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Examining Caregiver Vigilance for Child Sexual Abuse

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by

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DEDICATION

To Grandma, Vera Ziegler Pound, a role model of principles, love, faith, and family. You showed me how to immediately embrace someone as family and gave me a backstop against which I can still set my line, even as you are gone. Your heart for all children, your desire to prevent children being hurt by those around them, and your willingness to share yourself without losing yourself, is a guiding point for my work. Your ceaseless encouragement of my pursuits, readiness to help me however you could, time you took to read to me, taking me on trips with you, and listening to my endless piano practice did not go in vain. You didn't have to, but you built my resilience and you remain a source of resilience in my spirit.

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ABSTRACT

Child sexual abuse (CSA) affects approximately one in four US children through adolescence. As an adverse childhood experience (ACE) implicated in long-term health and wellbeing, CSA is a pervasive safety concern. The influence of caregivers and healthcare providers is under-realized in CSA prevention. Examining the thinking processes preceding CSA vigilance response has been limited in research. Understanding the complexities in healthcare related to addressing CSA will facilitate caregiver-focused intervention in primary care. Guided by social ecology and protection motivation theories (PMT), the goals of this two-phase study were to explore caregiver cognitive processes towards vigilance for CSA and the challenges of CSA prevention and intervention in primary care. Phase I explored how the proposed cognitive process of situational risk perception related to caregiver prior experience and sociodemographic variables in a PMT model. Phase II explored challenges in primary care for providing guidance, appraisal, and treatment for CSA.

During Phase I, caregivers of children 4 – 10 years old were surveyed (n = 183). A multinomial logistic regression model identified prior childhood adversity and financial security as predictors of caregivers' CSA situational risk perception across both microsystem and exosystem layers. The investigator-developed 10-option measure of CSA risk situations was reliable (Cronbach's alpha = .80). A principle components analysis identified two factors, microsystem and exosystem-level CSA risks.

During Phase II, three focus group sessions were conducted with primary care providers and staff. Six themes were identified. Two themes were specific to the provider's role: (1) Competing care demands for high-risk children and (2) Challenges with appraisal and treatment. Two proximal processes with families were identified: (1) Navigating stigma, denial, and avoidance and (2) Sporadic interaction for guidance and appraisal. Two proximal processes with community resources were identified: (1) Fragmentation of community resources and (2) Constrained information sharing with community agencies.

Identifying influences on caregiver risk perception is a needed precursor to studying caregiver vigilance. This study supports developing a tailored intervention for caregivers grounded in cognitive processes for CSA risk and vigilance. This study identified primary care challenges and resources for addressing CSA, important for planning feasible PMT-based caregiver interventions in primary care.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1

INTRODUCTION

Statement of the Problem

In 2016, there were 57,064 child sexual abuse (CSA) victims confirmed by state-level child protection services across the country ("Kids Count Data Center," 2018). National telephone surveys of adolescents 16 years and older yield lifetime sexual abuse exposure rates of up to 29% (Finklehor, Shattuck, Turner, & Hamby, 2014; Finklehor, Turner, Shattuck, & Hamby, 2015). More than a fourth (26.6%) of 17-year-old females, compared to 5.1% of males, reported at least one exposure to sexual abuse or assault (Finklehor, et al., 2014). These numbers likely underestimate the true incidence rate of CSA. Victim counts from child protective services do not include cases investigated only by law enforcement. Also unaccounted for are non-disclosures, an ongoing issue in obtaining accurate epidemiologic data on child maltreatment (Finklehor et al., 2015).

Child sexual abuse is one of the ten primary adverse childhood experiences (ACEs) implicated in long-term adverse health and wellbeing outcomes from childhood through adulthood (Cashmore & Shackel, 2013; Felitti et al., 1998a; Felitti et al., 1998b). Children and adolescents who experience CSA have a higher risk of pediatric and adolescent behavioral health concerns and substance abuse, especially in caregiving environments lower in support or resource stability (Cashmore & Shackel, 2013; Cohen, Mannarino, Zhitova, & Capone, 2003; Sanjeevi, Houlihan, Bergstrom, Langley, & Judkin,

2018). Higher levels of ACEs are associated with increased rates of chronic disease, substance abuse, social instability, and early death (Felitti & Anda, 2009; Felitti et al., 1998a).

Given the significant effects of ACEs such as CSA on long-term health and wellbeing, prevention of CSA warrants prioritization in child health research and practice. Children are inherently dependent on the adults around them for protection, guidance, and basic resources. Two groups of significance for protection and wellbeing in a child's social ecology are their close-contact caregivers (such as parents and grandparents) and healthcare providers.

Caregivers in the innermost layers of a child's social ecology have the greatest direct influence on their wellbeing (Bronfenbrenner, 1974; Grzywacz & Fuqua, 2000). Close caregivers' influence extends to the child's physical, mental and emotional developmental outcomes (Bronfenbrenner, 1974). Given the strong influence of caregivers, the need for additional research addressing factors affecting caregivers' perceptions and actions for protecting children from CSA has been identified (Babatsikos, 2010; Babatsikos & Miles, 2015; Walsh & Brandon, 2012; Xie, Qiao, & Wang, 2016). Walsh and Brandon found parents were less likely to perceive their children at risk for CSA compared to children in general prior to completing a CSA prevention program. Caregivers perceived less CSA risk and were less reactive to questionable incidents between their children and proximal adults compared to responses to incidents outside the child's microsystem (Babatsikos, 2010). Many recent CSA prevention efforts have focused on children; however, children have a limited

capacity to self-protect based on their limited understanding of an unexplained risk and ability to take certain specific actions such as avoiding a coercive proximal caregiver or family associate (Rudolph, Zimmer-Gembeck, Shanley, & Hawkins, 2018). While child-focused teaching remains important to CSA prevention, continuing to develop caregiver-focused interventions is needed to place the bulk of protective responsibility on those more empowered to reduce CSA risk (Rudolph et al., 2018).

Most caregiver-focused CSA prevention programs were independent of a specific parenting resource, recruited through children's schools or community networks, or offered to families identified by child protection services. Accessing a wider range and higher number of caregivers to provide CSA prevention education is a challenge, partly due to limited participation in separate voluntary sessions (Walsh & Brandon, 2012). Home-based primary prevention programs for CSA have demonstrated utility (MacIntyre & Carr, 1999). However, long-term outcomes from home-based programs for child maltreatment have been overall mixed and these resource-intensive programs are largely limited to families referred by child protection agencies (Donelan-McCall, Eckenrode, & Olds, 2009). Intervention strategies in conjunction with existing caregiving duties such as healthcare appointments may reach more caregivers since pediatric healthcare utilization is relatively high. In 2014, more than 90% of children under 17 years old accessed primary care (Burwell, 2016).

While healthcare providers' high access to children's caregivers provides an opportunity for a consistent and widespread CSA prevention program, there are challenges to implementation. Professional organizations of both pediatric medicine and

advanced practice nursing support widespread anticipatory guidance and appraisal for CSA (Hornor, 2013; Jenny & Crawford-Jakubiak, 2013). However, the U.S. Preventive Services Task Force (USPTF) has not issued a specific recommendation due to lack of sufficient evidence for or against standardized CSA screening and prevention (Moyer, 2013). The USPTF recommendations set the expectations for standardized anticipatory guidance and screenings for pediatric well visits; without being part of the USPTF schedule, CSA prevention and screening is inconsistently included in primary care visits. Child sexual abuse prevention and appraisal efforts in healthcare settings vary based on the provider's comfort and knowledge with the topic and perception of risk for their patients (Flaherty & Sege, 2005; Thomas, Flaherty, & Binns, 2004). Time studies have shown it is not possible to address all recommended preventive screening and education requirements in the standard well visit with the typical resources of a primary care practice (Yarnall, Pollak, Ostbye, Krause, & Michener, 2003).

To maximize the potential for effectiveness of a caregiver-focused CSA prevention program, determining more precisely where caregivers perceive risk for CSA and what influences risk perception is an important step. With a more solid understanding of where and how caregivers perceive CSA risk, exploration of the relationship between risk perception and vigilance behaviors for CSA can proceed. Establishing the relationships between prior experience, sociodemographic variables related to the child, caregiver, and home environment, caregiver risk perception and vigilance for CSA will facilitate cognitively based prevention program design to activate positive protection motivation in caregivers. Additionally, given the potential challenges

to implementing a CSA prevention program in primary care settings, gaining a better understanding of the complexities of primary care with families at high risk for CSA before planning an intervention is needed.

Overview of the Study

The overarching conceptual framework guiding this two-phase study incorporates concepts from social ecology and protection motivation theory. Both phases of the study draw from a social ecology perspective, while Phase 1 also incorporates protection motivation theory. Social ecology theory takes a holistic and layered view of the influences on a child's wellbeing. In social ecology, the child is conceptualized as being in the center of a set of concentric layers of caregivers, settings, systems, and societal influences, as well as the layer-crossing construct of time (Bronfenbrenner, 1989). The closest layer to the child, the microsystem, consists of caregivers and others with ongoing influence on the child. The exosystem layer includes settings a child encounters and people not involved enough to be part of the microsystem, but with which a child comes in contact. Between these two layers is the mesosystem layer, representing interaction between the layers. The focus in Phase I of this study is on potential risk settings for CSA in the microsystem and exosystem layers of social ecology to develop an initial understanding of where CSA risk perception exists for caregivers. Using survey data from caregivers of children four to 10 years old, the quantitative analysis in Phase I explores caregiver perception of CSA risk in settings situated in the microsystem and exosystem layers of a child's social ecology.

In addition to the social ecology theory, Phase I of the study is guided by the protection motivation theory (PMT) (Maddux & Rogers, 1983; Rogers, 1983). Protection motivation theory proposes a person's prior experiences with a risk or threat, combined with specific sociodemographic characteristics, influence the processing of, and thus the protective response to, the risk or threat. Relationships between caregiver prior experiences of exposure to adult and child adversity and trauma as well as caregiver and child sociodemographic variables with a proposed new cognitive process, situational risk perception, are explored.

A social ecology perspective guides Phase II of the study. How primary care providers and staff manage CSA guidance, appraisal, and treatment with patients and families in the clinic setting are explored using data from three focus groups. Since addressing CSA in primary care involves understanding sociodemographic factors of the family and interactions with the child and the family, both are centrally located in a socioecological model. The healthcare provider and primary care setting are an immediate outer layer with a second exterior layer of community resources. The complexities of the provider role and the interactions with both the child and family core and the exterior community resources are explored.

Purpose of the Study

The overall goals of this pilot study are two-fold. First, the Phase I study aims to examine how the proposed socioecological cognitive process of situational risk perception is related to the caregiver prior experience and family sociodemographic variables in a PMT model. the Phase II study aims to explore the challenges of primary

care providers and staff in providing guidance, appraisal, and treatment for CSA and the interactions occurring between primary care and both children and families and community resources.

Cross-sectional descriptive survey data from caregivers (*n* = 183) of four to ten year old children were used in Phase I. Statistical analyses were conducted to test the cognitive process of situational risk perception in an adapted PMT for caregiver vigilance for CSA in order to explain the relationships between prior experience, cognitive processes, and vigilance response. Focus group data from pediatric primary care staff were used for Phase II. A better understanding of the processes and challenges for addressing CSA in primary care will support future primary care intervention development.

Study Aims and Research Questions

Phase I

Specific Aim 1. Identify how the proposed socioecological cognitive process of situational risk perception is related to caregiver prior experience and family sociodemographic variables in a protection motivation theoretical (PMT) model. The research questions associated with this specific aim are:

RQ1a: Do child and family demographics, financial security, life stress, and prior adversity or trauma experiences influence caregiver situational risk perception of CSA?

RQ1b: Is there a difference in the influence of these child and caregiver factors on situational risk perception of CSA in different social ecology layers?

Phase II

Specific Aim 2. Explore the complexities in primary care settings for providing guidance, appraisal, and treatment for CSA from an ecological perspective. The research questions associated with this specific aim are:

RQ2a: What are the challenges primary care providers and staff encounter in providing guidance, appraisal, and treatment for CSA?

RQ2b: What resources are lacking for primary care providers and staff to provide consistent and effective care for CSA?

RQ3c: What interactions related to CSA guidance, appraisal, and treatment occur by primary care providers and staff with children and families and with community resources?

CHAPTER 2

SUSTAINED AND PURPOSEFUL ATTENTION:

A CONTENT ANALYSIS OF ADULT CAREGIVER VIGILANCE OF CHILDREN[1]

Child caregivers, including parents, grandparents, extended family, and family friends, are central figures with major responsibilities for both protecting a child from exposure to unsafe situations or threats and responding to such potential dangers. Adult caregiver vigilance involves *sustained, purposeful attention and behaviors to anticipate a child's safety and wellbeing needs.* Better understanding of adult caregiver vigilance is essential to assessment of adult caregivers' attitudes and behaviors and to the promotion of effective measures to protect and address the needs of children within the family context. The goals of this content analysis were to identify and examine the current approaches to adult caregiver vigilance of children within the existing scientific literature. The following sections contain a description of the methods employed in the literature search and the results of the analysis of the identified literature, including key attributes and purposes of adult caregiver vigilance, areas of consensus across the literature, and emergent research priorities of exploring how familiarity and group effects affect caregiver vigilance.

[1] Chappell, K. K. and Messias, D. H. In preparation for submission to *Journal of Family Theory and Review*.

Areas identified for further analysis and research include the application of caregiver vigilance to less-studied child safety and wellbeing situations, including accidental injury, ingestions, and child maltreatment, such as child sexual abuse. Future examination of caregiving and supervision through the lens of adult caregiver vigilance may contribute to the implementation of more focused, effective risk reduction and intervention strategies to enhance child wellbeing.

Methods

This systematic review examined the current literature on vigilance in health and safety contexts related to children and their adult caregivers. An initial keyword search for *vigilance* in the Academic Search Complete EBSCO database, with no restrictions on country, language of origin, or publication date, resulted in 10,408 citations. Subsequent steps to narrow the initial citation list were completed. First, a search for vigilance combined with the secondary terms *parent OR parenting* resulted in 236 citations. Next, a search combining vigilance with the secondary term *caregiver* yielded 51 citations.

A subsequent review of the titles and abstracts of these 287 articles identified further excluded material unrelated to caregivers' perceptions and actions towards health and safety of children or families (i.e., discussion of vigilance among animals or as a cognitive process in neuroscientific studies of attention). Inclusion criteria were incorporation of vigilance either in the discussion of behaviors or attitudes or as a part of a measurement tool; an emphasis on human behaviors or processes; and inclusion of caregivers. This selection process resulted in 33 articles that met the inclusion criteria. Next, the reference lists of these 33 articles were examined for titles suggesting

relevance to the review; articles of potential relevance from this step were appraised to determine appropriateness for inclusion. One additional article discussing the results of a phenomenological study with parents of children with Autism (Woodgate, Ateah, & Secco, 2008), was included from this step.

Three articles meeting the inclusion criteria addressed behaviors or concepts around overt physical safety topics of accidental overdose, baby monitor use, and physical injury risk in activity. The small number found on these physical safety topics raised the issue that other relevant articles may have been missed due to the initial search terms. Therefore, a separate subsequent search was conducted with *vigilance* and the secondary term of *child safety,* which yielded 21 results. Of these, a literature review of sources of parental anxiety for children with food allergies (Sanagavarapu, 2012), was determined to meet the review inclusion criteria. Of note, several studies of caregivers of family members requiring acute or ongoing health care were included despite not having a focus on child caregiving, given that examination of vigilance for health and safety concerns of a vulnerable family member (e.g., during hospitalization or chronic illness), may contribute to knowledge about other caregiving situations.

