted for 15.3% of the variance in reporting practices. The addition of the attitudinal dimension of commitment to the model facilitated a 13.4% change in the variance of the full model from model one to model two, where $\Delta R^2 = .133, p < .001$. This finding provided support in the rejection of the null hypothesis. Per model two,
gender and commitment were found to be individually influential on the reporting practices of preservice speech-language pathologists where $\beta = .184, p = .019$ and $\beta = .369, p < .001$, respectively. Females are more likely than males to report. As a student’s level of commitment increases, so does the likelihood he or she will report suspected maltreatment (see Table 4.5). The covariate, ethnicity, was not statistically significant and did not individually contribute to the model. Table 4.5 displays the contribution made by each variable in the multiple regression model for predicting reporting practices of preservice speech-language pathologists.

Table 4.5

*Hierarchical Regression Model One; Step Two*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>2.162</td>
<td>.914</td>
<td>.184</td>
<td>2.365</td>
<td>.019*</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>-.279</td>
<td>.577</td>
<td>-.037</td>
<td>-.483</td>
<td>.630</td>
</tr>
<tr>
<td>Commitment</td>
<td>.514</td>
<td>.108</td>
<td>.369</td>
<td>4.758</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note: * $p \leq .05, \alpha = .05$

**Model Three**

Model Three included ethnicity and gender as well as the attitudinal dimension of commitment and confidence. Research question 1c asked: “Will there be a statistically significant contribution from the attitudinal factor, confidence, to the model for predicting preservice speech-language pathologists’ reporting practices?” The related null hypothesis predicted: “The attitudinal factor, confidence, will not statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices?” The overall model was significant, $F(4, 143) = 7.598, p < .001$, and model 3 accounted for 17.5% of the variance in
reporting practices. The addition of the attitudinal dimension of confidence to the model explained an additional 2.2% of the variance over and above the two covariates and commitment ($\Delta R^2 = .023, p = .050$). This finding provided support to reject the null hypothesis. Per model three, gender, commitment, and confidence all individually contributed to the model; however, the contribution of commitment was the greatest where $\beta = .317, p < .001$. The contributions made by gender and confidence to the model were also statistically significant, where $\beta = .166, p = .035$ and $\beta = .159, p = .050$, respectively. Again, as with models one and two, the covariate ethnicity was not statistically significant and therefore did not contribute to the model. As a student’s level of confidence and commitment and confidence increases, so does the likelihood he or she will report suspected maltreatment (see Table 4.6). Nonetheless, as with model two, females are more likely than males to report suspected maltreatment. Table 4.6 displays the individual contributions made by the variables for predicting reporting practices of preservice speech-language pathologists.

Table 4.6

Hierarchical Regression Model One; Step Three

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1.944</td>
<td>.911</td>
<td>.166</td>
<td>2.133</td>
<td>.035*</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>-.342</td>
<td>.572</td>
<td>-.046</td>
<td>-.598</td>
<td>.551</td>
</tr>
<tr>
<td>Commitment</td>
<td>.442</td>
<td>.113</td>
<td>.317</td>
<td>3.909</td>
<td>.001**</td>
</tr>
<tr>
<td>Confidence</td>
<td>.277</td>
<td>.140</td>
<td>.159</td>
<td>1.980</td>
<td>.050*</td>
</tr>
</tbody>
</table>

Note: * $p \leq .05$, ** $p \leq .001$, $\alpha = .05$
Model Four

Model Four retained the covariates ethnicity and gender as well as the attitudinal dimensions of commitment and confidence, while adding concern to the model. Research question 1d asked: “Will there be a statistically significant contribution from the attitudinal factor, concern, to the model for predicting preservice speech-language pathologists’ reporting practices?” The related null hypothesis predicted: “The attitudinal factor, concern, will not statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices.” The overall model was significant, $F(5, 142) = 9.121, p < .001$, and accounted for 24.3% of the variance in reporting practices. The addition of the attitudinal dimension of concern to the model explained an additional 6.8% of the variance over and above the two covariates and the two attitudinal dimensions of confidence and commitment ($\Delta R^2 = .068, p < .001$). This finding provided support to reject the null hypothesis. Per model four, gender, commitment, and concern all individually contributed to the model; however, the contributions made by commitment and concern were the greatest where ($\beta = .240, p = .004$) and ($\beta = .288, p < .001$) respectively. In model four, the attitudinal dimension of confidence was not statistically significant, and therefore; did not individually contribute to the model. Additionally, secondary to its low reliability coefficient, any results related to the attitudinal dimension of confidence should be interpreted cautiously. In keeping with the aforementioned models one, two, and three, the covariate ethnicity did not contribute to the model in a meaningful way. Therefore, as a student’s level of commitment and concern increase, so does the likelihood, he or she will report suspected maltreatment (see Table 4.7). Again, females present as more likely than males to report suspected maltreatment. Table 4.7 displays the individual contributions
made by the variables to the model for predicting reporting practices of preservice speech-
language pathologists.

Table 4.7

*Hierarchical Regression Model One; Step Four*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1.760</td>
<td>.878</td>
<td>.150</td>
<td>2.006</td>
<td>.047*</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>-.244</td>
<td>.551</td>
<td>-.033</td>
<td>-.442</td>
<td>.659</td>
</tr>
<tr>
<td>Commitment</td>
<td>.335</td>
<td>.113</td>
<td>.240</td>
<td>2.968</td>
<td>.004*</td>
</tr>
<tr>
<td>Confidence</td>
<td>.146</td>
<td>.140</td>
<td>.084</td>
<td>1.048</td>
<td>.296</td>
</tr>
<tr>
<td>Concern</td>
<td>.233</td>
<td>.065</td>
<td>.288</td>
<td>3.567</td>
<td>&lt;.001*</td>
</tr>
</tbody>
</table>