Sample

The final sample for this analysis of the current research on child caregiver vigilance included 35 articles, published between 1988 and 2018. There were no exclusion criteria related to study design. Disciplines represented included nursing (*n* = 11), psychology (*n* = 11), public health (*n* = 4), and two or fewer each from the fields of family studies, health sciences, social work, physical and occupational therapy,

medicine, pharmacy, and early childhood education. (There was some overlap when co-authors were from different disciplines.)

The majority (*n* = 26) were reports of empirical research. Also included were theory development (*n* = 7) and literature reviews (*n* = 2). Among the theoretical articles were explorations of middle-range nursing theory for adult caregiver responses during illness in the family (Mishel, 1988; Wilson & Morse, 1991). There were three reports of ethnographic research exploring family vigilance for chronically ill individuals were included (Carr, 2014; Carr & Clarke, 1997; Carr & Fogarty, 1999) and two studies that employed grounded theory approaches to parental vigilance of chronically ill children were also found (Meakins, Ray, Hegadoren, Rogers, & Rempel, 2015; Sallfors & Hallberg, 2003). There was one report on development of a model to address the dynamics of parent monitoring of adolescent behaviors and adolescent and family functioning outcomes (Omer, Satran, & Driter, 2016).

The two literature reviews analyzed existing literature about continuous partial attention in parents of children with complex care needs (McCann, 2015) and parental anxiety for a child with a food allergy (Sanagavarapu, 2012). The empirical studies spanned a range of approaches and methodologies, including instrument development and validation, content analysis, conversational analysis, phenomenology, and naturalistic inquiry. There were also cross-sectional and longitudinal quantitative studies.

Findings

The analysis of the literature resulted in the identification of *vigilance as a caregiving practice,* consisting of *core elements, attributes and behaviors.* The distinct purposes of adult caregiver vigilance for children were maintenance of the child's safety and wellbeing (e.g. caregiving practice), as an expression of caring, and as a caregiver's coping mechanism. Each of these findings is discussed in depth in the following sections.

Vigilance as a Caregiving Practice

Within the family caregiving literature, vigilance is portrayed as a practice or mechanism of caregiving deployed when deemed necessary. Among caregivers of family members with dementia, vigilance involves ongoing caregiving activities such as ensuring their loved one receives quality care (McCormack, Tillock, & Walmsley, 2017). According to Niedel, Traynor, and Grey (2013), parental vigilance involving management of a child with a chronic illness is a "mechanism for both problem detection and problem solving strategies" (p. 260). Among caregivers of children with type 1 diabetes, vigilance was defined as an "embodiment within their caregiving role, which arose in response to … intense needs …" (Rifshana, Breheny, Taylor, & Ross, 2017, p. 3234).

Vigilance activities are incorporated into adult caregiving practices focused on child and adolescent safety in neighborhood and public settings. In their research on parenting techniques and youth self-control. Brody and colleagues (2005) identified involved-vigilant parenting skills as a protective factor against dangerous situations for teenagers. McDonell (2007) reported parents exhibited higher vigilance through tighter

control and monitoring of children if they assessed the neighborhood environment as more dangerous.

Vigilance as an expression of caring and commitment. Adults providing care to chronically ill family members considered vigilance to be an important component of their caring behaviors (Carr, 2014; Carr & Clarke, 1997; Carr & Fogarty, 1999). Family members described vigilance as encompassing "both affective and instrumental components . . . a manifestation of labor and love" (Carr & Clarke, p. 235). Adult caregivers characterized vigilance as "close, protective involvement" (Carr & Fogarty, 1999). Similarly, adults identified vigilance as a component of childcare. Among adult caregivers of chronically ill children, vigilance intermingled protection, monitoring, and caring behaviors (Meakins et al., 2015). In their vigilant care model, Omer and colleagues (2016) described the least-involved level of adolescent monitoring as "parents manifest[ing] a nonobtrusive, caring interest in the child, while trying to establish an open interchange" (p. 296).

Vigilance as a coping mechanism for caregivers. Dating from Mishel's (1988) middle-range theory of uncertainty in illness, there is evidence of vigilance as a means of coping by caregivers. Wilson and Morse (1991) reported spousal caregivers characterized vigilance as part of the *buffering process* necessary to cope in times of illness. Parents described vigilance related to the use of baby monitors as being a normal anxiety response (Nelson, 2008).

Within this sample of existing literature on adult caregivers, the reported aims and purposes of vigilance varied widely. A major limitation within the examined

literature is the lack of discussion of parental vigilance having multi-functional or evolving purposes on the basis of situational or individual caregiver factors. However, evidence vigilance can function as a caregiver coping strategy during stressful situations suggests the potential therapeutic benefit of being a vigilant caregiver may not always be associated with the ultimate goal of provision of childcare or supervision (i.e., child well-being). Within the literature, the most prevalent purpose of vigilance identified in the literature is as a caregiving or caring action. Vigilance as caring supports the notion that it is a manifestation of love for and emotional attachment to the child. Vigilance is also identified as an expected component of the caregiving role. Factors contributing to the extent of vigilance included the level of perceived threat or need, addressed in the following sections.

Essential Attributes of Adult Caregiver Vigilance

Given that both sustained attention and the ongoing processing of threat information are two critical attributes of adult caregiver vigilance consistently identified in the literature, these attributes are considered essential for adult caregiver vigilance.

Sustained, heightened attention. Vigilance in a child caregiving role is frequently identified as requiring a sustained, or continuous, attention level (Goodwillie, 2014; Y. Kim, Kim, Bhandari, & Choi, 2017; Larson, 2010; Lucas, Jernbro, Tindberg, & Janson, 2016; Morrongiello & House, 2004; Sallfors & Hallberg, 2003; Sullivan-Bolyai, Deatrick, Gruppuso, Tamborlane, & Grey, 2003). For caregivers of children with Type 1 Diabetes, vigilance is an ongoing conscious effort, requiring “more than just awareness, work and attention…to monitor all aspects” of the child’s condition (Rifshana et al., 2017, p.

3231). Caregivers of children with Autism described their parenting experiences, especially in public, as “heightened watchfulness and preparation for action” (Woodgate et al., 2008, p. 1079). Similarly, Sanagavarapu (2012) described caregiver vigilance as constant attention with a particular concern for unfamiliar situations and settings. Omer, et al. (2016) noted vigilant parental monitoring of adolescent behaviors involved a process of shifting between lower and higher levels of attention, with an ongoing baseline attention level.

Evidence of the impact of parental vigilance was reported by Morrongiello and House (2004), who assessed the correlation between parent distance and engagement with children at a public play area and found that children whose caregivers were located in closer physical proximity and provided more consistent input to the child were less likely to sustain physical injury (Morrongiello & House, 2004). The continual, ongoing nature of vigilance is cited as both challenging and important to many caregivers (Goodwillie, 2014; Larson, 2010). Vigilance in caregiving is described as complex and inadequately understood by standard measures of tasks, such as time use studies (McCann, 2015). Recent examinations of vigilance as an individual psychological process have noted this sustained attention level requires a significant and complex cognitive demand, in contrast to being a redundant, simplistic process as previously conceptualized (Guastello, 2014; Hancock, 2014).

For adult caregivers of children, the mental demands of vigilance may be particularly pervasive and ongoing. Uncertainty appears to be an especially relevant factor in vigilance for adult caregivers of children (Meakins et al., 2015; Mishel, 1988).

An adult with primary responsibility for a child, especially one with few, if any, support persons, may be constantly and unrelentingly *on guard* for the child's wellbeing. The caregiver often may feel on guard*,* even when the child is in another's care, at school, or in daycare, because although the child is there at the caregiver's allowance, the caregiver is not able to provide direct supervision (Kerr, Stattin, & Burk, 2010; Meakins et al., 2015). The people and situations a child may encounter are not static or predictable, lending an even greater complexity to vigilance among adult caregivers than even an air traffic controller, given that air traffic controllers are not responsible for the outcomes of flights once they leave their shift.

Processing threatening information. Processing or addressing threatening information is an essential component of caregiver vigilance identified across multiple studies (Sallfors & Hallberg, 2003; Sullivan-Bolyai et al., 2003; Wackerbarth & Tarasenko, 2018). Among caregivers of infants with hypoplastic left heart syndrome, a key component of vigilance was the perception of threats within complex symptoms as a significant component of vigilance (Meakins et al., 2015). In their study of parent compliance with booster seat use, Shimony-Kant and colleagues (2018) characterized vigilant decision makers as using "'high-quality' information processing" amidst competing pressures (p. 53). Although not addressing vigilance explicitly, Babatsikos and Miles (2015) identified risk assessment and balancing risk against other demands as key elements in their grounded theory of caregivers' approaches to child sexual abuse risk.

Parental vigilance practices may change over time. Kerr and colleagues (2010) noted a shift from the in-person *vigilant parental monitoring* of young children to asking

the child and others about their activities and interactions once they are older and more activities occur outside the parent's direct supervision. Omer and colleagues described vigilant monitoring of adolescents as a shifting between levels of attention and action "according to alarm signals they detect" (2016, p. 296).

In summary, this review identified two critical attributes of caregiver vigilance: 1) processing threatening information and 2) sustained, heightened attention. The necessity of ongoing, sustained attention to specific risks has been identified as especially challenging for adult caregivers of children (Goodwillie, 2014; Larson, 2010; McCann, 2015). Parents' child caregiving responsibilities are long-term and require ongoing attention and cognitive effort. Challenges to optimal vigilance among child caregivers include the need for shifting levels of attention to specific risks and effectively balancing demands for risk mediation and other caregiving needs.

Key Behaviors in Adult Caregiver Vigilance

Adult behaviors specific to caregiver vigilance included monitoring, attention to specific environmental factors, and providing structure and expectations are key behaviors identified in the literature on adult caregiver vigilance include. Adult caregiver vigilance also involves active risk avoidance and teaching vigilance practices directly to the child.

Monitoring. Monitoring was identified and measured as a vigilance behavior across a wide variety of caregiving situations, from preventing adolescent behavioral and academic difficulties to caring for a child with a chronic illness (Fisher, Leve, O'Leary, & Leve, 2003; Hayes, Hudson, & Matthews, 2007; LaFleur, Zhao, Zeringue, & Laird, 2016;

Niedel et al., 2013; Sullivan-Bolyai et al., 2003). In the majority of the publications (*n* = 16), monitoring was the primary vigilance behavior discussed. Among families who had previously lost a child, Rosenblatt (2000) noted vigilance resulted in increased monitoring of remaining children. Monitoring also involved a difficult balance in assessing whether concerns are related to a usual situation or to a specific and special need of the child, such as parents interpreting symptoms in a diabetic child to determine whether a specific symptom relates to the child's diabetes (Niedel et al., 2013).

In studies on adolescent risk-taking, monitoring was operationalized as both pre- and post-activity questioning on the basis of caregiver perceptions of the adolescent's responses (Fisher et al., 2003; Hayes et al., 2007; McDonell, 2007). These findings highlight an essential weakness in caregiver monitoring behaviors, given efforts to obtain information from the person who is often least likely to bet able to provide accurate and relevant information. Kerr and colleagues (2010) reported an inverse relationship between the extent of parent monitoring as described above and degree of delinquency self-reported by adolescents.

Monitoring as a function of perceived threat or familiarity. Parental monitoring often may reflect perceived, rather than actual, threats. For example, children are more at risk for accidental ingestion of over-the-counter medications than prescriptions (Chien, Marriott, Ashby, & Ozanne-Smith, 2003), yet over-the-counter medications may be more easily accessible. Chien and colleagues (2003) hypothesized this risk differential as possibly associated with adult caregivers reducing monitoring behaviors because of

the pervasiveness of these products in households. Sanagavarapu (2012) found a higher level of parent concern for a child's risk of food allergy exposure in unfamiliar settings, such as a new school setting compared to when their child is with persons who have previously kept the child safe, such as return visits to known friends' homes or other established settings.

Decreased monitoring across multiple home settings. Families with more than one home setting, especially those with stepfathers, reported overall decreased monitoring activity (Fisher et al., 2003). The authors suggested the reduced monitoring was related to a lower agreement level on parenting approach and overall reduced communication among families with stepparents compared to other families.

There was some discussion regarding the notion that lower levels of caregiver monitoring are associated with decreases in other vigilance behaviors. Findings around reduced monitoring are largely based on studies where caregivers or adolescents report vigilance behavior frequencies. Without the added perspective of direct observational research, how situational circumstances affect vigilance behaviors remains unclear (Hayes et al., 2007; Kerr et al., 2010). Hayes and colleagues proposed the extent of risk-taking monitoring of children appears to be partially dependent on a parent's motivation, values, goals, skills, and social context. These findings suggest there are both individual caregiver and system factors influencing monitoring as a vigilance behavior for children. Additionally, depending upon the particular risk being addressed, monitoring may not be the most frequent or the only employed behavior.

Avoidance of risky situations. There is evidence the criteria primary adult caregivers use to exclude other caregivers from watching their child independently is not usually related to prior personal experiences with that individual (Meakins et al., 2015). Instead, a general distrust of others' ability to provide an adequate level of care and supervision is the primary driver of caregivers' exclusion of persons caring for their child on their own (Meakins et al., 2015). Chien and colleagues (2003) hypothesized familiarity with a situation may reduce one's ability to accurately perceive it as a threat.

Key parental vigilance behaviors of children with seizure disorders included restricting activities and limiting adult supervisors (Smith et al., 2014). As previously noted, caregivers of African American adolescents identified neighborhood factors, including perceived level of law enforcement presence, as factors contributing to the level of restriction they placed on the child's movements and activities (McDonell, 2007).

Providing structure and expectations. Caregivers are expected to set clear expectations and rules around possible risks for those in their care. Parental expectations of their child and rules around particular risk factors were identified as part of adolescent vigilant care (Omer et al., 2016). "Structuring of the adolescent's environment" (p. 96) is an integral component of the theoretical model of monitoring developed by Hayes and colleagues (2007). Parents who previously lost a child exerted more control over their living children's environment, including reducing their overall mobility and limiting supervisors (Rosenblatt, 2000). Management of the environment through careful storage of medications was identified as a vigilant behavior by

caregivers to reduce accidental ingestions (Chien et al., 2003). Caregivers of adults with dementia sought environmental indicators, including a culture of service for all residents, before feeling comfortable a facility was safe for their loved one (McCormack et al., 2017).

Teaching children vigilance. Another identified caregiver behavior is teaching children vigilance strategies such as identifying and avoiding risk situations and maintaining boundaries (Brody et al., 2005; S. Kim, Brody, & Murry, 2003). In a parent-adolescent program targeted at reducing adolescent substance use and early sexual activity, Brody and colleagues noted caregivers who provided instruction for the child on how to be vigilant decreased the frequency and magnitude of adolescent risk-taking behaviors. When parents provide child sexual abuse teaching, children are often taught about avoidance of strangers, but are less likely to get direction on handling an comfortable or inappropriate situation with someone they know or trust (Babatsikos & Miles, 2015). Omer et al. (2016) identified essential vigilant care skills, which included caregivers specifically stating their expectations related to risky behaviors (i.e., unsafe sex, distracted driving, and smoking) to adolescents, then initiating conversations with adolescents focused on the risk situations.

Summary of Review Findings

This content analysis of the literature on caregiver vigilance identified several specific monitoring behaviors and activities. Monitoring behaviors varied in the level of child and caregiver engagement, ranging from daily discussion with adolescents on their activities to solo environmental surveillance. Vigilance behaviors also varied in level of

effort. Ongoing efforts included monitoring of continual concerns; episodic monitoring included assessment of new settings' or caregivers' suitability.

Several knowledge gaps related to vigilance behaviors were identified. Monitoring was the most frequently identified vigilance behavior, and was also a focus in several of the reports reviewed. However, research suggests monitoring occurs with variable consistency and effectiveness, depending on the situation and influencing factors. Beyond coverage of adolescent risk-taking behaviors preceding delinquency, there is scant research on factors that influence caregivers' perceptions of risky situations, particularly related to known higher-risk possibilities for children's wellbeing.

Another knowledge gap involves inclusion of key vigilance behaviors in child education, with the goal of prevention or reduction of harm. Studies primarily focused on the content of the instruction caregivers provide, how they feel about providing this instruction, and evaluation of interventions to facilitate caregivers teaching their children. There was limited focus in the reviewed literature on factors influencing decisions to teach children and prioritization of child education content and focus.

Across the articles reviewed in this analysis, the association of familiarity to vigilance was a common finding. Familiarity was identified as an influence on caregivers' perception of threats (Chien et al., 2003). Familiarity also reduced the likelihood of addressing CSA risk and of caregivers' readiness to address risks (Babatsikos & Miles, 2015).

Discussion

Findings of this content analysis indicated consistency and consensus on both the purpose and critical attributes of adult caregiver vigilance; identified several specific caregiver vigilance behaviors; and resulted in a proposed definition of adult caregiver vigilance for children.

The critical attributes of adult caregiver vigilance identified across the literature are sustained, heightened attention and processing of threats. This is consistent with broader conceptualizations of vigilance beyond caregiving (Dollinger, Greening, & Tylenda, 1985; Guastello, 2014; Hancock, 2014; Krohne & Hock, 2011). Agreement on these essential components of vigilance is helpful for researchers across disciplines exploring specific focus areas regarding child wellbeing. There was apparent consensus across the literature on the definition and attributes of adult caregiver vigilance behaviors, although not all studies included in the analysis include all the identified vigilance behaviors. Furthermore, there was no evidence of dissention in the operationalization of vigilance (such as particular reports disqualifying behaviors others have identified as vigilance).

Based on the findings of this content analysis, the following definition of adult caregiver vigilance is proposed: *sustained, purposeful attention and behavior to anticipate a child's safety and wellbeing needs.* Dissemination and adoption of this definition will facilitate theoretical exploration, model building, and testing involving adult caregiver vigilance for children. This definition of adult caregiver vigilance

distinguished the concept from other related concepts, and is not necessarily intended to address other aspects of parenting or other areas of human behavior

.Conclusion

On the basis of a content analysis of the literature, adult caregiver vigilance of children has been previously explored sufficiently to identify key attributes and behaviors. Based on this review, a proposed conceptual definition of adult caregiver vigilance of children is *sustained, purposeful attention and behavior to anticipate a child's safety and wellbeing needs.* Adoption of this conceptual definition could promote consistency and clarity in research and enhance measurement development.

Much of the study of caregiver vigilance has been in discrete areas, such as monitoring to reduce adolescent risk-taking. These findings provide adequate perspective for considering what affects caregiver vigilance and how vigilance behaviors influence other risk situations. Across situations, adult caregiver vigilance for children involves sustained attention as well as processing of threats. Key vigilance behaviors include monitoring, teaching the child to be vigilant, structuring the child's environment, and avoiding risky situations.

One path to further development of adult caregiver vigilance is considering how the purpose of vigilance behaviors, particularly when utilized as a coping strategy by caregivers, influences the resultant behaviors and outcomes. If the primary purpose of vigilance against a threat is actually a hindrance to effective prevention, an intentional perspective shift may need to be part of the prevention message or intervention. Alternatively, if the primary purpose of vigilance for a threat is constructive and

sustained, caregivers' purpose may be integral to a targeted motivational approach. The application of specific vigilance behaviors to different risks would be useful to prevention program development for numerous sustained and episodic child safety risks.

Exploration of how situational factors contribute to caregiver vigilance is a significant research priority to advance knowledge about caregiver vigilance. There is very little research on how group caregiving, or collective caregiving practices, may influence a child's risk for specific safety concerns. Within the discipline of psychology, there is a recognized need for further examination of group effects on vigilance due to an increase in demand for vigilance tasks in group settings (Guastello, 2014). Trends of reduced primary caregiving, decreased family stability, and increased economic pressure among modern U.S. families often expose children to a higher number of caregivers and settings on an ongoing basis (Schor et al., 2003; Stith et al., 2009). The effects trends of caregiving may have on risk and vigilance need to be addressed.

Familiarity is another situational factor bearing prioritization in future research on vigilance. Findings from this content analysis indicated caregivers' sense of familiarity with settings and the persons involved in a situation was associated with changes in vigilance behavior. While familiarity may be a valid cognitive screen for some risks, such as whether to have concerns a person will drive while intoxicated with the child in their car, the influence of familiarity on some child safety risks may be detrimental. For instance, child sexual abuse is most likely to occur in the child's most frequent

caregiving settings and by someone known and familiar to the child (Snyder, 2000; USDHHS, 2018).

Ongoing risks such as child maltreatment, ingestions, and drowning can benefit from identification of the factors that influence adult caregiver vigilance. A more complete understanding of the cognitive processes that influence caregiver actions will promote the development of targeted prevention efforts for focused areas of child safety from a protection motivation perspective. A better understanding of factors affecting the under-recognized concept of adult caregiver vigilance of children will provide a means to address complex prevention issues of significant and lasting importance to child and family wellbeing.

CHAPTER 3

EXAMINING CAREGIVER RISK PERCEPTION FOR CHILD SEXUAL ABUSE FROM A SOCIAL ECOLOGICAL APPROACH[2]

Child sexual abuse is a pervasive and wide-reaching individual and public health concern. Self-report studies of adolescents and adults yield a range of eight to twenty-nine percent reporting at least one cumulative incident of sexual abuse by eighteen years of age (Finklehor, Omrod, Turner, & Hamby, 2005; Finklehor et al., 2015). Childhood sexual victimization is among the 10 major adverse childhood experiences (ACEs) leading to poorer child well-being outcomes, mental and physical health concerns in adulthood, and early death (Felitti & Anda, 2009; Felitti et al., 1998b). High ACE exposure also affects social determinants of health and family stability, due to the negative effect on lifelong relationship, education, and employment outcomes (Bynum et al., 2011; Schor et al., 2003). Due to the significant and lasting effects on child and adult wellbeing and health, the U.S. Department of Health and Human Services considers child maltreatment, including child sexual abuse (CSA), one of the most significant societal health concerns requiring action (USDHHS, 2018).

While the absence of identifiable risk factors for CSA does not exclude a child from risk (Davies & Jones, 2013), identified child-specific, caregiver-focused, and

[2] Chappell, K. K., Bell, N., and Shapiro, C. To be submitted to *Child Abuse & Neglect.*

environmental risk factors for CSA provide important context for exploring caregiver risk perception. Child-focused risk factors for CSA are often either static or with limited chance for modification without focused intervention. One significant and unmodifiable child-specific risk factor for CSA is female gender (Finklehor et al., 2014). Females are at higher risk for CSA at all ages (McCloskey & Raphael, 2005). Children with disabilities, especially intellectual disabilities, are at greater risk for CSA (Butler, 2013; Maclean et al., 2017). Risk factors for CSA that are modifiable but frequently under-addressed include conduct disorder and mental health diagnoses (Butler, 2013; Maclean et al., 2017; March & Schub, 2013). Children with a prior history of sexual victimization are at risk for repeated and separate CSA incidents (March & Schub, 2013). Child-specific risk factors represent characteristics of more frequent appeal to perpetrators, as for females, or make a child easier for a perpetrator to manipulate or intimidate.

Caregiver-focused factors that increase a child's risk for CSA are often influences on the level of attention or prioritization available for parenting or factors altering the caregiver's self-regulation. Children of caregivers who abuse substances or have mental illness are at greater risk for CSA (March & Schub, 2013). The absence of one or both parents increases the risk for exposure to CSA (Butler, 2013; Fleming, Mullen, & Bammer, 1997). Caregivers' prior experiences with childhood maltreatment and adversity increases the risk for subsequent children being exposed to child maltreatment or other adverse experiences themselves (Kilpatrick, Saunders, & Smith, 2003). Parents with a high exposure to ACEs are more likely to practice an authoritarian parenting style, which is linked to higher rates of children being diagnosed with

behavioral and mental health issues, increasing the child's risk for CSA (Babcock Fenerci, Chu, & DePrince, 2016). Intergenerational trauma, including ACEs, contributes to personal and socioeconomic stressors that increase risk for child maltreatment such as unstable employment and relationship difficulties (Felitti et al., 1998b; Szilagyi et al., 2016). The effects of ACEs on a caregiver are lifelong and can reduce energy for caregiving and alter a caregiver's responses to stressors in the caregiving role, including potential increased exposure to new child maltreatment risks (Finzi-Dottan & Harel, 2014; Steele et al., 2016; Szilagyi et al., 2016).

Identifiable environmental risk factors for CSA in the literature focus on the child's home setting. Living in environments with other forms of child maltreatment such as physical abuse and neglect increase the odds of CSA occurring for children in that setting (March & Schub, 2013). Family income below 400% of the federal poverty threshold and having a mother with an education below college level are risk factors for CSA, particularly for female children (Butler, 2013). Income and education-related risk factors are themselves connected to specific additional risk factors for CSA. Housing insecurity, single parent homes, and increased dependence on others for childcare puts pressure on caregivers in consistently providing safe environments and reliable caregivers (Ha, Collins, & Martino, 2015; Warren & Font, 2015).

Conversely, the absence of risk factors does not translate to the absence of CSA occurrence. In a retrospective study of adolescent sexual abuse victims at a forensic examination center, Davies and Jones (2013) identified specific risk factors for sexual abuse, including prior interaction with child protection services, substance use by the

adolescent victim, and the victim having a disability. Although the identified risk factors were significant within the sample, nearly 43% of the sample did not have any of the identified risks in the study (Davies and Jones, 2013). This highlights that while CSA risk factors are relevant areas to address for prevention programs, attention is needed across the population to reduce significant health and wellbeing compromise for children. As seen with the US Triple P System population trial focused on physical abuse and neglect-related maltreatment, population-level interventions, alongside training for child services providers, can impact systems-level outcomes such as substantiated case rates (Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009). Risk cannot be eliminated for a problem such as CSA that occurs more often in a child's closest environment by perpetrators who are largely unrecognized as a threat. The inability to eliminate risk for CSA necessitates the development of prevention programs with a population level approach.

When addressing influences on a health concern such as CSA, a social ecological perspective provides a framework for addressing a child situated within the people and systems that affect their wellbeing. The innermost layer of a child's social ecology, termed the microsystem, is comprised of the immediate and frequent settings where children interact with their primary caregivers, is the most influential on children's wellbeing and long-term outcomes (Bronfenbrenner, 1974; Grzywacz & Fuqua, 2000). Perpetrators of child sexual abuse (CSA) are more likely to be in the child's microsystem, including the most immediate caregiving settings such as their home and environments with extended family and close family friends (Finklehor et al., 2015; Fleming et al.,

1997). More than 90% of CSA occurs within a child's immediate layers of social ecology (Snyder, 2000; USDHHS, 2018), which includes their home, extended family settings, and immediate caregiver environments.

While risk factors for CSA have been identified and settings of greatest risk for CSA are established, these key areas of information for CSA prevention are not generally well known among caregivers. In particular, caregivers' general knowledge about risk factors and settings of highest risk is low overall (Babatsikos, 2010; Walsh & Brandon, 2012). Some parents report teaching children about 'stranger danger' to reduce CSA risk but are generally unaware of the higher risk and occurrence of CSA in microsystem-level settings (Chen, Dunne, & Han, 2007; Walsh & Brandon, 2012). Babatsikos and Miles (2015) found caregivers feel caught off-guard and experience more uncertainty with how to respond when persons they have a personal relationship with are the alleged perpetrators of CSA for their child. The uncertainty and disbelief of persons close to them as possible CSA perpetrators persisted into situations when a person was engaged in suspicious behavior such as potentially looking up a child's skirt or shorts or touching them a child in a highly affectionate way in front of the caregiver (Babatsikos & Miles, 2015).

The disconnect between risks for and locations of greater occurrence for CSA and caregiver risk perception is problematic. Where risk is not perceived, there is typically a lower behavioral response to prevent or respond to the risk (Weinstein, 2000). A better understanding of factors influencing caregiver risk perception for CSA is needed to appropriately examine how risk perception affects vigilance response.

Exploring situational and intrinsic factors in the caregiver's life beyond their caregiving role is needed to contextualize caregivers' responses to concerns for their children.

Life stress may be important to understanding caregivers' capacity to perceive risk, particularly facing a risk such as CSA is ongoing but rarely overt, requiring sustained and purposeful attention to identify threats. Life stress is the result of situations requiring adjustment in relationships or daily routines such as loss of a job or change in residence, and those that fundamentally change a person's life at a broader level, such as loss or addition of a family member (Holmes & Rahe, 1967; Scully, Tosi, & Banning, 2000). Life stress occurs related to circumstances perceived as positive, negative, or neutral, as all require mental or emotional effort to sustain or adjust within the situation (Holmes & Rahe, 1967).

There is evidence to suggest life stress affects vigilance in daily life activities. General vigilance decreases amidst higher overall cognitive workload (Guastello, 2014). During a contained, time-limited activity, acute mild stress amplified early detection of the events of interest while overall creating a negative effect on attention to the events of interest as the activity continued (Qi, Gau, & Liu, 2018). Another task activity experiment involving detection of a specific phenomenon found personality traits did not influence detection but stress and coping levels were a significant predictor of how consistently individuals detected an errant event (Shaw et al., 2010). Extrapolating attention decrement phenomenon to less controlled settings such as the ongoing tasks of caregiving, stress appears to increase initial perception of the event of interest or

concern but may ultimately have a negative influence on a phenomenon such as caregiver risk perception, an ongoing attentional task.

High levels of life stress increase risk for development of acute and chronic illnesses and social processes such as maternal transition to first-time parenting (Holmes & Rahe, 1967; Ngai & Ngu, 2013). Caregivers managing the challenges associated with poverty, such as food and housing insecurity, typically experience stress beyond the expected baseline of daily living and parenting (Steele et al., 2016; Warren & Font, 2015). Children of caregivers under significant stress are at greater risk of physical neglect and physical abuse (Ethier, Lacharite, & Couture, 1995; Warren & Font, 2015).

The need for additional research on caregiver factors influencing CSA prevention, recognition, and response has been identified (Babatsikos, 2010; Rudolph et al., 2018; Walsh & Brandon, 2012). In particular, Babatsikos highlights the need for further study of how caregivers recognize and address CSA risk. Xie, Qaio, and Wang (2016) emphasize the need for further research of caregiver risk perception for CSA to improve prevention program strategies. A better understanding of factors affecting caregiver response is a needed component for developing effective strategies focused on the caregiver's role in CSA prevention (Rudolph, et al., 2018). Risk perception affects response to a given threat, and there is an incomplete understanding of risk perception for CSA, making this a significant area to examine to facilitate development of prevention strategies involving caregivers.

This study is part of a larger mixed methods research study conducted in 2018 to explore caregiver vigilance for CSA and challenges in pediatric health care settings to

providing caregiver-focused CSA prevention programs. The purpose of the overall study is to examine relationships between caregiver child sexual abuse situational risk perception, caregiver history of adverse experiences and trauma, and caregiver's current life stress. Given the long-term effects of CSA, prevention needs to be a significant public health and individual wellbeing priority. With the absence of exclusionary factors for CSA, meaning all children have some level of risk, there is a need for improved prevention strategies across the population as well as those that target higher-risk children. Examining caregiver risk perception across child, caregiver, and home environment factors is needed to advance CSA prevention.