Note: * p ≤ .05, α = .05

The guiding research question for this study queried, “Will there be a statistically
significant relationship between preservice speech-language pathologists’ reporting practices and
their attitudes toward maltreatment (i.e., commitment, confidence, and concern) while
controlling for demographic variables (i.e., gender and ethnicity)?” and the related null
hypothesis predicted: “There will be no statistically significant relationship between preservice
speech-language pathologists’ reporting practices and their attitudes toward maltreatment (i.e.,
commitment, confidence, and concern) while controlling for demographic variables (i.e., gender
and ethnicity).” The collective model may be analyzed in effort to respond to the research
question one. The full model (model four) was statistically significant, F(5, 142) = 9.121, p <
.001, and accounted for approximately 24.3% of the variance of reporting practices (R² = .243,
ΔR² = .068). The attitudinal dimensions of concern and commitment make the most significant
contributions to the variance in reporting practices followed by gender. As commitment ($\beta = .240, p = .004$) and concern ($\beta = .288, p < .001$) increase, so do students’ ($\beta = .150, p = .047$) reporting practices. Females are more likely than males to report suspected abuse and neglect. Ethnicity and confidence were not found to be statistically significant individual contributors. These findings provide support the decision to reject the null hypothesis. The regression equation was $\hat{Y} = -16.009 + .150(X_1) + .240(X_2) + .288(X_4)$.

**Summary**

This nonexperimental, multivariate correlation study examined the predictive relationship between 148 preservice speech-language pathologists’ reporting practices and their attitudes toward maltreatment (i.e., commitment, confidence, and concern). The tested null hypotheses are summarized in Table 4.8.
Table 4.8

Summary of Tested Null Hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Statement</th>
<th>Overall Model/$R^2$</th>
<th>Added Variance/$\Delta R^2$</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_{01}$</td>
<td>There will be no statistically significant relationship between preservice speech-language pathologists’ reporting practices and their attitudes toward maltreatment (i.e., commitment, confidence, and concern) while controlling for demographic variables (i.e., gender and ethnicity)?</td>
<td>24.3%</td>
<td>6.8%</td>
<td>Reject</td>
</tr>
<tr>
<td>$H_{01a}$</td>
<td>The demographic variables (i.e., gender and ethnicity) will not significantly contribute to the model for predicting preservice speech-language pathologists’ reporting practices?</td>
<td>1.9%</td>
<td>-</td>
<td>Fail to Reject</td>
</tr>
<tr>
<td>$H_{01b}$</td>
<td>The attitudinal factor, commitment, will not statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices?</td>
<td>15.3%</td>
<td>13.4%</td>
<td>Reject</td>
</tr>
<tr>
<td>$H_{01c}$</td>
<td>The attitudinal factor, confidence, will not statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices?</td>
<td>17.5%</td>
<td>2.2%</td>
<td>Reject</td>
</tr>
<tr>
<td>$H_{01d}$</td>
<td>The attitudinal factor, concern, will not statistically contribute to the model for predicting preservice speech-language pathologists’ reporting practices?</td>
<td>24.3%</td>
<td>6.8%</td>
<td>Reject</td>
</tr>
</tbody>
</table>
CHAPTER FIVE: DISCUSSION

Chapter Five comprises seven sections that serve to present the problem statement, an overview of the findings, theoretical and practical implications, limitations, recommendations for future research, and concluding remarks. The pervasiveness of child maltreatment is a global issue that influences both children with and without disabilities. The most current statistics on child maltreatment indicate that around 13% of children suffering maltreatment also possess some type of disabling condition (U.S. Department of Health and Human Services, 2012). Reporting malfeasance is also a significant issue crossing both medical and educational settings (Bunting et al., 2010; Starling et al., 2009; & Wood et al., 2010).

Speech-language pathologists have an opportunity to assist in reducing the overall number of children identified as victims of abuse and neglect via both promulgative and preventative means as they work with children with disabilities. Nonetheless, speech-language pathologists feel they possess “insufficient knowledge of the indicators of abuse or how to report suspicions,” “fear incorrectly reporting a child as being maltreated and the consequences of that action,” and “lack confidence in child protective services to investigate the report or protect the child effectively” (Johnson, 2012, p.4). Furthermore, previous research has suggested “cultural background (ethnicity) may influence an individual’s perception of maltreatment or willingness/unwillingness to report it” (Choo et al., 2013, p.102). “Females have (also) been found to be less tolerant of physical, emotional, and sexual abuse than males” but “are no more likely to report abuse” than their male counterparts (Bunting et al., 2010, p.193).

As such, this study sought to apply the Theory of Reasoned Action (TRA) (Azjen & Fishbein, 1977) relating the attitudinal factors of commitment, confidence, and concern with
reporting practices of preservice speech-language pathologists, while controlling for gender and ethnicity.

This study utilized a quantitative, predictive, correlational research design with hierarchical multiple regression analysis in effort to demonstrate the predictive relationship between a single criterion variable and three predictor variables and two covariates. The research design was an acceptable approach as it sought to examine relationships. The study was designed and based in theory and on the results of preceding research (Gall et al., 2007).

A convenience sample of 148 Master’s level preservice speech-language pathologists attending accredited training programs across the United States was utilized. A convenience sample was used due to availability (Warner, 2013). Once approval was obtained from Liberty University’s Institutional Review Board (IRB), a recruitment email blast was sent out to 257 program directors of accredited speech-language pathology graduate programs throughout the United States. Program directors were requested to forward the email detailing the study, including the link for the survey to their first and second year graduate students. Participants were given two weeks to complete the survey. One hundred forty eight completed surveys were completed. Approximately 94.9% \((n = 139)\) of respondents identified themselves as female and 6\% \((n = 9)\) identified themselves as male. Among the participants 83.7\% \((n = 124)\) identified themselves as white and 16.2\% \((n = 24)\) identified themselves within the non-white-racial/ethnic group. These numbers are representative of graduate programs in the United States and are consistent with the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) (2013) report (Council on Academic Programs in Communication Sciences and Disorders and American Speech-Language-Hearing Association, 2013).
The data was analyzed using a hierarchical multiple regression analysis. The analysis was completed to show the predictive relationship between the criterion variable and the predictor variables. Specifically, the approach sought to identify whether a statistically significant relationship was present between preservice speech-language pathologists’ reporting practices (criterion variable) and their attitudes toward maltreatment (i.e., commitment, confidence, and concern) (predictor variables) while controlling for demographic variables (i.e., gender and ethnicity) (covariates). The variables were placed into separate blocks resulting in separate models.