The analyses presented in this report are a component of the larger study's goals. Since CSA risk perception is poorly understood, a closer examination of this cognitive process is needed before advancing to examine the effect of risk perception and other processes on caregiver vigilance responses. The analyses will address how the proposed cognitive process of situational risk perception behaves in relation to the caregiver's prior experiences in a protection motivation theoretical (PMT) model in a social ecology context. The specific research questions addressed were: 1) Do child and family demographics, financial security, life stress, and prior adversity or trauma experiences influence caregiver situational risk perception for CSA? 2) Is there a difference in the influence of these child and caregiver factors on situational risk perception for CSA in different social ecology layers?

Guiding Theoretical Frameworks

Protection Motivation Theory. In protection motivation theory, prior experiences, including personal history and exposure to information, affect a person's cognitive processing of a health risk or threat, leading to coping responses of varied utility and appropriateness for reducing the risk (Floyd, Prentice-Dunn, & Rogers, 2000; Rippetoe & Rogers, 1987; Rogers, 1983). Rogers proposed PMT as a model suitable for adaptation to a variety of health risks and threats. Selected constructs and processes of PMT address perceptions specific to the potential of CSA in a caregiver's environment.

In the adapted model, Caregiver Prior Experience includes demographics and prior experiences specific to trauma or significant stress. Demographics of interest include those that affect life experiences and influence daily life in a family, including gender, race, education level, employment or school time commitments outside the home, and financial insecurity. Prior trauma exposure variables in this study highlight the caregiver's personal childhood trauma and adversity history, potential history as a caregiver of a child victim of sexual abuse, and trauma experiences as an adult.

Life stress is proposed as a new precursor to cognitive processing of threat information. This addition to the original model seeks to explain variation in cognitive mediating processes related to a caregiver's present circumstances and capacity. Also newly proposed in the adapted PMT model of caregiver addressing of CSA risk is the cognitive mediating process of situational risk perception. Situational risk perception is the extent to which caregivers recognize risk for a threat that has an increased potential in given environments or settings. Situational risk perception is proposed as

representing a process uniquely important to a PMT-based model for caregiver vigilance for CSA.

Social Ecology. A social ecology perspective promotes exploration of a process such as situational risk perception for CSA from a broader, yet child-centered, focus (Belsky, 1995; Bronfenbrenner, 1989; Grzywacz & Fuqua, 2000). The social ecology model is a holistic and interactive view of the system of people and circumstances which influence behaviors and outcomes, typically for an individual person or family. Bronfenbrenner described the child at the center of the social ecology model. At the individual child, or intrapersonal, level are characteristics such as age, gender, temperament, and physical ability level. Caregivers and other influences surround the child in concentric layers, extending out as far as the macrosystem, which encompasses the policies and laws of the child's larger environment.

For this study, the closest two layers to the child, comprised of caregivers and settings affecting the child and interacting across layers, will be the focus. First, the microsystem, which includes the immediate caregiving environments over which the primary caregivers perceive a high level of knowledge and control about exposures. The settings identified in this layer using the study data were the child's home settings, the homes of extended family members, and the homes of family friends. The next concentric layer is the mesosystem, representing interactions between the microsystem and the exosystem. The next layer of settings and caregivers is the exosystem. In this study, the exosystem includes the settings over which a caregiver has less ongoing and direct control or influence but that the child is exposed to. The exosystem settings

identified in the study data are neighborhood settings, public places, school, religious settings, child's friends' homes, childcare, and extracurricular settings.

Methods

A cross-sectional descriptive quantitative study design, collecting survey data from caregivers of children four to ten years old, was used to examine the research questions. Data were collected from January to August 2018. The study received approval by the Institutional Review Board (IRB) at the investigators' academic institution.

Sampling and Recruitment

Our objective was to recruit caregivers of children within the Southeastern United States. Recruitment occurred using three approaches. First, survey packets were offered at four health care clinics and one family service center across three different regions in one state. All four clinics served a mix of privately and publicly insured patients. Two of the clinics were part of one metropolitan-area academic health system; the other two clinics were private practices, each in a small-to-medium-sized town within the same state. The family service center was located in a small town within the same state and provided therapeutic day care, pediatric counseling, and family strengthening programs to families referred for concerns related to child exposure to instability or safety risks. All clinic and family service sites were offered a learning session to be provided after all data were analyzed in order to emphasize the local results from the study. No other site-based incentives were offered.

Next, postcards containing the survey link and quick response (QR) code were distributed via community sites including houses of worship, hairdressers, and community-based facilities across eight counties in three different regions in one state. Alongside the postcard distribution, snowball recruitment was conducted using social media-based invitations distributed to the primary investigator's social and professional networks using LinkedIn, text, and email contacts. The primary investigator's social and professional networks further distributed the invitation with the survey link via Facebook, Instagram, LinkedIn, and email forwarding. Network contacts were encouraged to especially share with those in the state where the other recruitment approaches were applied but the survey was not restricted to participation outside this area and yielded participants from several states.

The desired sample size for the caregiver survey portion of the larger mixed-methods study was 210. The survey used in the larger study had 24 non-demographic variables. A minimum of 100 cases is traditionally recommended for exploratory studies (Gorsuch, 1983).

The inclusion criteria for participants were: caregiver for at least one child between four and ten years old; able to read and understand English; and either residing in the same home as the child, assisting in caregiving of the child at least weekly, or, regardless of frequency of contact, is the child's parent (biologic, adoptive, or step-). Respondents could include extended family or close family friends regularly caring for the child. The child age range was chosen to restrain the analysis to the post-toddler and pre-pubertal period. Children younger than this require greater ongoing

physical supervision and engage with few exosystem influences independently. Children beyond this age group are often transitioning to a yet lower level of supervision and are developing a better awareness of sexual activity and dangers.

Participants. A total of 183 caregivers of the 264 who initiated the survey completed all items needed to address the research questions (see Table 3.1). Approximately 73% of the sample were biological parents and 11.5% biological grandparents. The remainder were in other caregiver roles such as stepparent, adoptive parent, and extended family and family friends. Most respondents (92.3%) were female. The mean age of the respondents was 39.3 ± 9.8 years. Considering race and ethnicity, less than a fourth (23%) of respondents were Non-White and 2.7% were of Hispanic ethnicity. The majority of the respondents were married (79.3%). Respondents were largely college-educated, with 32.2% having a graduate education and 37.2% having a bachelor's degree.

Demographic information about the children under respondents' care and their home environments was also collected (see Table 3.2). Forty-one percent of the respondents were caregivers for 4-10 year old males; 37.2% for females; and 21.9% for children of both sexes. The mean age of the children under respondents' care was 6.7 ± 1.9 years. Nearly 22% of the respondents report the child(ren) of focus as being on Medicaid or eligible for Medicaid (hereafter, referred to as Medicaid eligible). Most respondents (84.2%) live in the full-time home of the child(ren) of focus and 72.2% have a full-time commitment of work or school outside of the home.

Instruments

Demographics and environment information. An informed consent statement preceded the survey (see Appendix A). Continuing into the survey (see Appendix B) constituted consent to participate. An investigator-developed 19-item tool was used to assess caregiver and family demographics. Demographics collected included caregiver gender and age, child sex and age, and home dynamics (such as number of adults in home and whether caregiver lived in child's full-time or part-time home). Also collected were the child's Medicaid eligibility as a general indicator of household financial security, as well as caregiver education level and time commitment outside the home, based on employment and student status. For the demographic item related to employment or student status, dummy variables were created to allow for separate analysis of the relationship of each to ACE exposure level since they were discrete but not equally comparable categories. The four categories were: full-time employment or school; part-time employment or school; home-based work; and retired, disabled, and unemployed responses were binned together and conceptualized as having minimal ongoing outside-of-home time commitment.

Trauma and adversity exposure. The Adverse Childhood Experiences (ACE) tool measures exposure to childhood experiences of significant potential stress or trauma (Felitti et al., 1998b). The ACE derives one total score from 10 yes/no self-response items on adults' previous childhood trauma and stressor history (Felitti et al., 1998a). The ACE items ask about exposure to the following experiences before the age of eighteen: physical, sexual, and emotional abuse; physical neglect, including food

insecurity; emotional neglect; caregiver divorce or separation; domestic violence in the home; caregiver substance abuse; caregiver imprisonment; and caregiver mental illness. The respondents' ACE scores were re-coded into ordinal categories, with the highest exposure category being "4 or more ACEs," which is frequently utilized when measuring childhood adverse experiences (Bynum et al., 2011; Felitti & Anda, 2009; Ford et al., 2014). The ACE instrument in this study produced an acceptable Cronbach's alpha of .73; comparable to prior reliability calculated as .80 (Ford et al., 2014).

Two yes/no questions were included in the survey in order to assess previous adult exposure to violence. For each, a "yes" response prompted a follow-up item asking the number of separate situations. One item asked whether the respondent had prior experience as a caregiver of children who have experienced sexual abuse. The other item asked about the caregiver's personal experience with violence or trauma as an adult with examples offered in the question including domestic violence exposure, physical assault, and sexual assault. These items were investigator-designed to measure variables for which no validated instruments were found. These items were developed through a brief cognitive interview process with three participants of diverse background, gender, race, age, and caregiver roles to increase clarity and inclusiveness of answer options (DeVellis, 2012).

Current life stress. The Social Readjustment Rating Scale (SRRS) measures life stress based on the occurrence of life events that may create positive or negative stress and have occurred over the past year. The SRRS produces a single regression-weighted composite score. The score is based upon self-report responses identifying the

occurrence and frequency of 43 events requiring life adjustments in the past year (Holmes & Rahe, 1967; McGrath & Burkhart, 1983; Pakenham, 1999). Events include death of a spouse, a new job, change in personal habits, and recent illnesses. Pakenham obtained a Cronbach's alpha of .83 with a sample of persons with multiple sclerosis (1999). To evaluate validity, Holmes and Rahe (1967) tested intergroup concordance in the initial development of the SRRS (Kendall's *W*, .48, $p < .00$). Scully, Tosi, and Banning (2000) similarly verified content validity of the measure.

Scores were treated as a two-level variable, with scores of 0 to 299 coded as "low" and scores of 300 or higher coded as "high," based upon prior studies correlating these levels to risk for illness (Holmes and Rahe, 1967). Scoring is based on multiplying number of occurrences of each event by a weighted value specifically assigned to that event (ranging from eight points for each major holiday season to 100 points for death of a spouse). Thus, possible scores start at zero, if none of the life events are identified over the past year, and can range up to a four-digit number if a respondent encountered multiple major and minor life stresses.

To assess reliability of the SRRS with this sample, a Cronbach's alpha of .66 was found after eliminating the two SRRS items that did not have any positive responses in this study (incarceration or spouse death in the past year). It is possible the sample size in this study influenced reliability statistics. The demographics of the sample may also have skewed this statistic, since the sample was predominately one gender and more highly educated than a general U.S. adult sample, such as the ones obtained for the foundational studies to establish the validity and reliability of the SRRS. Sample size and

demographic influences are particularly worth consideration for their effect on reliability for a weighted scale with a significant number of items and wide potential score range.

Situational risk perception. A survey item was developed to assess perception of child sexual abuse risk in 10 different settings with an eleventh option of no risky settings. The 10 items collectively demonstrated acceptable reliability with a Cronbach's alpha of .80. A principal component factor analysis using oblimin rotation with Kaiser normalization was conducted to determine whether this new measure contained significant sub-factors important to this analysis. Two significant factors emerged. Seven potential risk settings distinctly grouped onto one factor, termed exosystem settings. The exosystem settings factor had an eigenvalue of 3.58 and the seven items had factor loading values of .55 to .73 and significant correlations to each other ($p < .01$). The seven settings, with the commonality of being under less caregiver choice or control, were the homes of the child's friends, school, childcare, religious settings, public settings, the child's neighborhood, and locations where extracurricular activities occur.

The three remaining potential risk settings distinctly grouped onto the second factor, termed microsystem settings. The microsystem settings factor had an eigenvalue of 1.30. The three items had factor loading values of .57 to .78 and significant correlations to each other ($p < .01$). The three settings, with the commonality of being under more caregiver choice or control, were the child's home, homes of other family members, and homes of family friends.

Analysis

Descriptive statistics, including Pearson's chi-square and *t*-tests for differences, were conducted for description of the study cohort. Logistic regression analyses were conducted to examine predictive relationships between independent variables of caregiver prior trauma experience, life stress, home environment factors, and caregiver and child demographics; and the dependent variable of situational risk perception. Situational risk perception was treated as a categorical variable with options of no CSA risk identification, microsystem risks only, exosystem risks only, and both microsystem and exosystem risks identified.

Statistical analyses were conducted using IBM SPSS version 25. Because this was an exploratory analysis in a developing theoretical area, a backward stepwise process was used for the regression analysis (Menard, 2010). With multinomial regression analyses, likelihood ratio tests were given greatest weight in determining final model selection (Agresti, 2013; Menard, 2010).

Results

Respondent exposure to childhood adversity, determined by ACE scores, was treated as the main exposure variable in the analysis. Descriptive analysis results for ACE exposure levels and of the dependent variable, situational risk perception, are followed by the results of the multinomial logistic regression. The survey item about history as a caregiver of a child who was a victim of CSA was excluded from this analysis due to a limited number of respondents identifying this past experience (n = 10).

Sample differences by recruitment strategy

The first recruitment strategy, offering paper survey packets at health care offices, produced a very modest number of completed packets (*n* = 10). Thus, the two other previously described approaches were implemented. Responses from the informational postcards with the link and QR code accounted for 13.6% of the sample (*n* = 25) and social media-based snowball sampling accounted for over 80% of the sample (*n* = 148).

There was a difference in situational risk perception by sampling method, with paper survey respondents identifying no situations as risky for CSA (60% compared to 26% of postcard sample and 17.6% of snowball sample) (*p* = .027). More snowball sample respondents had a full-time work or school commitment outside the home (77% compared to 60% of paper survey sample and 12% of postcard sample) (*p* = .012). Significantly more snowball sample respondents had a graduate education (37.2%, compared to 10-12% of the other samples) and none of the snowball sample had a high school diploma or less compared to 10-12% of the other samples (*p* = .000). The snowball and postcard respondent groups each identified caring for Medicaid-eligible children less often than the paper survey group (16.9%, 36%, and 60%, respectively) (*p* = .001). Comparison of sample by recruitment strategy should be approached with caution due to the small sample size from the health care offices and some low cell counts in crosstabulation comparisons.

Adverse Childhood Experience (ACEs) as Main Predictive Factor

The mean ACE score among respondents was 1.810 ± 1.997 with a range of 0 to 8. The most frequently reported individual ACE was parent separation or divorce, reported by 44.8% of the sample. Sexual abuse exposure as a child was reported by 20.8% of the sample. The lowest reported ACE exposure was physical neglect (4.9% of the sample).

The relationship of health and wellbeing outcomes based on ACE score levels, with the most risks being of equally significant concern for those with an ACE score of four or more (Felitti & Anda, 2009; Felitti et al., 1998a). Raw ACE scores were converted to a three-level configuration of low exposure (zero or one ACE), moderate exposure (two or three ACEs), or high exposure (four or more ACEs) to facilitate use as the main factor in the planned multinomial logistic regression analysis. Among the respondents, 55.2% reported minimal ACE exposure (zero or one ACE), nearly a fourth reported moderate ACE exposure (two or three ACEs), and 20.2% reported a high exposure with four or more ACEs (see Table 4.1). Independent variables with a *p*-value of .25 or less were identified for inclusion as co-variates in the logistic regression analysis.

Caregiver demographic variables by ACE exposure level. Marital status and gender were the only two caregiver demographic variables with significant differences by caregiver ACE exposure levels (p = .028 and .143, respectively) (see Table 3.1). Fewer respondents with high ACE exposure were married (67.6%) compared to moderate and low ACE exposed respondents (73.4% and 86.1%, respectively). With a limited number

of male respondents, all respondents with a high ACE exposure level were female and females comprised 90-91% of the other two ACE exposure levels' respondents.

Child and home environment variables by ACE exposure level. The child-specific variable of child gender(s) under the respondent's care was identified as a covariate of ACE exposure level (p = .201) (see Table 3.2). There was a higher percentage of respondents caring for children of both male and female gender in the high ACE exposure level (27%) compared to the moderate and low ACE exposure groups (20% each). Respondents caring solely for female children the highest proportion of those cared for among the moderate ACE exposure group (51.1%) while those caring for solely male children were the highest proportion among the low ACE exposure group (45.5%).

Two home environment variables, the presence of Medicaid-eligible children in the home and outside-of-home time commitment, were identified as significant covariates for ACE exposure level. There were significant differences in ACE exposure level by financial stability, based on Medicaid eligibility of children in the home (p = .047). More caregivers with a high ACE exposure level were caring for Medicaid-eligible children (35.1%) compared to moderate and low ACE exposure levels (24.4% and 15.8%, respectively). Two outside-of-home time commitment variables were identified as covariates for ACE exposure, part-time work or school and no outside-of-home time commitment (p = .084 and .241, respectively). Those with part-time work or school commitments were in the highest proportion in the high ACE exposure group (16.2%) while those with minimal ongoing outside-of-home commitments were in the highest proportion in the moderate ACE exposure group (11.1%).

Caregiver adult trauma and stress variables by ACE exposure levels. Adult exposure to trauma or violence was reported by 32.2% of the respondents (see Table 3.2). A range of zero to twenty exposures (One-sample Kolmogorov-Smirnov, $p = .000$) were reported. For consideration in the model, this variable was re-coded as exposure/non-exposure. More caregiver respondents with a high ACE exposure level had been exposed to violence or trauma as an adult (54.1%), compared to those with moderate and low levels (42.2% and 19.8%, respectively). There was a significant difference in adult trauma or violence exposure by ACE exposure levels ($p = .000$).

Caregiver life stress scores were significantly different by ACE exposure level. Respondents' mean SRRS score was 200.990 ± 171.535 with a range of zero to 1,236. Approximately 19% of respondents had a SRRS score over 300. The proportion of respondents with high stress levels corresponded to ACE exposure levels, with 43.2% of the high ACE exposure group having a high SRRS score, while 20% of the moderate ACE group and 8.9% of the low ACE exposure group had a high SRRS score ($p = .000$).

Situational Risk Perception for Child Sexual Abuse

As previously noted, CSA situational risk perception was categorized into four groups based on whether respondents identified either microsystem or exosystem risk settings, both microsystem and exosystem risk settings, or no CSA risk settings as potentially risky for children in their care. Among the respondents, 22.4% identified none of the ten risk setting options as potentially risky for CSA for children in their care. Exosystem settings were solely chosen by 47% of the respondents; 7.1% identified only

microsystem settings; and 23.5% identified both exosystem and microsystem CSA risk settings.

Among the seven exosystem settings, the two settings most often identified as risky for CSA were public places and homes of the child's friends (42.1% and 41%, respectively). The least often identified exosystem setting was religious settings (18.6%). Among the three microsystem settings, homes of extended family members and family friends were most often identified as risky for CSA across the respondents (22.4% and 20.8%, respectively) and the child's home was identified by 3.8% as a risky setting for CSA.

Caregiver prior adverse experiences or trauma. Differences in CSA situational risk perception were assessed by ACE exposure level (p = .004). Respondents with high ACE exposure identified risks in both the microsystem and exosystem more often than those with moderate or low ACE exposure (48.6% compared to 17.8% and 16.8%, respectively). Respondents with high ACE exposure were the least likely to identify exosystem CSA risks only (27% compared to 50% and 58% of low and moderately ACE exposed). Respondents with low ACE exposure were the most likely to not identify any risk settings for CSA (26.7% compared to 15-19% of the moderately and highly ACE exposed respondents).

Logistic Regression Model to Predict CSA Situational Risk Perception

We constructed a multinomial logistic regression model to examine how caregiver prior experience, life stress, and caregiver, child, and home setting factors affect CSA situational risk perception according to children's social ecology levels.

Caregiver ACE exposure level is the main factor in the model to predict CSA situational risk perception (p = .004). Eight child, caregiver, and home environment variables with a p-value of .25 or lower in association analyses with ACE levels were treated as covariates (see Table 3.1). The child-focused covariate in the model was child sex(es) among the 4 – 10 year old children under the respondent's care. The caregiver-focused covariates in the model were gender, life stress, exposure to violence as an adult, marital status, part-time outside-the-home time commitment, and minimal time commitment outside the home (retired, disabled, or unemployed). The home environment covariate included in the model was the presence of Medicaid-eligible children in the home.

Prior to the modeling procedure, the independent variables were checked for multicollinearity to ensure appropriateness of multinomial logistic regression analysis. Multiple linear regression procedures were completed to cross-compare all independent variables, including examination of dummy variables for non-dichotomous categorical variables. Two measures were used to detect multicollinearity. Any two variables with a conditional index over 15 or with a variable inflation factor (VIF) over 2.5, since this is an overall smaller sample, would have been questionable for multicollinearity. No variable pairs had a conditional index higher than 7.09 or a VIF higher than 1. No multicollinearity was detected.

A main effects modeling procedure resulted in a model with a -2 Log Likelihood of 243.872 and a Nagelkerke's R^2 of .298 (p = .011). The statistical analysis found unexpected singularities in the Hessian matrix, yielding less reliable fit statistics.

Caregiver gender and marital status, as well as the minimal out-of-home time commitment variable (caregivers identified as retired, disabled, or unemployed) were removed as co-variates due to singularities in the dependent variable categories. Next, a backward stepwise procedure was executed to seek best fitting model with the remaining variables.

The resulting final logistic regression model has a -2 Log Likelihood of 214.035 and a Nagelkerke's R^2 of .153 (p = .001). Two predictive variables were significant in the final model, caregiver ACE exposure level and presence of Medicaid eligible children in the home (likelihood ratio test, p = .005 and .021, respectively). Likelihood statistics indicated this model is a better predictive fit for the dependent variable than the initial main effects model.

Exosystem-only CSA risk identification. One of the two predictive variables in the model, presence of Medicaid-eligible children, was significant to exosystem CSA risk identification (see Table 3.4). Caregivers without Medicaid-eligible children in the home were nearly four times as likely to exclusively identify exosystem risks for CSA (OR 3.855, 95% CI 1.542 - 9.634). In the sample, 51.7% of respondents without Medicaid-eligible children identified exosystem risks exclusively, compared to 30% of respondents with Medicaid-eligible children in the home.

Exosystem risk identification for CSA appeared more likely for respondents with lower ACE exposure but this finding was not significant. In the sample, nearly 50% of respondents with low ACE exposure identified solely exosystem risks. Among the other

ACE exposure levels, 57.8% of the moderately ACE exposed and 27% of the high ACE exposed identified solely exosystem risks.

Microsystem-only CSA risk identification. In the final model, neither independent variable in the model, caregiver ACE exposure level and presence of Medicaid-eligible children in the home, demonstrated significance in predicting caregivers who will only identify microsystem risks for CSA. The model suggested a higher likelihood of caregivers with moderate levels of ACE exposure identifying microsystem CSA risks only but this was not a significant finding given the confidence interval crossing the null value of 1. In the sample, 8.9% of moderately ACE exposed identified solely microsystem risks, compared to 6.9% of the low ACE exposed and 5.4% of the high ACE exposed. Similarly, the model suggests caregivers with Medicaid-eligible children in the home were more likely to identify microsystem risks for CSA only but this was not significant. In the sample, 10% of those with Medicaid-eligible children identified microsystem CSA risks only, compared to 6.3% of respondents without Medicaid-eligible children.

Exosystem and microsystem CSA risk identification. Both independent variables in the final model were predictive for caregivers identifying both microsystem and exosystem CSA risk settings. Caregivers with high ACE exposure were more than five times as likely to identify both microsystem and exosystem risk settings for CSA as to not identify risk at either social ecology level (OR 5.408, 95% CI 1.748 – 16.730). Caregivers with a moderate ACE exposure level may be half as likely as those with high exposure, but still more likely than those with low ACE exposure, to identify CSA at both

social ecology levels, but this finding was not significant. In the sample, 48.6% of respondents with high ACE exposure identified CSA risks at both microsystem and exosystem levels of social ecology, compared to 17.8% of moderately ACE exposed and 16.8% of lower ACE exposed respondents.

Respondents with Medicaid-eligible children in the home were more likely to identify both microsystem and exosystem risk settings for CSA as to not identify risk at either level (OR 3.165, 95% CI 1.104 - 9.078). In the sample, 22.5% of the respondents with Medicaid-eligible children in the home identified both microsystem and exosystem CSA risks, compared to 23.8% of respondents without Medicaid-eligible children in the home.

Discussion

This study identified where in children's social ecology caregivers perceive risk for CSA and identified caregiver and home environment factors influencing situational risk perception for CSA. Child sexual abuse is reported to affect between one in four to one in ten children by the time they reach adulthood (Finkelhor, Omrod, Turner, & Hamby, 2005; Finkelhor, Shattuck, Turner, & Hamby, 2014). In the current sample of caregivers, CSA exposure was reported by 22%; this rate is similar to the rate of 20.7% reported in the initial ACE study (Felitti et al., 1998a). Yet, nearly a fourth of respondents did not perceive any settings as risky for CSA for children in their care. There is a disconnect between what adults were exposed to in their childhood and the likely awareness they have of exposures occurring to others around them and their perception of potential risk for children under their care. The lack of transfer of both

personal and peripheral experience and exposure to a risk such as CSA to recognition of same risks in present situations suggests there are significant effects on risk perception for CSA beyond direct experience or awareness of past impersonal, or publicized, events.

This study addressed two research questions about factors for caregiver risk perception for CSA. First, do child and family demographics, financial security, life stress, and prior adversity or trauma experiences influence caregiver situational risk perception for CSA? One main factor, caregiver ACE exposure level, and eight covariates for ACE exposure level, were analyzed in a multinomial regression analysis for caregiver situational risk perception. Some variables had to be removed during analysis because they lacked distribution across variable categories needed for accurate model analysis and others were eliminated to improve predictive power of the model. Two factors were significant in the model, caregiver ACE exposure level and presence of Medicaid-eligible children in the home.

Secondly, is there a difference in the influence of these child and caregiver factors on situational risk perception of CSA in different social ecology layers? Neither of the significant factors in the regression model were specifically predictive of caregivers identifying microsystem CSA risks only. Absence of Medicaid-eligible children in the home, representing financial security, was predictive of caregivers identifying solely exosystem CSA risks. Both higher caregiver ACE exposure levels and the absence of Medicaid-eligible children in the home were predictive of caregivers identifying both microsystem and exosystem CSA risks.

Influences on CSA Situational Risk Perception in a PMT-based model

This study was conceived in a PMT-based model. The analyses explored how caregivers' prior experience and sociodemographic variables at the child, caregiver, and home environment levels influenced caregivers' perceptions of CSA risk settings. Situational risk perception was proposed as a CSA threat-focused cognitive process important to a PMT-based model within a social ecological context.

The influence of caregiver ACE exposure on risk perception. As a relevant prior experience for the threat of CSA, caregivers' childhood adversity, as measured by ACE scores in this study, was predictive of CSA risk perception in the overall regression model and particularly identified likelihood of caregivers identifying both exosystem and microsystem risks. Since most maltreatment and violence exposure of all types occurs within a child's immediate environment (Finklehor et al., 2015; USDHHS, 2018), the finding that caregivers with a history of higher exposure to childhood adversity were more likely to identify risky settings, especially microsystem settings with accompanying exosystem settings that represent uncertainty, is understandable.

As discussed, previous studies have linked caregiver ACE exposure to increased risk for their children to be exposed to ACEs such as CSA. The results of this study help solidify the effect of caregiver's prior ACE exposure as affecting CSA situational risk perception. The increase in overall CSA risk perception with higher levels of caregiver ACE exposure suggests that some experience may translate to accurate perception of risk, but that high levels of exposure may result in a broader, and possibly misplaced, perception of risks across all layers of a child's social ecology. The variation in risk

perception between moderate and high levels of ACE exposure could reflect the differences in adaptive and maladaptive processes represented in PMT (Rippetoe & Rogers, 1987; Rogers, 1983). Further exploration of specific areas of risk identified would further clarify this aspect of risk perception. Further, the influence of a priori experience with child adversity on situational risk perception suggests a need to increase awareness of actual risk settings for those with low ACE exposure. The influence of ACE exposure on CSA risk perception presents the opportunity to empower those already identifying higher risk environments and provide tools to address risk.

The influence of financial stability on situational risk perception. Children living in less financially secure homes are at greater risk for CSA, in part due to transience and reduced caregiving support (Butler, 2013; Ha et al., 2015; Warren & Font, 2015). Awareness of these trends by those affected were reflected in our findings that caregivers of children who are Medicaid-eligible more often identified risk than those without Medicaid-eligible children. Although risk perception was not universally identified by less financially secure caregivers, their increased likelihood of identifying CSA risks demonstrates some accuracy in the perception of caregivers of higher-risk children.

Interestingly, a larger proportion of those identifying exosystem risks for CSA were caregivers without Medicaid-eligible children. Exosystem settings such as the most frequently chosen option of public places, are, in reality, less likely settings for CSA than the least chosen microsystem setting of the child's home, and the other microsystem settings (Finklehor et al., 2015; Snyder, 2000). The disproportionate level of concern for

CSA encounters in the lower risk exosystem settings by caregivers with higher financial security suggests these caregivers perceive their specific microsystem is immune to CSA threats or they perceive settings outside their immediate system to be inherently more dangerous.

The unclear role of life stress on risk perception. It was initially theorized life stress would influence the cognitive process of situational risk perception in an adapted PMT model. Life stress, as measured by SRRS score levels, was not retained in the final model for CSA situational risk perception. The SRRS did not have an acceptable level of reliability in this study, possibly due to the sample being skewed highly female and more educated than a general sample of U. S. adults. The poor reliability of the measure in this analysis severely limited the researchers' ability to reach conclusions on whether life stress does or does not influence situational risk perception. Possibly, the SRRS will demonstrate a more important relationship in predicting caregiver vigilance actions, a planned follow up to this analysis.

Pertinent Negatives: Risk Perception Distortion with Occurrence Data

The analyses reveal caregiver perceptions for CSA risk that are inconsistent with occurrence data. This finding warrants discussion in highlighting where CSA risk perception needs addressing for future intervention studies and prevention programming. Further, inconsistencies between CSA risk perception and occurrence data inform future PMT-based research efforts directed at understanding the basis of caregiver perception and how perception drives protective behaviors. The distortion between CSA occurrence data and caregivers' situational risk perception for CSA reflects

additional factors or cognitive processes need consideration in developing a PMT-based model to explain caregiver situational risk perception and subsequent vigilance.

Child gender unidentified as increasing CSA risk. Child sexual abuse risk exists for all children due to their developmental vulnerability and the variety of situations children encounter that can increase risk. If respondents did have a tendency to recognize risk more for certain children, it could be logical, though flawed, if the tendency was based on occurrence rates. For instance, females are at a higher risk for CSA at all ages (McCloskey & Raphael, 2005). In this study, there was not a significant difference in risk perception based on the gender(s) of children under the respondent's care.