Model one included the covariates ethnicity and gender and examined how these variables contribute to the regression model for predicting reporting practices of preservice speech-language pathologists. The model was not significant overall; ethnicity and gender only accounted for 1.9% of the total variance of reporting practices. In model two, the attitudinal dimension of commitment was added, and the entire model significantly explained 15.3% of the total variance of reporting practices. This is a 13.4% change in variance from models one to two. In model three, confidence was added and explained an additional 2.2% of the variance over and above the two covariates and the single dimension of commitment. The fourth and full model accounted for 24.3% of the variance and was statistically significant: an increase of 6.8% over model three. This provides evidence that the linear combination of the three attitudinal dimensions of concern, commitment, and confidence while controlling for gender and ethnicity was significant for predicting reporting practices of preservice speech-language pathologists.

Commitment, concern, and gender were all individual contributors to the model. With regard to relationships among the predictor and criterion variables, the results revealed that reporting practices had a positive statistically significant relationship with concern ($\beta = .288, p$
.001) and commitment ($\beta = .240, p = .004$). As commitment and concern increased, the likelihood that preservice speech-language pathologists will report suspected child maltreatment also increased. Commitment added 15.3% of variance to the model for predicting reporting practices of preservice speech-language pathologists. Concern added 6.8% of variance to the model for predicting reporting practices of preservice speech-language pathologists. Gender ($\beta = .150, p = .047$) was also a statistically significant contributor to the model. Females are more likely than males to report suspected maltreatment.

The variables confidence and ethnicity were also individually examined. Confidence was found to possess a positive relationship with reporting practices ($\beta = .084$); however, it was not a statistically significant contributor to the model ($p = .296$). The covariate ethnicity was not a statistically significant contributor to the model ($p = .659$).

At least two previous research studies examined the attitudinal dimensions of commitment, confidence, and concern per inservice teacher reporting practices of child abuse and neglect (Choo et al., 2013; Walsh et al., 2012). To date, there are no peer-reviewed studies that examine preservice speech-language pathologists’ views on reporting practices with a paucity of research with regard to child maltreatment and inservice speech-language pathology (Hyter, 2007). The results of this study may help to narrow the gap in the literature and largely parallel previous research by Choo et al. (2013) and Walsh et al. (2012).

**Discussion and Implications**

The study encompassed three predictor variables (e.g., commitment, confidence, and concern) and two covariates (e.g., gender and ethnicity), and their influence on the amount of variance per the criterion variable (e.g., reporting practices). The full model (model four) identified three variables (e.g., commitment, concern, and gender) that each individually
significantly contributed to the overall regression equation for predicting reporting practices of preservice speech-language pathologists. Additional variables, although not statistically significant individually, were a part of the entire significant full model (model four). The predictor and control variables are singularly discussed in light of the present research.

**Demographic (Covariate) Variables**

**Gender**

Gender was included as a covariate as females are reportedly less tolerant toward child maltreatment but are as equally likely to report abuse and neglect as their male counterparts (Bunting et al., 2010). Gender ($\beta = .150, p = .047$) was an individually significant contributor to the full model (model four). Reporting practices of preservice speech-language pathologists was found to be higher for female students as compared to their male counterparts. This finding is consistent with previous research (Bunting et al., 2010). It is necessary though to note, that among the participants, 6% ($n = 9$) identified their gender as male and 94.9% ($n = 139$) identified their gender as female. This represents a significantly uneven gender distribution and a low number of males in the present study. As such, more research is needed in this area in terms of male students due to their low representation in the study and in the field of speech-language pathology overall.

**Ethnicity**

Ethnicity was included as a covariate as cultural background may influence an individual’s perceptions toward maltreatment and subsequently, their reporting practices (Choo et al., 2013). Ethnicity ($\beta = -.033, p = .659$) was not an individually statistically significant contributor to the full model (model four) or any of the other models. This study’s representation was predominately white (83.7%) ($n = 124$); 16.2% ($n = 24$) of respondents
identified themselves as non-white or member of a racial/ethnic group. Diversity has been an important consideration with regard to child maltreatment, especially reporting practices, in past research. “Diversity in the population has led to sharing of traditions, such that cultural practices are not isolated to the country of origin” (Lilly & Kundu, 2012, p.372). For example, cupping and coining are two commonly accepted Asian cultural practices. An untrained person may mistake their use as a form of physical abuse. Further, previous research identified significant differences between varied culture groups with regard to the dimension of confidence (Choo et al., 2013). “Teachers from Chinese backgrounds had lower confidence scores than teachers from both Malay and Indian backgrounds” (Choo et al., 2013, p.244). This study did not render ethnicity as a significant factor that predicted reporting; however, there was low ethnic representation in the sample and a lack of diversity overall. This is likely why ethnicity was not found to be an individual significant contributor to reporting.

**Predictor Variables**

**Commitment**

The attitudinal dimension of commitment was initially added to model two and was subsequently present in models three and four. Commitment ($\beta = .240, p = .004$) was an individually statistically significant contributor to the full model (model four) as well as all of its predecessors. Therefore, as preservice speech-language pathologists heighten their levels of commitment and responsibility regarding child maltreatment, they in turn increase the likelihood they will report suspected malfeasance. Specific phrases related to the dimension of commitment and to the practices of preservice speech-language pathologists include: “prevention of long-term consequences for children; necessary for the safety of children; fulfilling my
professional responsibility; reporting guidelines are necessary; and enables services to be made available to children and families” (Walsh et al., 2012, p. 497).

The results of this study were similar to those found in other studies likely due to the strong emotional connection, and thus, commitment, that speech-language pathologists have with the children they serve (Choo et al., 2013; Walsh et al., 2012). Previous research notes that both negative and positive attitudes toward reporting practices appear to influence an individual’s behavior (Walsh et al., 2012). The likelihood is great that preservice speech-language pathologists share similar convictions to teachers whose “commitment to and comprehension of their professional roles and responsibilities as reporters” is related to their positive attitudes toward those they serve and is largely predicated on feelings of safety and prevention (Walsh et al., 2012, p.496). Moreover, an individual’s level of knowledge about the behavior was also implicated. Such antecedents may include an individual’s beliefs and their own metacognitive analyses concerning their views (Burak et al., 2013). Preservice speech-language pathologists’ sense of commitment is linked directly to how they feel about child abuse and neglect as well as their pre-existing awareness of the issues surrounding maltreatment. These factors, coupled with a progressive understanding of professionalism, may explain why the attitudinal dimension of commitment was a statistically significant contributor to reporting practices.

Confidence

“Confidence among teachers in being able to identify abuse is clearly fundamental to an effective system of child protection monitoring in schools” (McGarry & Buckley, 2013, p.83). It can be said that confidence is tied to knowledge and also to a degree of faith in the law enforcement system to investigate alleged misacts. Educators and speech-language pathologists
must be able to trust that their reports will be fully investigated and that Child Protective Services (CPS) will effectively respond (Walsh et al., 2012).

The attitudinal dimension of confidence was initially added to model three and was also present in the full model. Confidence ($\beta = .140$, $p = .296$) was not an individually statistically significant contributor to the full model (model four), but its addition in model three was significant ($p = .050$). This dimension also carried the lowest reliability estimate using Cronbach’s $\alpha$ (.46). Reliability estimates are important as they imply consistency over time.

Confidence is informed by both practical and empirical data where reporting practices are concerned. Understanding that confidence is time and experience oriented may help explain why it did not individually significantly contribute to the final model and why the results of this study differed from Choo et al. (2013) and Walsh et al. (2012), who found confidence to be a significant factor. The dimension of confidence is largely tied to professional experience and on-the-job training. The study samples by Choo et al. (2013) and Walsh et al. (2012) used inservice teachers with varied years of experienced. This study used relatively inexperienced preservice speech-language pathologists. The aforementioned outcome is not terribly surprising given most preservice speech-language pathologists have never reported maltreatment and may not be aware of proper practices. This lack of interaction with authorities, coupled with a limited understanding of “the system’s response to reporting and perceptions of the effectiveness of child protective systems’ responses to their notifications,” likely impacted this dimension overall (Walsh et al., 2012, p. 496).

**Concern**

The attitudinal dimension of concern was added in model four and was an individually statistically significant contributor to the full model (model four), where ($\beta = .288$, $p = .001$).
Concern was the strongest predictor of reporting practices of preservice speech-language pathologists overall; reliability was estimated using Cronbach’s \( \alpha \) to be .77. Therefore, as preservice speech-language pathologists’ levels of concern increase regarding child maltreatment, so does the likelihood they will report suspected maltreatment. Specific phrases related to the dimension of concern and to the practices of preservice speech-language pathologists include: “reluctant to report because of what parents might do; apprehensive due to family/community retaliation; if unsubstantiated (I) can get into trouble; hard to gather enough evidence; and employer disagreed with me” (Walsh et al., 2012, p. 497). The element of concern as it relates to attitudes towards child maltreatment appears aligned with an individual’s emotional response. Concern about what may happen as a result of reporting an alleged act is also a part of this attitudinal dimension (Choo et al., 2013).

One might speculate as to why preservice speech-language pathologists’ sense of concern toward reporting was slightly heightened over commitment. It is possible their lack of experience working with children and families and the fact that most have never reported child maltreatment likely served to inflate their levels of concern above commitment. This is consistent with previous research, wherein “teachers with less than 10 years of experience had significantly higher scores” with regard to the attitudinal dimension of concern (Choo et al., 2013, p.244). There is also a high probability that by nature of their choice of profession, preservice speech-language pathologists perceive child maltreatment to be an important and worthwhile issue. Moreover, their knowledge that this study sought to examine their reporting practices coupled with their self-driven need to achieve accuracy likely influenced their independent ratings. This too is in some way tied to participants’ affect and is also consistent with theory.
Theoretical Implications

Whereas the premise of this study centered on examination of the relationships between the attitudinal factors of commitment, confidence, and concern toward child maltreatment and the associated reporting practices; the paramount factor for consideration was aligned with volitional control. Volitional control corresponds with intentionality. As such, the ability to weigh evidence and arrive at a decision based on review of the data directly aligns with Ajzen and Fishbein’s (1977) Theory of Reasoned Action (TRA). The theory posits that if an individual can be moved to intend to perform a behavior after considering attitudes, perceptions, and subjective norms, the likelihood is great, he or she will actually carryout the said behavior. The results of this study served to provide evidence that the theory held true when applied in this context and with this population. As the attitudinal dimensions of commitment and concern increase, so does the likelihood that preservice speech-language pathologists will report suspected maltreatment. Moreover, females are more likely to report suspected abuse and neglect than their male counterparts.

Practical Implications

Based on the results of the study, recommendations can be made to the American Speech-Language-Hearing Association (ASHA) collectively and singularly to accredited university training programs throughout the United States. The primary focus area centers on improving training and instruction at the graduate level. The secondary focus area centers on increasing the male voice within the profession in effort to balance the gender misrepresentation. An ongoing theme noted in the literature with regard to the anemic reporting practices crossing both the fields of education and medicine centers on poor preparation and decreased support. Feng et al. (2010) itemized the hindrances behind reporting practice issues to include
“reporters’ characteristics, beliefs, attitudes, cultural factors, self-confidence, as well as social and institutional supports” (p.125). A lack of training regarding the signs of child maltreatment but also on how to best report alleged misacts from both academic (preservice) as well as occupational (inservice) personnel, including students was also implicated (Bunting et al., 2010; Fraser et al., 2010; Kenny, 2004; McKee & Dillenburger, 2009). Moreover, reporting discrepancies of child abuse and neglect per physicians’ practices were attributed to insufficient training during medical school and/or subsequent residency assignments (Starling et al., 2009). As such, accredited speech-language pathology training program in the United States, with support from ASHA, should continue to diversify student enrollment and realign their programs of studies (and standards) so that students are: knowledgeable of the signs/symptoms of maltreatment, informed on how to report suspected malfeasance, and held accountable for failing to respond accordingly. The current study supports this change as the three attitudinal dimensions coupled with ethnicity and gender predict reporting behavior.