Overall lowered perception of higher risk settings for CSA. A child's most immediate settings are the most likely places for sexual abuse to occur. Across the study sample, microsystem settings (child's home, other family homes, and family friends' homes) were identified by 30.6% of caregivers, less than half as many who identified exosystem settings as risky (70.5%). The most frequently identified individual settings for CSA risk were public places and children's friends' homes; public places, in particular, are low on actual occurrences. A child's home was the least often identified potential CSA risk setting despite being one of the most frequent actual risk locations. While understandable that caregivers were not universally identifying the child's home as currently risky, it is notable it was the lowest identified setting by caregivers. This suggests CSA risk assessment for a child's home setting is not ongoing, which is of

concern for children needing ongoing vigilance from caregivers, particularly if members in the home are transient or changing.

Strengths

The sample obtained for this study shares demographic commonalities with larger child wellbeing studies, making results such as caregiver ACE exposure comparable. Additionally, the inclusion criteria embracing those who may not be primary caregivers for children 4 -10 years old but are actively involved in their regular care and supervision offers the potential to understand risk perception for CSA across a child's closest layers of social ecology. Taking a broader recruitment perspective acknowledges the influences of a variety of caregivers on a child's wellbeing and safety, versus limiting exploration of caregiver risk perception for CSA to only one or two of those caring for a child.

Limitations

Recruiting an adequate sample for this survey-based study of caregivers was a challenge. With the initial planned recruitment via paper survey packets at health care offices yielding a very low number of responses, the differences in samples obtained via the three methods reveals considerations for targeted recruitment to specific subpopulations. Social media-based snowballing may produce a more educated and financially stable sample with higher time commitments outside the home, depending on snowball initiation and spread, than postcard placement around general community locations and health care clinic-based paper survey completions. Such a sample, then, may also have particular tendencies in addressing risk for safety concerns, as seen in the

greater proportion of this social media snowball sample reporting no settings as risky for CSA for their child. While a limitation, analysis with this sample also provided the opportunity to recognize how aspects such as financial security influence risk perception.

Due to limited recruitment of a diverse sample in caregiver gender, race, ethnicity, and education level, as well as financial security, the results cannot be generalized to all caregivers. Demographic limitations in the sample may also have obscured significant results for some predictive variables. Of note, all of the respondents who identified four or more ACE exposures were female; had there been a larger number of males in the overall sample, this could have presented an opportunity to better understand risk perception differences by caregiver gender. While the failure to recruit a more diverse sample is a limiting factor for subsample analysis and application, it is notable the significant findings in this study emerged in a sample composed of higher educated and more financially stable caregivers than the general population of the sampled region. The findings highlight the perception bias of financial stable caregivers against their children being at risk within the microsystem, where the greater risk exists for all children.

The measure for life stress, the SRRS, was of limited usability in the analyses and interpretation of results involving this measure should be interpreted with caution. Because of the low Cronbach's alpha obtained for this study, the reliability of the measure for this study was a limiting factor.

There were a low number of caregivers reporting history of caregiving for a child exposed to CSA, limiting capacity to analyze this variable. To remedy this limitation, a supplementary data collection through child advocacy centers and other facilities aimed at assisting families managing active childhood maltreatment concerns in the same geographic area would increase the positive responses to the caregiver exposure variable and facilitate further analysis. This would allow for a more complete picture of trauma and adversity's influence on caregiver risk perception and, subsequently, caregiver vigilance.

Conclusion

The predictive factors of caregiver ACE exposure level and financial security on situational risk perception identified in this analysis connect existent risk factors for CSA to how caregivers with those risks perceive risk. Recognition of influences on risk perception stemming from caregiver prior experience and financial security can be useful in focusing intervention development and implementation. Also, recognizing where caregiver perceptions are not aligned with occurrence data and identified risk factors for CSA can be informative for intervention development, particularly educational campaigns, while also providing information to professionals working with families to aid in understanding caregiver perspectives, assisting in a more deliberate and accepting approach to improving children's safety. Of note, the discordance between the perception of where threats exist for a children in any family, including one that is more financially secure, and the unfortunate realities of CSA risk both illustrates a

bias of financially secure caregivers against other caregiving settings and represents a blind spot in protecting their children.

While child sexual abuse risks exist across social ecology levels, recognition of risk in the higher probability level of ecology for the threat is a critical step in progressing towards productive action to reduce the threat. The results of this analysis are useful towards next steps in caregiver-focused research on CSA prevention. Identifying how situational risk perception for CSA translates to caregiver actions to protect children is a needed future step. Analyzing how the significant factors in this report relate to vigilance response actions will support intervention development. In particular, continued development of an adapted PMT-based model for caregiver vigilance for CSA could support tailored intervention strategies addressing the complexity of factors affecting cognitive processes and responses by caregivers.

Table 3.1. Participant Demographics by Level of ACE Exposure.

	Total sample (*n* = 183)	**0 - 1 ACE** *n* = 101 (55.2%)	**2 - 3 ACEs** *n* = 45 (24.6%)	**4+ ACEs** *n* = 37 (20.2%)	*p*
Age	24-69 years μ 39.3 ± 9.8*	26-69 years μ 38.99 ± 9.2*	26-67 years μ 41.9 ± 11.9*	24-62 years μ 37.1 ± 8.2*	.472[=]
Gender-female[+]	169 (92.3%)	91 (90.1%)	41 (91.1%)	37 (100%)	.143**^**
Race					
White/Caucasian	141 (77%)	79 (78.2%)	34 (75.6%)	28 (75.7%)	.917**^**
Non-White[#]	42 (23%)	22 (21.8%)	11 (24.4%)	9 (24.3%)	
Ethnicity-Hispanic	5 (2.7%)	2 (2%)	1 (2.2%)	2 (5.4%)	.534**^**
Marital status					
Never married	16 (8.7%)	7 (6.9%)	6 (13.3%)	3 (8.1%)	.028**^**
Divorced	15 (8.2%)	3 (3.0%)	6 (13.3%)	6 (16.2%)	
Cohabitating	7 (3.8%)	4 (4.0%)	0 (0%)	3 (8.1%)	
Married	145 (79.3%)	87 (86.1%)	33 (73.4%)	25 (67.6%)	
Education level[@]					
HS diploma/GED	4 (2.2%)	1 (1%)	3 (6.7%)	0 (0%)	.305**^**
Associate's degree	52 (28.4%)	27 (26.7%)	14 (31.1%)	11 (29.8%)	
Bachelor's degree	68 (37.2%)	38 (37.6%)	14 (31.1%)	16 (43.2%)	
Graduate degree	59 (32.2%)	35 (34.7%)	14 (31.1%)	10 (27%)	
Relationship to 4 - 10 year old children	134 (73.2%)	77 (76.2%)	28 (62.2%)	29 (78.4%)	.365**^**
Biological parent	8 (4.4%)	5 (5%)	3 (4.5%)	1 (2.7%)	
Adoptive parent	3 (1.6%)	3 (3%)	0 (0%)	0 (0%)	
Stepparent	21 (11.5%)	8 (7.9%)	10 (22.2%)	3 (8.1%)	
Grandparent	2 (1.1%)	1 (1%)	0 (0%)	1 (2.7%)	
Step-grandparent					
Extended	14 (7.7%)	6 (5.9%)	5 (11.1%)	3 (8.1%)	
family/friend	1 (0.5%)	1 (1%)	0 (0%)	0 (0%)	
Foster parent					

*****mean ± standard deviation

[=]ANOVA

^χ^2

[+]No respondents chose "non-binary" option.

[#]Non-White category is predominately Black/African American, with 5 total respondents identifying a different race than White/Caucasian or Black/African American.

[@]HS diploma/GED category includes respondents who reported not completing HS/GED. Associate's degree category includes responses of completing training or partial degree.

Table 3.2. Child and Home Environment Factors by Caregiver's Level of ACE Exposure.

	Total sample (*n* = 183)	**0 - 1 ACE** *n* = 101 (55.2%)	**2 - 3 ACEs** *n* = 45 (24.6%)	**4+ ACEs** *n* = 37 (20.2%)	*p*
Gender of children under care					
Male children	75 (41%)	46 (45.5%)	13 (28.9%)	16 (43.2%)	.201^
Female children	68 (37.1%)	34 (33.7%)	23 (51.1%)	11 (29.7%)	
Both genders	40 (21.9%)	21 (20.8%)	9 (20%)	10 (27%)	
Financial stability					
Children on Medicaid/eligible	40 (21.9%)	16 (15.8%)	11 (24.4%)	13 (35.1%)	.047^
Caregiver location					
Child's full-time home	154 (84.2%)	87 (86.1%)	36 (80%)	31 (83.8%)	.615^
Child's part-time home	3 (1.6%)	2 (2%)	0 (0%)	1 (2.7%)	
Not living with child	26 (14.2%)	12 (11.9%)	9 (20%)	5 (13.5%)	
Outside-of-home commitment					
Full-time work/school	132 (72.2%)	73 (72.2%)	33 (73.4%)	26 (70.3%)	.953&
Part-time work/school	20 (10.9%)	13 (12.9%)	1 (2.2%)	6 (16.2%)	.084&
Home-based work	20 (10.9%)	11 (10.9%)	6 (13.3%)	3 (8.1%)	.752&
Other$	11 (6%)	4 (4%)	5 (11.1%)	2 (5.4%)	.241&

^χ^2

&χ^2 result for specific category when treated as a dummy variable, to assess for appropriateness of model inclusion.

$The "Other" category combines respondents who were retired, unemployed, or disabled.

Table 3.3. Adult Trauma and Stress Variables by Caregiver's Level of ACE Exposure.

	Total sample (*n* = 183)	**0 - 1 ACE** *n* = 101 (55.2%)	**2 - 3 ACEs** *n* = 45 (24.6%)	**4+ ACEs** *n* = 37 (20.2%)	*p*
Violence/trauma exposure as an adult	59 (32.2%)	20 (19.8%)	19 (42.2%)	20 (54.1%)	.000**^**
Current life stress					
Low-level SRRS	149 (81.4%)	92 (91.1%)	36 (80%)	21 (56.8%)	.000**^**
High-level SRRS	34 (18.6%)	9 (8.9%)	9 (20%)	16 (43.2%)	

^χ^2

Table 3.4. Multinomial Logistic Regression Results for Situational Risk Perception for Child Sexual Abuse.

	Exosystem CSA risk	**Microsystem CSA risk**	**Both Microsystem and Exosystem CSA risk**
	Odds Ratio (95% CI)	Odds Ratio (95% CI)	Odds Ratio (95% CI)
Caregiver ACE level			
4 or more ACEs	1.058 (.348, 3.271)	1.217 (.197, 7.502)	5.408 (1.748, 16.730)*
2-3 ACEs	2.383 (.881, 6.449)	2.333 (.520, 10.469)	2.119 (.632, 7.102)
0-1 ACEs	Ref	Ref	Ref
Medicaid eligible children in home			
Yes	-3.855 (-1.542, -9.634)*	1.428 (.359, 5.679)	3.165 (1.104, 9.078)*

*Significant result, based on not crossing the null value of 1.

CHAPTER 4

COMPLEXITIES IN GUIDANCE, APPRAISAL, AND TREATMENT FOR CHILD SEXUAL ABUSE IN PRIMARY CARE: A SOCIAL ECOLOGICAL PERSPECTIVE[3]

One of the most important roles of healthcare providers, influencing long-term health and wellness among families and children, is the provision of anticipatory guidance and surveillance for health risks. For high-risk threats such as child sexual abuse (CSA), the effects of not mitigating this risk can affect a child well into adulthood. Sexual abuse is among the ten adverse childhood experiences (ACEs) whose cumulative occurrence before the age of eighteen years influences adverse mental health and behavior outcomes across the lifespan (Felitti & Anda, 2009; Felitti et al., 1998a). Exposure to CSA and the other ACEs increases the likelihood of engagement in maladaptive coping strategies in adulthood, including illicit substance use, cigarette smoking, and overeating (Felitti et al., 1998b). These behaviors add to the increased risk that occurs with higher ACE scores for mental health disorders, cardiovascular disease, and cancer (Felitti & Anda, 2009; Felitti et al., 1998a).

Primary care providers have uniquely high potential for access to the pediatric population, especially relative to other professionals charged with safety and protection

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of children. In 2014, at least 90% of children under 17 years old accessed primary care at least once (Burwell, 2016). With this extent of access to a vulnerable population, there is an opportunity and a responsibility for primary care providers to offer anticipatory guidance to heighten awareness, appraise health risks and findings, and provide treatment for children at risk for or experiencing CSA.

The purpose of this qualitative study was to explore the complexities in primary care settings for providing guidance, appraisal, and treatment for CSA from an ecological perspective. These data were part of a larger mixed methods pilot study.

Methods

Design

A single-category focus group design seeking thematic saturation was used (Krueger & Casey, 1994). Criteria for focus group participants included: (1) currently employed at a primary care office serving pediatric populations; (2) able to speak and understand English; and 3) willingness to participate. The study received approval by the Institutional Review Board (IRB) at the investigators' academic institution.

A variety of primary care offices serving pediatric populations across regions in one Southeastern US State were recruited for this study. One author (KKC) contacted a provider or other leader in each potential site to gain approval for site participation. Once this was obtained, individual participants were recruited for the focus group via an email or live announcement to all primary care office staff. A variety of staff in the office, including providers, clinical support staff, administrative personnel, and those in other roles such as counselors and educators, were invited to attend. Attendance by at

least one provider was required to schedule a focus group session. At the time of the announcement, an informed consent statement providing the purpose and nature of the focus group and topics to be discussed was distributed to all potential participants in the primary care office prior to the day and time established for the focus group (see Appendix C). This allowed time for individuals to decide if they wished to participate. The informed consent document was redistributed and remaining in the session was considered as consent. Lunch was provided to participants as groups were held during the lunch hour.

Settings. All three facilities hosting focus groups were located in the same Southeastern US state, with one each in a small town, large town, and metropolitan area. All three facilities worked with a high proportion of underserved patients. One of the sites was a pediatric primary care facility; the other two were family primary care sites. Two were community health centers and offered sliding scale fee programs in addition to accepting private and public insurance plans; the third had a high proportion of publicly insured clients and was part of an academic health system.

The counties where the facilities were located reasonably represent their state's overall picture of family economic stability measures. These counties ranged in unemployment rates among families with children, with one having the highest rate in the state and the others in the middle and lower ranges ("Kids Count Data Center," 2018). Across the facilities' counties of location, there was one each in the lower, middle, and upper thirds for the percentage of children in poverty (ranging from 20% to

33%). Between 39% and 50% of children live in single-parent homes across the three communities (“Kids Count Data Center,” 2018).

In measures of child wellbeing, the three communities were fairly similar and representative of the state's standings. Three-year infant mortality rates for the three communities were in the middle and highest thirds in the state and range from 8.2 to 11 infant deaths per 1,000 births (“Kids Count Data Center,” 2018). All three communities' infant mortality rates were approximately double for non-White babies, consistent with the overall US pattern. Child abuse investigation referral rates (for all types) across the three communities were between 4.8 and 5.7% of the child population, compared to an overall state rate of just over five percent. The percentage of referred cases founded for abuse were a broader range, with one community having less than half the founded rate than the others (“Kids Count Data Center,” 2018). One focus group was held at each of three primary care offices recruited.

Sample. There were 17 participants in the study. Each focus group was comprised of four to seven attendees and each included at least two nurse practitioners. The nurse practitioner participants (*n* = 8) ranged in experience from two to more than 20 years, four were doctoral prepared with the remaining master’s-prepared. Other participants included nurses (*n* = 3), medical and nursing assistants (*n* = 2), office staff (*n* = 2), one mental health counselor, and one patient educator. All participants were female; all staff in each of the three settings were female. Ten of the participants were White/Caucasian, five were Black/African American, and two were of Hispanic ethnicity; racial and ethnic representation was diverse across clinic roles.

Procedure. One author (KKC) conducted all focus groups using a semi-structured interview guide (see Appendix D). The authors developed the interview guide based on preliminary work about safety concerns and CSA prevention with children's caregivers. Focus group questions began with open-ended questions covering broad topics on anticipatory guidance and safety for pediatric patients and families, followed by questions focused on risk factors for sexual abuse for children in their setting, their processes for identification or appraisal, and intervention, including challenges with these processes. Focus group sessions were held in a private room for confidentiality. Audio recordings were made of each focus group and provided to a transcriptionist on a separate data storage device with directions for all work to occur on the storage device. Because no patient or clinic identifiers were discussed during the focus group sessions, the recordings were not encrypted. The transcriptionists were not informed or aware of participant locations or true names. Data were transcribed verbatim with all identifying information redacted and replaced with labels (such as "another primary care in same town").

Data Analysis. Transcripts of focus groups were analyzed iteratively using thematic analysis (Krueger, 1998) by all three authors. Emergent themes were coded across and between questions using QRS NVivo 12. Constructs related to barriers or challenges for CSA interventions, including prevention, appraisal, and treatment in primary care emerged from the data. Also, constructs related to provider interactions with both the family and community levels emerged from the data. After the team had consensus on the themes, a thematic map was created. Strength of themes across the

data and direct quotations that strengthened descriptions of themes were identified through ongoing analysis.

***Internal consistency*.** To maintain internal consistency, classifying findings into themes followed principles for qualitative analysis (Krueger, 1998). To be classified into a recognized theme, comments needed to emerge from more than one focus group. The extensiveness of a comment, or whether multiple participants said it across the groups, was considered. While not a primary determinant for recognizing whether a collective of comments warranted a theme, because much of the discussion was led from a practical feasibility perspective, intensity of comments was considered in determining whether a theme was warranted for a set of comments.

Verifiability of the data. Extensive field notes were taken by one author (KKC) during the focus group sessions. These have been maintained for future verifiability. Prior to analysis, these notes, along with reviewing the audio recording, provided a resource to verify unclear areas on the transcripts. After analysis and theme description, member checking was done between first author and participants from each focus group to ensure they felt their comments and intent were represented accurately.

Results

Six themes emerged from the data: (1) Competing care demands for high-risk children; (2) Challenges with appraisal and treatment; (3) Navigating stigma, denial, and avoidance; (4) Sporadic interaction for guidance and appraisal; (5) Fragmentation of community resources; and (6) Constrained information sharing with community agencies. The themes are conceptualized from a social ecology perspective to reflect the

interactive and multi-leveled nature of CSA guidance, appraisal, and treatment (Bronfenbrenner, 1943, 1989). In the Model of Primary Care Complexity Addressing CSA in High-Risk Families (see Figure 4.1) created from this data analysis, the child and family are in the center and the provider is positioned between this innermost layer and the outer ring of the greater community. The data analysis found both provider-specific considerations and interactions with families and the surrounding community were important to understanding the provider's experience with guidance, appraisal, and treatment for child sexual abuse in higher-risk populations. The first two themes are provider-focused, demonstrating challenges the provider encounters specific to their role and responsibilities. The remaining themes reflect proximal processes, interactions occurring in a social ecology model that are systematic and ongoing (Grzywacz & Fuqua, 2000). The three themes that emerged as proximal processes from these data address the nature of the provider's interactions with either the family and child or the community outside their clinic setting that influence the provider's efforts in CSA guidance, appraisal, and treatment.

Competing Care Demands for High-risk Children

Competing care demands within pediatric primary care visits, with special focus on the complexity of caring for high-risk children, was a highly stressed theme by the participants. As a theme focused on the provider role, this theme is represented in the middle layer of the model, where the provider is positioned in managing CSA risk for high-risk children. Primary care participants identified the burden of having to address numerous screening and anticipatory guidance needs in the limited time for patient

visits. The responsibility for balancing complex or multiple health and safety needs was mentioned by participants, as well as the inability to fully address all areas of concern for their patients. This provider role-specific challenge to CSA guidance and appraisal was pervasive throughout the focus group sessions.

Multiple safety topics were identified as relevant and important for pediatric visits. Providers' prioritization of anticipatory guidance shared in each visit was verbalized as being based largely on clinical impressions or caregiver-expressed concerns across health and wellbeing areas. Using general behavior screening tools or mental health screening, such as tools to assess depression in adolescents, was discussed as helpful in narrowing priorities for a specific child. A participant noted "focus[ing] on what's important for that child" as an important guide to prioritizing topics, while providing the example that a child without a bicycle does not need teaching about wearing a helmet. The most frequently identified priority guidance topics were car and gun safety. Only after further probing about safety and anticipatory guidance issues for children did the topic of CSA emerge. One nurse practitioner discussed why maltreatment prevention training for caregivers is important in primary care:

> *. . . will help to prevent at least one child from being sexually or physically abused and not speak up because you know those things follow children, people for the rest of their lives and it really molds who they are, so, I think it adds to, when you think of the big picture and adding to a person's quality of life, that's, um, very important.*

As discussions ensued on anticipatory guidance and safety issues, the complexity of managing high-risk children emerged. Risk factors for CSA identified by the participants, including resource insecurity, family transience or instability, and developmental vulnerability present higher risk for other health threats. Health threats that share some risk factors with CSA include physical neglect, substance abuse exposure, and developmental delay.

Participants discussed having inadequate time to both cover core standards of care and also delve into individualized areas of needed guidance in response to non-acute risks. Providing services critical to basic health, such as immunizations, were identified as competing priorities during well visits. Providing care for existing diagnoses, such as medication maintenance for chronic conditions, or acute treatment for sick visit complaints, was discussed as a detractor, though a necessary priority, from addressing less acute issues such as CSA guidance and appraisal when not connected to the chief visit purpose.

While identified as a general area of concern to varying degrees across the focus groups, CSA guidance and appraisal competes with other, often more overt, health threats in time constraints of a visit, especially sick visits. Participants expressed concern for specific groups of children, including those in non-intact families or those with transient home situations due to custody issues, different family members' assisting with child care, or financial instability. Participants repeatedly mentioned concerns about families with one caregiver having frequent changes in domestic partnerships and that this increased their concern for sexual abuse risk, in particular. One focus group

also identified their patients who were in foster care as being a group with complex health needs. Participants in two groups identified making guidance prioritization decisions based on location or situation-based needs. A nurse practitioner described their concerns about children in less stable environments:

> *. . . they aren't in a good place to develop properly. Umm, you know good enough for resilience. That's something I tend to worry about a lot . . . My job is just to try to figure it out. How to help them, you know, with all this dysfunction that they are undergoing.*

Primary Care Challenges with Appraisal and Treatment

Another theme that emerged in the focus groups were challenges with CSA appraisal and treatment, for which there were a few complex issues identified. This theme is presented in the provider level of the model since it is role-focused. Participants identified inconsistent processes and tools for screening in primary care sites. At one site, it was identified there was not a screening mechanism in place for CSA specifically but that screening questions were asked universally. One site's providers expressed hesitance to fully utilize Safe Environment for Every Kid (SEEK; reference) questions in their current documentation system due to lack of training and familiarity with the intended implementation of the tool. The SEEK tool is designed to screen for child maltreatment risks such as harsh physical punishment and food insecurity and is not designed to specifically identify risks for CSA, nor has it been identified as sensitive to CSA risk (Dubowitz, 2014). At the third site, general screening was universal without targeted questions related to child sexual abuse. A medical assistant on that staff noted

asking the same home environment and child behavior screening questions of all families because “I don’t assume somebody has a normal living situation.”

When asked about training or learning needs for the staff at their facilities, participants identified several areas of desired additional training. Topics identified by participants to increase their readiness to address CSA included information about additional risk factors as well as signs and symptoms of CSA; physical exam techniques and findings; psychosocial treatment effects; and mandated reporting standards. These areas of desired training suggest an awareness of discomfort and knowledge deficit in appraisal of CSA.

Participants identified multiple risk factors and danger situations for child sexual abuse. The most commonly identified risks by participants were unstable or non-intact families including single parent homes, mothers frequently changing male partners, and older children or additional persons in the home. Other situations mentioned as CSA risk factors include transient housing, substance abuse in the home, and developmental vulnerability.

Challenges were identified with physical assessment and determination of likelihood of sexual abuse in two of the groups. Participants discussed feeling it would be harder to tell if a boy or a younger child was sexually abused. Genitourinary signs and symptoms were mentioned as requiring attention for possible CSA and one participant mentioned CSA potential based on the location of a skin infection. Actions such as reporting to child protection services or law enforcement were reported as almost exclusively based on either a caregiver’s report of knowledge of a CSA incident or

recurring physical symptoms. A more passive response of discussing the concern with others in the office and considering other appraisal strategies was often elicited in situations with warning signs but no disclosure or physical indications of sexual abuse.

Interactions with Families: Navigating Stigma, Denial, and Avoidance

Participants described navigating children's and caregivers' stigma, denial, and avoidance of CSA while also displaying some indications of hesitance and uncertainty in their approach. The responses and comfort levels of all involved influence a situation. The interactions in this proximal process between caregivers and primary care staff are represented by a dual direction arrow between the child/family and provider levels of the model. Participants identified frequent caregiver reactions to child disclosures of CSA as being characterized by denial, often in the child's presence, or avoidance, by not taking action against alleged perpetrators because they have left the immediate family setting. One participant noted caregivers with immediate denial of general questions about any possible exposure to CSA were concerning due to limiting their thinking processes, and that another frequent response to general questions about possible sexual abuse exposure was anger and the caregiver "taking offense." It was also felt caregivers reacted in a similarly reflexive manner to providers teaching their child about CSA prevention. One nurse practitioner discussed the flaw in caregiver avoidance: ". . . a lot of parents feel like they can govern by omission. They can just omit it because they don't think it will happen."

Participants in two focus groups noted children's frequent avoidance or delay in disclosing sexual abuse. One participant recalled an instance where a child recanted and

visibly shrank in confidence as their parent denied the possibility of an abusive situation the child had disclosed. Participants noted the need to ask the child about CSA away from the caregiver to get a straightforward answer but that this was not the typical visit situation. When discussing screening tools, one participant reported pointing to questions about general sexual activity on the computer screen, rather than asking aloud, if the parent was in the room.

Adding to the interactional nature of stigma, denial, and avoidance of CSA are provider behaviors minimizing the overt discussion of CSA risks and response. One nurse practitioner discussed guidance prior to adolescence as focusing on asking the parent whether they have "any concerns related to that." Regarding CSA screening and guidance, participants repeatedly noted the less caregivers felt targeted and the more staff was able to say "we ask everyone these questions," the less difficulty staff had in discussing sensitive topics.

Participants displayed a range of verbal and nonverbal cues about comfort levels in discussing CSA guidance, appraisal, and treatment. Participants who appeared initially less comfortable discussing the topic among professionals in a focus group setting did demonstrate more verbal and nonverbal comfort as the discussion unfolded including less pausing before answers and more exchange between participants. Thus, the general comfort level of participants with discussing the topic of CSA would influence navigating the topic with caregivers and children.

Sporadic Provider-Family Interactions for Guidance and Appraisal

Another process between providers and families identified in the data was sporadic interactions for guidance and appraisal; this process is also represented using a dual direction arrow between the innermost and middle areas of the model. Participants described a lack of regular follow up with families because they sought care across different clinics and because of frequent "no show" appointments. Participants from the site that was part of a broader system of clinics in a midsized city and its smaller town nodes reported some children went to different locations for well visits and sick visits. Families that rotate between locations based on convenience or access make consistent guidance and ongoing appraisal for those children, as well as relationship building, a challenge.

Another challenge participants identified was regarding which children had frequent no-show appointments. One participant noted those who were frequent no-shows tended to be the ones where "you read their chart and you go "whoa, this kid needs to come" [for monitoring or assessment]." Another participant highlighted the impact of sporadic interactions between a primary care staff and high-risk families, stating, "so many kids, we get the reporting done but they never get much help." With less predictable contact, reinforcing guidance and managing follow up and referrals with high-risk families is significantly challenging and often unsuccessful.

Interacting with the Community: Fragmentation of Resources

Fragmentation of community-level resources was identified by the two groups located outside a metropolitan area. Difficulties in both finding appropriate resources

and ensuring their patients qualified for the resource were identified as part of this interaction, represented by a dual direction arrow between the community and provider levels of the model. Participants discussed seeking to connect families to resources and encountering limits on who could access a resource, such as child advocacy centers being exclusively for children already identified as victims. One site's participants discussed a lack of available maltreatment prevention programs such as family strengthening services for caregiver referrals. Another site noted the difficulties in locating protective resources such as safe after-school care options for developmentally vulnerable children. Fragmentation of resources was not only a barrier to providing needed services, but also a frustration for staff. One group suggested a practice-based case manager would be helpful for better serving the vulnerable population at their clinic.

Interacting with the Community: Constrained Information Sharing

Participants expressed difficulty providing timely and accurate care due to constraints in information sharing between primary care staff and outside agencies. The proximal process of constrained information is illustrated between the primary care and community resource levels in the model. Both barriers to mandatory information sharing and gaps in flow of information in community settings were noted. Reporting abuse concerns to child protection authorities and law enforcement was identified as difficult, with participants noting the process is time-consuming and needed to be more efficient. Participants discussed reporting CSA concerns where a child told them specifically what happened without reservation but verbalized hesitancy reporting

situations without a disclosure despite disclosure not being a required element of reporting concerns.

When discussing the flow of information from community agencies to primary care, one participant reported not being able to receive information from investigative sources that would assist in treatment follow-up with primary-care-based counseling services. Another participant noted the lack of a permissible connection between school guidance counselors and primary care staff inhibiting monitoring an at-risk child's situation when there was not sufficient information to report an issue to authorities.

Discussion

The six themes identified in the analysis highlight the complexity of providing guidance, appraisal, and treatment for CSA in primary care settings, particularly those with a higher proportion of high-risk children and families. Considering this clinical issue from a social ecological perspective positions provider care for CSA as being connected both to those provided care and the community of resources available, while also acknowledging providers' role-specific challenges.

Analysis in this study found a significant balancing effort between addressing acute visit needs and addressing less visible but long-term health risks such as child sexual abuse. Risk factors for CSA identified by study participants included resource insecurity, family transience or instability, movement of persons in and out of child's home settings such as frequently changing domestic partners of parents, and developmental vulnerability. These identified risks are represented in the literature (Butler, 2013; Davies & Jones, 2013; Finklehor et al., 2015; Rudolph et al., 2018; Sanjeevi

et al., 2018; Stith et al., 2009). A significant risk factor not identified specifically in analysis is that primary caregivers, even if a stable presence in the child's life as a long-term caregiver, are among the most likely perpetrators (Snyder, 2000; USDHHS, 2018).

Many of the CSA risks participants identified also increase the risk for health concerns such as physical neglect and developmental delay (Dubowitz, 2014; Jordan & Moore-Nadler, 2014; Slack et al., 2011; Svensson, Eriksson, & Janson, 2013). This complex risk picture accompanies the possibility of a child with a more transient caregiving situation having physical health needs needing follow-up due to extended periods between patient visits. Further, the time constraints placed on primary care visits limits the ability to care for patients' needs and provide guidance and preventive services safely and competently (Linzer et al., 2015). In time studies, Yarnall et al. (2003) found it is not possible to complete all US Preventive Services Task Force (USPTF) guidelines for a family practice population within the visit time limits imposed by reimbursement systems. Yarnall and colleagues posited time limitations are seriously affecting prevention effectiveness and surveillance quality.