**Training and Support**

This study shows that the reporting practices of preservice speech-language pathologists are related to the attitudinal dimensions of commitment, confidence, and concern. Therefore the following applications are provided to help elucidate possible pedagogical practices. University training programs include the topic, specific to the signs/symptoms of abuse and neglect, but also how to report alleged acts, in coursework currently in place. Example courses might include cognitive-communication disorders, traumatic brain injury, special topics, independent studies, or professional issues in speech-language pathology and audiology. Clinical Directors should also thoroughly review the material during practicum, internship, or externship meetings beyond customary mention. Graduate programs that are also housed within schools of medicine (i.e.,
Departments of Surgery or Otolaryngology) or whose university has a medical school may seek out their respective departments of pediatrics to consider possible interdepartmental relationships. Medical schools are actively working to address this very issue by including additional training requirements/competencies regarding child maltreatment for their medical students and residents (Christian, 2008). Universities that contain schools of law may also investigate guest lectures and court case presentations regarding the topic but also implications for failing to report alleged maltreatment.

From a national perspective, ASHA may consider formulating an ad hoc committee or a focus group to investigate the roles and responsibilities of the speech-language pathologist per identification and reporting of child abuse and neglect. This work should include positional statements and/or technical papers on the topic. ASHA currently defers matters related to child abuse and neglect to individual employers or university training programs. Deference to an outside source without published guidelines serves to impoverish the attitudinal dimension of confidence. Preservice and inservice speech-language pathologists are not confident that their decisions to report will be acted upon or taken seriously in some cases. There is a high degree of uncertainty overall.

Gender Gap

A caveat highlighted in this study beyond the researcher’s control is the lack of equal gender representation. This study overwhelmingly represented more females than males. Historically, this gender gap has been an ongoing issue for the field of speech-language pathology since 2002 crossing “all degree, employment, and certification categories” (Rowden-Racette, 2013, p.47). The male perspective on child maltreatment as it relates to preservice speech-language pathology is limited. The female gender contribution to the regression equation
was statistically significant for this study; however, this does not necessarily indicate that males are not committed, confident, or concerned about their attitudinal roles and responsibilities as preservice or inservice speech-language pathologists. University training programs, as well as ASHA, should continue their efforts to balance the ratio of male to female speech-language pathologists as a whole.

**Limitations**

Limitations for any study should evidence review of both threats to internal and external validity. With regard to multiple regression analysis, there are five threats to internal validity that may be considered. These include: omitted variable bias, wrong functional form, errors-in-variables bias, sample selection bias, and simultaneous causality bias (Stock & Watson, 2010). The nature of this study controls for all but two of the five threats to internal validity: omitted variable bias and sample selection bias.

Omitted variable bias suggests that unidentified variables can impact the criterion variable significantly (Hausman & Wise, 1979). The predictor variables addressed in this study are specific to the instruments by which they are being measured. Moreover, the variables essential to the Theory of Reasoned Action included are based on a thorough review of the literature. As such, the threat to omitted variable bias is reduced. However, as the current regression model only accounted for 24.3% of variance; a more robust model with additional variables is still needed. For example, additional variables may include the age of the preservice speech-language pathologist, parental status, and geographic location in the United States. Previous research has shown that older females who are also mothers are less likely to use corporal punishment as a disciplinary method and “may have a better understanding of child development” (Zolotor, Robinson, Runyan, Barr, & Murphy, 2011, p.4). Moreover, studies
investigating spanking in the United States have found an increased use of corporal punishment in the southeastern states as it may be more accepted culturally as a discipline practice (Giles-Sims, Straus, & Sugarman, 1995; Straus & Stewart, 1999; Zolotor et al., 2011).

Sample selection bias must also be considered. The sample populace for this study is consistent with convenience sampling. A mass survey was distributed to preservice speech-language pathologists in all 50 states; however, participation administratively and individually was voluntary thus increasing the possibility that one or more geographic regions may be over-represented or under-represented. This threat was limited by providing ample opportunity, with reminders, to complete the survey thereby increasing the sample size. Additionally, the threat was also reduced given the nature of the study itself. Adherence to the sample size requirements for plausible results as suggested by Warner (2013) \(N > 104 + k\) further counters the threat of sample selection bias.

Additionally, one must also consider nonignorable nonresponse as “attrition is a problem in any panel survey” (Hausman & Wise, 1979, p.456). The survey link was submitted to varied program directors who then in turn made the link available to their students. The results do not reflect those students who elected not to participate due to university or departmental policies or by choice. The results do not account for students who initiated but did not complete the survey. Incomplete surveys were discarded. Statistical controls were not used to account for those individuals falling into one of the aforementioned categories. As such, conclusions drawn beyond the arena of preservice speech-language pathology would be unacceptable.

Certainly with regard to external validity concerns, generalizability is limited given the fact that only a single population group (preservice speech-language pathologists) was studied and that a significant gender bias was present. Conclusions related to gender in this model
should be interpreted and applied with caution as the cell size for male participants, while reflective of the demographic breakdown in the field, was very small. Moreover, the likelihood the results will be applicable to other fields of study is debatable. One must also note the focus of a correlational study centers on relationships and not causation (Gall et al., 2007); thus suggesting further research is needed that is quasi-experimental in nature.

**Recommendations for Future Research**

There are varied opportunities for further research based on the findings and limitations of this study. The intent of this study was to apply the Theory of Reasoned Action to predict reporting practices of preservice speech-language pathologists when considering the attitudinal dimensions of commitment, confidence, and concern. Certainly, additional dimensions of attitude may be explored as contributory to the reporting practices of professional groups both inclusive and exclusive of speech-language pathology beyond the ones presented here. Moreover, this study could be replicated for the fields of occupational and physical therapies, examining both preservice and inservice groups, including undergraduate students. To that end, comparisons may be drawn between and within the professions of speech-language pathology, physical and occupational therapies.

Quasi-experimental designs should not be overlooked either. This type of design establishes cause and effect relationships and uses existing groups. The information collected from this study could be used to develop an intervention or training focusing on the three attitudinal dimensions discussed heretofore. The intervention or training could then be examined in a quasi-experimental design. For example, preservice or inservice therapists could be randomly assigned to a control or treatment group. The participants in the treatment group could receive training specific to the three attitudinal dimensions of commitment, confidence, and
concern. The control group would receive no training and would then be “tested” against the treatment group and the results of the two groups compared.

Lastly, this researcher notes that the current model identified only 24.3% of the variance in reporting practices of preservice speech-language pathologists using quantitative methods. In effort to investigate the missing 75.7% of the puzzle, one might add the component of perception beyond the tenets of attitude consistent with the work of Fakunmoju and Bammeke (2013). Additional variables may also be included with the study consistent with correlational design. A qualitative study may also be considered. Qualitative approaches may prove useful in ascertaining the phenomena surrounding the question, “what is the experience of the reporter or non-reporter?” For example, phenomenological research tends to align with the commonalities of phenomena as experienced by an individual involved in the same situation. Further examination is needed on inservice or preservice speech-language pathologists’ reporting experiences to further understand factors that contribute to nonreporting. Another qualitative approach could involve a case study. The case study approach examines an issue or problem as experienced in context. This could involve an inservice or preservice speech-language pathologist who is currently involved in a maltreatment case where he or she has grappled with the decision to report or not report. Nonetheless, a qualitative approach may provide descriptive data as opposed to the predictive data gleaned from this study. It is plausible that the data obtained using a qualitative approach may then be used to design more robust quantitative studies.

**Conclusion**

In summary, the intent of this study was to add empirical support to further support Ajzen and Fishbein’s (1977) Theory of Reasoned Action as used to predict the reporting practices of
preservice speech-language pathologists when encountering possible child maltreatment. Being an effective speech-language pathologist “requires an understanding of the myriad issues children face in navigating their multiple environments” (Hyter, 2007, p.97). Child maltreatment is unfortunately an all-too-common issue. This study offered both theoretical and practical implications impacting university graduate training programs singularly but also the field of speech-language pathology collectively. The study highlighted the need for ongoing research into the arenas of child maltreatment, subsequent protective services, and the roles and responsibilities of inservice and preservice speech-language pathologists. To that end, recommendations for future research are provided as well as the limitations of the present study. Whereas the pervasiveness of child maltreatment is a global issue that impacts both children with and without disabilities, the hope of this researcher is that the scant knowledge base as it relates to the field of speech-language pathology and child maltreatment has now been increased and the gap in the literature narrowed.
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APPENDICES

Appendix A: Instrument

Appendix B: Liberty University IRB Approval Letter

Appendix C: Program Directors’ and Participants’ Email

Appendix D: Program Directors’ and Participants’ Reminder Email

Appendix E: Permission to use the TRAS
Appendix A: Instrument

Child Maltreatment: What Attitudinal Factors of Commitment, Confidence, and Concern Predict Reporting Practices of Preservice Speech-Language Pathologists?

Alan F. Smith
School of Education
Liberty University

Demographics
Please provide some basic demographic information.

Gender
Please indicate your gender:

- Female
- Male

Ethnicity
Please indicate your ethnicity:

- White American
- African American
- American Indian
- Asian
- Pacific Islander
- Hispanic
- Other: [ ]

University Designation
Please indicate your university designation:

- Freshman
- Sophomore
- Junior
- Senior
- 1st Year Graduate Student
- 2nd Year Graduate Student
- Faculty
- Staff
- Other: [ ]
University/College Name
Please indicate the name of the university or college you currently attend.

State (University/College)
Please indicate the state (location) in which your university or college is located.

Age Classification
Please indicate your age.
- Traditional Student (≤ 24 Years Old)
- Nontraditional Student (≥ 24 Years Old)

Attitudes Toward Child Maltreatment
Please indicate the extent to which you agree or disagree to the following statements regarding child maltreatment by selecting the most appropriate response.

Note: A child in this questionnaire connotes anyone under the age of 18 years as stipulated by law and an adult is anyone who is 18 years old and above. Child maltreatment is synonymous with abuse and/or neglect.

Adapted with permission from:


Commitment
Please indicate the extent to which you agree or disagree to the following statements regarding child maltreatment by selecting the most appropriate response.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Mostly Agree</th>
<th>Somewhat Agree</th>
<th>Neutral</th>
<th>Somewhat Disagree</th>
<th>Mostly Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

It is important for speech-language pathologists to be involved in reporting child maltreatment to prevent long-term consequences for
<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree</th>
<th>Mostly Agree</th>
<th>Somewhat Agree</th>
<th>Neutral</th>
<th>Somewhat Disagree</th>
<th>Mostly Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting child malfreatment is necessary for the safety of children.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I would like to fulfill my professional responsibility by reporting suspected child maltreatment.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Child maltreatment reporting guidelines are necessary for speech-language pathologists</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I plan to report child maltreatment when I suspect it.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Reporting child maltreatment can enable services to be made available to children and families.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Confidence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Please indicate the extent to which you agree or disagree to the following statements regarding child maltreatment by selecting the most appropriate response.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am confident that the appropriate authorities will respond effectively to reports of child maltreatment.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>It is a waste of time to report child maltreatment because no one will follow up on the report.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I believe that the current system for reporting child maltreatment is effective in addressing the problem.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
**Concern**

Please indicate the extent to which you agree or disagree to the following statements regarding child maltreatment by selecting the most appropriate response.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Mostly Agree</th>
<th>Somewhat Agree</th>
<th>Neutral</th>
<th>Somewhat Disagree</th>
<th>Mostly Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would be reluctant to report a case of child maltreatment because of what parents will do to the child if he or she is reported.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I would be apprehensive to report child maltreatment for fear of family/community retaliation.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Speech-language pathologists who report child maltreatment that is unsubstantiated can get into trouble.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I would find it difficult to report child maltreatment because it is hard to gather enough evidence.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I would still report child maltreatment even if my employer disagreed with me.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Vignettes**

Please indicate the likelihood you would report the following vignette-based scenarios to the authorities by selecting the most appropriate response.

Note: A child in this questionnaire connotes anyone under the age of 18 years as stipulated by law and an adult is anyone who is 18 years old and above. Child maltreatment is synonymous with abuse and/or neglect.


### Vignette #1

Courtney is a six-year-old black child who was struck by her mother with a wooden stick. The mother is divorced and is a maid in a motel in a national chain. Courtney suffered a concussion.

<table>
<thead>
<tr>
<th>Option</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely Would Report</td>
<td></td>
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<tr>
<td>Probably Would Report</td>
<td></td>
</tr>
<tr>
<td>Possibly Would Report</td>
<td></td>
</tr>
<tr>
<td>Not Sure</td>
<td></td>
</tr>
<tr>
<td>Possibly Would Not Report</td>
<td></td>
</tr>
<tr>
<td>Probably Would Not Report</td>
<td></td>
</tr>
<tr>
<td>Definitely Would Not Report</td>
<td></td>
</tr>
</tbody>
</table>

### Vignette #2

Susan is an 8-year-old white child. Her mother is a homemaker and is married to an urban planner. Susan’s mother hit her in the face, striking her with her fist. Susan suffered a black eye and a cut lip.

<table>
<thead>
<tr>
<th>Option</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely Would Report</td>
<td></td>
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<tr>
<td>Probably Would Report</td>
<td></td>
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<tr>
<td>Possibly Would Report</td>
<td></td>
</tr>
<tr>
<td>Not Sure</td>
<td></td>
</tr>
<tr>
<td>Possibly Would Not Report</td>
<td></td>
</tr>
<tr>
<td>Probably Would Not Report</td>
<td></td>
</tr>
<tr>
<td>Definitely Would Not Report</td>
<td></td>
</tr>
</tbody>
</table>

### Vignette #3

Michael is the 8-year-old white child of a divorced waitress. The mother, who has custody of the child, frequently brings home different men to spend the night. Michael knows about his mother’s sexual relations.

<table>
<thead>
<tr>
<th>Option</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely Would Report</td>
<td></td>
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<tr>
<td>Vignette #4</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Savannah, a ten-year-old black child, is allowed to stay around when her</td>
<td></td>
</tr>
<tr>
<td>parents have drinking parties. Her father is an administrator in city</td>
<td></td>
</tr>
<tr>
<td>government and her mother is a homemaker.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Probably Would Report</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Possibly Would Report</td>
<td></td>
</tr>
<tr>
<td>Not Sure</td>
<td></td>
</tr>
<tr>
<td>Possibly Would Not Report</td>
<td></td>
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<tr>
<td>Probably Would Not Report</td>
<td></td>
</tr>
<tr>
<td>Definitely Would Not Report</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Vignette #5</th>
</tr>
</thead>
<tbody>
<tr>
<td>James is a 9-year-old black child with severe behavior problems. His</td>
</tr>
<tr>
<td>father, a gas station attendant, and his mother, a homemaker, refuse to</td>
</tr>
<tr>
<td>accept treatment for themselves or for their child.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Definitely Would Report</th>
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<tbody>
<tr>
<td>Probably Would Report</td>
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<tr>
<td>Possibly Would Report</td>
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<tr>
<td>Not Sure</td>
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<tr>
<td>Possibly Would Not Report</td>
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<tr>
<td>Probably Would Not Report</td>
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</tr>
<tr>
<td>Definitely Would Not Report</td>
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</tbody>
</table>
## Vignette #6

Karen, a 9-year-old white child, is ignored most of the time by her father, a veterinarian, and mother, a homemaker. They seldom talk with or listen to her.

- **Definitely Would Report**
- **Probably Would Report**
- **Possibly Would Report**
- **Not Sure**
- **Possibly Would Not Report**
- **Probably Would Not Report**
- **Definitely Would Not Report**

## Vignette #7

Misty is the 7-year-old white child of a custodian and his wife. The parents have failed to obtain an eye exam for their child. The child complains of not being able to see things at a distance.

- **Definitely Would Report**
- **Probably Would Report**
- **Possibly Would Report**
- **Not Sure**
- **Possibly Would Not Report**
- **Probably Would Not Report**
- **Definitely Would Not Report**

## Vignette #8

As you talk to Gabe, a 10-year-old black child, you notice it is uncomfortable for him to sit. You find out that his father, a mechanical engineer, usually punishes him by spanking him with a leather belt leaving marks on his skin.

- **Definitely Would Report**
- **Probably Would Report**
- **Possibly Would Report**
- **Not Sure**
### Vignette #9
You discover that Chase, a 7-year-old black child and his father, a taxi driver, have repeatedly engaged in mutual masturbation.

<table>
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<tr>
<th>Response</th>
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<tbody>
<tr>
<td>Definitely Would Report</td>
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<td>Probably Would Report</td>
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<tr>
<td>Possibly Would Report</td>
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<tr>
<td>Not Sure</td>
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<tr>
<td>Possibly Would Not Report</td>
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<tr>
<td>Probably Would Not Report</td>
<td></td>
</tr>
<tr>
<td>Definitely Would Not Report</td>
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</table>

### Vignette #10
Nathan, a 6-year-old white child of public relations executive and his wife, is regularly left outside the house after dark, often as late as midnight. Neighbors have spotted the child wandering five blocks away from home.

<table>
<thead>
<tr>
<th>Response</th>
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<tbody>
<tr>
<td>Definitely Would Report</td>
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<td>Probably Would Report</td>
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<tr>
<td>Possibly Would Report</td>
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<tr>
<td>Not Sure</td>
<td></td>
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<tr>
<td>Possibly Would Not Report</td>
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</tr>
<tr>
<td>Probably Would Not Report</td>
<td></td>
</tr>
<tr>
<td>Definitely Would Not Report</td>
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</tbody>
</table>

### Dermatologic Images
Please indicate the likelihood you would report the following images to the authorities by selecting the most appropriate response.
<table>
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</tr>
</tbody>
</table>

Image #1

Image #2
### Image #7

![Image of an ear]

### Image #8

![Image of a different ear]
Appendix B: Liberty University IRB Approval Letter

June 24, 2014

Alan F. Smith

Dear Alan,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and that no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:

(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Please note that this exemption only applies to your current research application, and that any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption, or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

Fernando Garzon, Psy.D.
Professor, IRB Chair
Counseling

(434) 592-4054

Liberty University | Training Champions for Christ since 1971
Appendix C: Email to Program Directors and Participants

Research Study Information Sheet

You are invited to participate in a research study examining the relationship attitude has on the likelihood preservice (e.g., graduate student) speech therapists will report child abuse and/or neglect. In order to participate in this study, you must currently be either a first or second year graduate student attending an accredited speech-language pathology program in the United States. I ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Alan F. Smith, Liberty University, School of Education.

Background Information:

The purpose of this study is to identify if there is a relationship between preservice speech therapists’ attitudes toward child maltreatment and their associated reporting practices.

Procedures:

If you agree to be in this study, you will be asked to do the following things:

Complete a 10-15 minute online survey involving questions related to your demographics, attitudes toward child maltreatment, and the likelihood you would report possible abuse/neglect scenarios based on a series of short vignettes and dermatologically-based images. No identifying information will be obtained from the survey.

Risks and Benefits of Being in the Study:

The risks for a survey conducted on human participants could include psychological factors as well as issues concerning privacy and confidentiality. This survey is being administered via Google Docs and thus, utilizes a completely confidential software tool. The survey itself does not ask any personal individual identifiers such as a participant’s name, address, or university name. Although there are risks of strong emotional response, your participation is strictly voluntary. In addition, the study risks are no more than you would encounter working as a professional speech therapist.

The benefits to participation are that graduate training programs as well as professional and student speech therapists worldwide will possess a greater understanding the role attitude plays in clinical decision-making processes. Current research highlights a lack of training and knowledge regarding the signs and symptoms of child maltreatment. Moreover, this lack of familiarity also translates to poor decision-making processes once a therapist feels he or she has encountered suspected abuse or neglect. The study itself, heralds the mandate that speech therapists are commanded to report alleged abuse and neglect, a practice not routinely monitored or enforced.

Compensation:
Compensation is not available for this study.

Confidentiality:

By opening, completing, and then submitting the survey, you are providing consent to participate in the study. No personally identifiable information will be requested from the survey. The survey will be located on Google Docs and the data will be downloaded and stored on SharePoint. Data stored on the university server is kept in a password-protected database and is not shared with anyone. It is conceivable that engineering staff at the web-hosting company may need access to the database for maintenance reasons. The information will be stored on this site for the duration for three years and will then be deleted by the researcher. Any hard copies of the data will be stored in a locked filing cabinet and shredded at the end of three years.

Voluntary Nature of the Study:

Participation in the study is voluntary. Your decision whether to participate or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to answer any questions or to withdraw at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is Alan F. Smith. You may ask any questions. You are encouraged to contact him at afsmith4@liberty.edu. You may also contact this student’s advisor with any questions: Dr. Amanda Rockinson-Szapkiw, aszapkiw@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher or his advisor, you are encouraged to contact the Institutional Review Board, 1971 University Blvd, Suite 1837, Lynchburg, VA 24515 or email at irb@liberty.edu.

IRB Code Numbers: 1906.062414
Follow Up Reminder Email to Program Directors

Dear Program Directors,

This is a follow up to an email you received one week ago requesting that you notify your graduate students of an opportunity to participate in a research study. This study seeks to examine the relationship attitude has on the likelihood preservice (e.g., graduate student) speech therapists will report child abuse and/or neglect.

The online survey may be completed in around 10-15 minutes and involves questions related to demographics, attitudes toward child maltreatment, and reporting practices based on a series of short vignettes and dermatologically-based images. No identifying information will be obtained from the survey.

By opening, completing, and then submitting the survey, your students are providing implied consent regarding their participation in the study. No personally identifiable information will be requested from the survey and the researcher will not be able to directly or through identifiers link the participants to their survey responses.

Thank you for your time.

Sincerely,

Alan F. Smith, Liberty University
Appendix E: Permission to Use the TRAS

Hi Alan,

Lovely to hear from you.

You are very welcome to use the scale. There are now three iterations of the attitudes scale. The original, unvalidated 21-item measure (attached word document), the 14-item measure after factor analysis with an Australian sample (paper attached), and the shorter version after the Malaysian study (you have this one). If repeating this work again, I would reword the items so that there was no need for reverse coding (i.e. so that all items could be answered with the same scale). The word document indicates which items were reverse coded. I would also consider using a 7-point rather than a 5-point scale to see if this would produce finer grained results (top 2 and bottom 2 could then be combined if necessary). In addition, I would see if a semantic differential measure of attitudes would add anything further (as per Ajzen & colleagues – explained in the TPB manual by Francis et al attached).

Hope that helps – food for thought at least!

Best wishes

Kerryann

Kerryann Walsh PhD

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From: Smith, Alan Fitzgerald
Sent: Wednesday, 30 October 2013 7:00 PM
To: Kerryann Walsh
Subject: Re: Child Maltreatment

Hello Dr. Walsh. We haven’t communicated for quite some time; however I wanted to thank you again for the information you shared below and to let you know that I recently reviewed your article Teacher Reporting Attitudes Scale (TRAS): Confirmatory and Exploratory Factor Analyses With a Malaysian Sample. I was very excited to come across the information. May I use the scale as part of my own doctoral research examining whether a predictive relationship exists between perception and knowledge of child maltreatment in preservice speech therapists and if so, what factors of such appear to influence their reporting practices? I realize you are not the sole author of the work. Thank you so much for your time. All the best.

Alan F. Smith
Doctoral Student
Liberty University
School of Education
Lynchburg, VA, USA