The CSA appraisal and treatment challenges identified in this study are supported by the literature. Time constraints for patient visits were an identified concern in appraising child physical abuse by primary care physicians (Flaherty, Jones, & Sege, 2004). Time limitations present an even greater concern in appraising the less visible, more intricate child maltreatment issue of CSA, especially in settings caring for a greater proportion of high-risk children. Child sexual abuse appraisal is further complicated by the lack of systematically used tools for appraisal of risk and

intervention needs (Flaherty & Sege, 2005). Screening tools used in the primary care sites in this study assess behavioral signs for a broad differential diagnosis; signs of specific mental health diagnoses; or are intended to screen for physical abuse or neglect risk, such as the SEEK tool. Development and testing of CSA appraisal and decision-making tools accounting for objective and subjective assessment for use in primary care is needed to improve resources available to primary care sites.

As reflected in this study's results, provider knowledge about CSA prevention, recognition, and treatment is often limited, or even inaccurate (Flaherty & Sege, 2005; Thomas et al., 2004). There are very rarely physical findings of sexual abuse. Consequently, guidance and treatment for CSA in healthcare settings vary based on the provider's comfort, knowledge, and perception of risk, despite clinical guidelines and legal obligations (Flaherty & Sege, 2005; Jenny & Crawford-Jakubiak, 2013; Thomas et al., 2004). Over 95% of children assessed following a CSA disclosure of greatest physical contact, penetration, will have normal anogenital exam findings (Adams et al., 2016). The general pediatric population, then, has an even greater likelihood of normal physical findings, making physical assessment alone an insensitive standard for deciding to provide further attention to CSA as a clinical issue during a standard patient visit.

Professional organizations for pediatric nurse practitioners and pediatricians have supported clinical guidelines for screening, appraisal, and guidance for CSA as part of standard patient treatment and preventive care, publishing updates in their respective journals as ongoing expectations for practice (Hornor, 2013; Kellogg, 2005). However, the USPTF concluded there is insufficient and mixed evidence on primary care

interventions for maltreatment prevention to assess their benefit and harm (Curry et al., 2018).The absence of recommendations is a major limitation in setting system-wide policy towards population-level primary prevention. More evidence is needed to support specific recommendations for primary care providers in maltreatment prevention efforts, including specifically for CSA. Before further assessments on specific interventions directed at caregivers, establishing effects of trainings focused on CSA appraisal and treatment for primary care providers, addressing retained clinical knowledge and pattern of clinical practice experiences, would be useful.

Participants in this study identified sporadic interactions with high-risk families as a particular challenge to providing guidance and appraising ongoing health needs including CSA. Inconsistent or interrupted visit patterns in pediatric primary care are an ongoing challenge. Abdus and Selden (2013) found lower rates of adherence with recommended well-child visits among children who are publicly insured or uninsured and those in African American/Black families, or with caregivers who do not have a college education. Socioeconomic differences in well-child visit adherence persisted even during a period of increased public insurance coverage when overall adherence rose (Abdus & Selden, 2013). This study was conducted in the Southeastern US; regional differences in well-child visit adherence also exist, with the US West being lowest, then the South and the Midwest next lowest (Abdus & Selden, 2013). Future development of screening tools, guidance materials, and decision-making resources for providers need to consider the potential application in a sporadic visit, since those who are more sporadically attending appointments are often those most at risk.

Fragmentation of resources, including those aimed at recovery from identified CSA incidents and prevention services, was identified as a challenge to primary care facilities' ability to respond to concerns. This was particularly noted by primary care staff in facilities outside of metropolitan areas. To address these issues, facility administrators can pursue community partnerships, or, even better, implement an integrated care model to provide a more well-rounded and accessible system of resources, to include behavioral health, for high-risk families while reducing strain on primary care staff (Duprey, 2016). Integrated care models have been implemented to improve care for both general populations and those who may have especially significant needs for services, including rural families with children diagnosed with Autism Spectrum Disorder or Human Immunodeficiency Virus (Chetty, Maddocks, Cobbing, & Hanass-Hancock, 2018; Habeger & Venable, 2018). Practice sites initiating an integrated care model should prepare clear coordination protocols, foster an inclusive environment among collocated or consulting professionals, educate all involved, including families, about the model's purpose, and incorporate services seamlessly as part of treatment plans (Duprey, 2016; Habeger & Venable, 2018).

The difficulties with constrained information sharing with community agencies and resources identified in this study are reflected in the literature. Health care providers often lack comfort and confidence in the mandated reporter role; this could influence attitudes towards patient encounters and may also support why reporting occurs less often than warranted based on appraisal (Flaherty & Sege, 2005; Lynne, Gifford, Evans, & Rosch, 2015; McTavish et al., 2017). Professionals have particular

difficulty responding when appraising less overt signs of maltreatment (McTavish et al., 2017). Professionals were more likely to report in cases of visible physical injury or 'total' behavior change (McTavish et al., 2017). While challenges in mandated reporter knowledge and comfort span all types of child maltreatment, they are especially challenging for suspected sexual abuse with its particular appraisal challenges.

Limitations in receiving information from investigative agencies and between professional and lay settings was identified as a constraint to fully treating a child with possible CSA. Privacy laws in health care, education, and other arenas greatly limit potential information exchange without caregiver consent, further complicating complete care for a serious health concern. Exploring ways to facilitate information sharing among a child's care settings and professional interactions by directly involving the caregiver as intermediary could be of benefit to improving children's safety.

Significance

This study contributes to existing knowledge by expanding the implementation science for primary care interventions and children and/or caregivers. Intervention studies and implementation efforts should be planned with an understanding of facilitators, barriers, and other factors influencing the feasibility of testing and implementation (Cooper & Veroff, 2012). Limited resources may be better utilized when drawn from feasible and efficacious interventions to address this serious public health concern.

Limitations

No physicians or physician's assistants participated in the focus groups. There were three clinical practice sites with types of providers other than nurse practitioners invited to participate; two did not complete process to set up focus groups and were difficult to reach for follow up while one did not respond to the initial invitation. Due to the limited number of focus groups conducted and the homogeneity of the locations of the groups (high proportion of lower income patient populations), findings may not be generalizable to other settings.

Conclusion

This study improves understanding of the complex and challenging primary care issue of providers managing CSA guidance, appraisal, and treatment, especially with high-risk children and their families. This analysis of the barriers and processes in the provider role with CSA provides a foundation for developing screening tools, appraisal and decision-making guides, and interventions in concert with primary care practices. Given the complexity of CSA guidance, appraisal, and treatment in primary care, researchers and program developers are not likely to design feasible and applicable interventions and screening tools without collaboration with providers and staff.

Working with primary care staff, there are opportunities to enhance staff knowledge and comfort with CSA appraisal and treatment as well as strategies to navigate parental denial or avoidance. These efforts will increase progress toward effective, standardized primary care approaches to CSA guidance, appraisal, and treatment. One primary care strategy to facilitate addressing CSA risk is implementation

of an integrated care model to improve collocated resources. Better support of higher risk families is another strategy to consider in reducing risk and improving follow up for CSA and other ACEs. Approaches that reduce the incidence of a significant public health and individual well-being concern such as CSA will take collaborative and thoughtful development but have the potential for significant effect on children's and families' lives.

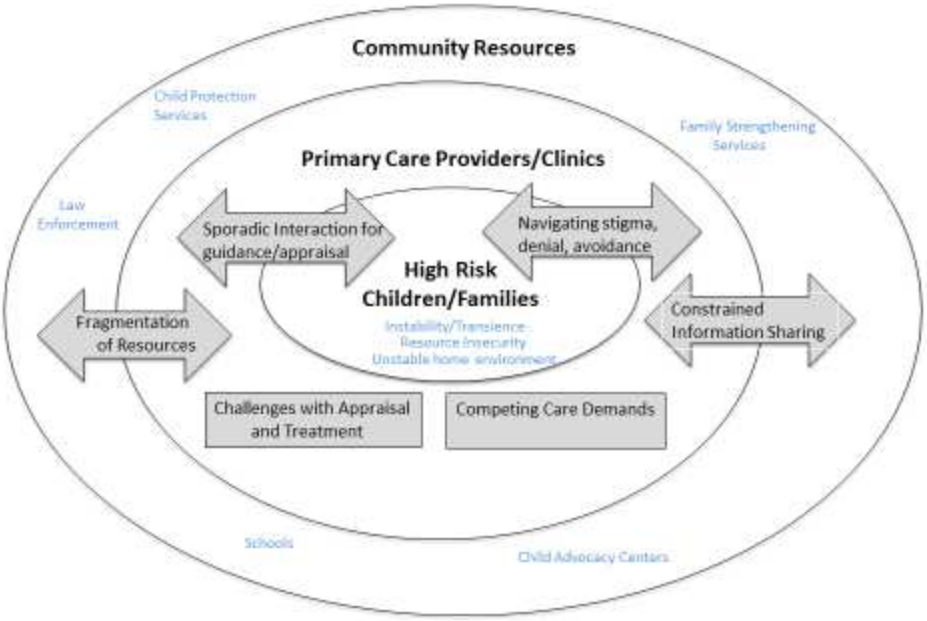

Figure 4.1. Model of Primary Care Complexity Addressing CSA in High-Risk Families.

CHAPTER 5

DISCUSSION

This chapter will present the overall findings for the research questions addressed in this study, organized by specific aim and research questions. Next, findings from the two phases of the project are discussed in the context of the state of science and practice. Finally, this section concludes with study limitations, strengths, and implications for future research.

Summary of Findings

Specific Aim 1. Identify how the proposed socioecological cognitive process of situational risk perception behaves in relation to caregiver prior experience and family sociodemographic variables in a protection motivation theoretical (PMT) model.

RQ1a: Do child and family demographics, financial security, life stress, and prior adversity or trauma experiences influence caregiver situational risk perception of CSA?

A cross-sectional descriptive quantitative study design, collecting survey data from caregivers of children four to ten years old, was used to examine the research questions under Specific Aim 1. A total of 183 caregivers of the 264 who initiated the survey completed all items needed to address the research questions. The analysis was grounded in Protection Motivation Theory (PMT) and social ecological frameworks. Multinomial logistic regression procedures were conducted to examine how child-

specific, caregiver-focused, and home environment variables related to the dependent variable of caregiver situational risk perception for CSA.

One main exposure, caregiver adverse childhood experience (ACE) exposure level, and eight covariates for ACE exposure level, were included in the analysis of caregiver situational risk perception. The selection criteria for covariates from the child-specific, caregiver-focused, and home environment variables in the survey was a *p*-value of .25 or greater when tested for association with caregiver ACE exposure level. The dependent variable of caregiver situational risk perception for CSA was based upon respondent identification of CSA risk among ten settings, including the child's home, public places, religious settings, and extended family homes. Based upon factor analysis of the ten-option survey item, two distinct groups of settings were identified, exosystem settings and microsystem settings. For regression analysis, the dependent variable of caregiver situational risk perception was categorized as: no CSA risk identification, microsystem CSA risk identification only, exosystem CSA risk identification only, and both exosystem and microsystem CSA risk identification.

During the analysis, variables that lacked distribution across categories were removed to improve model fit and utility (caregiver gender and marital status). A backward stepwise procedure was then used to improve predictive power by eliminating less contributory variables (gender of the children under caregiver supervision, caregiver outside-of-home time commitment (school or work), caregiver exposure to adult trauma or violence, and caregiver life stress levels). The final model for caregiver situational risk perception for CSA included two factors (-2 Log likelihood

214.035, p = .001). The two factors included in the final model, with likelihood ratio p-values of .005 and .021, respectively, were caregiver ACE exposure level and presence of Medicaid-eligible children in the home.

The significance of caregiver ACE exposure level and the presence of Medicaid-eligible children in the home in the regression model indicates caregivers' prior experience with adversity or trauma and family financial security influence caregiver situational risk perception for CSA. The relationship between caregivers' marital status and gender and situational risk perception for CSA was not clear. Sex of the children under caregiver supervision, caregiver outside-of-home time commitment (school or work), caregiver exposure to adult trauma or violence, and caregiver life stress levels were not significantly predictive in the produced model of caregiver risk perception.

RQ1b: Is there a difference in the influence of these child and caregiver factors on situational risk perception of CSA in different social ecology layers?

Absence of Medicaid-eligible children in the home, representing financial security, was predictive of caregivers identifying solely exosystem CSA risks. Caregivers without Medicaid-eligible children in the home were nearly four times as likely to exclusively identify exosystem risks for CSA (OR 3.855, 95% CI 1.542 - 9.634). In the sample, 51.7% of respondents without Medicaid-eligible children identified exosystem risks exclusively, compared to 30% of respondents with Medicaid-eligible children in the home. Exosystem risk identification for CSA appeared more likely for respondents with lower ACE exposure but this finding was not significant.

Neither of the significant factors in the regression model were specifically predictive of caregivers identifying microsystem CSA risks only. The model suggested a higher likelihood of caregivers with moderate levels of ACE exposure and those with Medicaid-eligible children in the home identifying microsystem risks for CSA only but these were not significant findings according to 95% confidence interval results.

Both higher caregiver ACE exposure levels and the absence of Medicaid-eligible children in the home were predictive of caregivers identifying both microsystem and exosystem CSA risks. Caregivers with high ACE exposure were more than five times as likely to identify both microsystem and exosystem risk settings for CSA as to not identify risk at either social ecology level (OR 5.408, 95% CI 1.748 – 16.730). Caregivers with a moderate ACE exposure level may be half as likely as those with high exposure, but still more likely than those with low ACE exposure, to identify CSA at both social ecology levels, but this finding was not significant. In the sample, 48.6% of respondents with high ACE exposure identified CSA risks at both microsystem and exosystem levels of social ecology, compared to 17.8% of moderately ACE exposed and 16.8% of lower ACE exposed respondents.

Respondents with Medicaid-eligible children in the home were more likely to identify both microsystem and exosystem risk settings for CSA as to not identify any CSA risks (OR 3.165, 95% CI 1.104 - 9.078). In the sample, 22.5% of the respondents with Medicaid-eligible children in the home identified both microsystem and exosystem CSA risks, compared to 23.8% of respondents without Medicaid-eligible children in the home.

There were differences in caregivers' identification of potential risk settings for CSA across microsystem and exosystem layers of a child's social ecology by financial security in the home and caregiver ACE exposure level. These caregiver and home environment-driven differences in caregiver situational risk perception for CSA in children's social ecology are discordant with CSA occurrence data, which indicates children are most at risk in microsystem settings (Finkelhor et al., 2014; Finklehor et al., 2015; Snyder, 2000). Caregivers with lower childhood adversity and trauma and with relative financial security are not identifying risk in the more frequent settings of CSA in a child's microsystem while over-identifying risks in exosystem settings. The lower identification of higher-occurrence CSA settings may be due to bias about settings and persons outside of their immediate environment or overconfidence in their ability to recognize risks.

Also of note, nearly a fourth of caregiver respondents did not identify any settings as risky for CSA. Given the prevalence of CSA and caregivers' inability to preclude risk for the children they care for, since perpetrators are not generally pre-identified, this indicates caregiver risk perception for CSA is not concordant with actual risk. In the absence of recognizing a health or wellbeing threat to you or those in your care, preventive actions are unlikely (Floyd et al., 2000; Weinstein, 2000). The absence of identification of risk settings for CSA by nearly one in four caregivers amplifies the need to continue to examine influences on caregiver situational risk perception for CSA.

Specific Aim 2. Explore the complexities in primary care settings for providing guidance, appraisal, and treatment for CSA from an ecological perspective.

RQ2a: What are the challenges primary care providers and staff encounter in providing guidance, appraisal, and treatment for CSA?

A single-category focus group design was used to address Specific Aim 2 by conducting three focus group sessions with pediatric primary care providers and staff. The primary care sites hosting the focus groups were in three separate communities in the same Southeastern U.S. State; the three communities collectively represent the state's overall standing in child wellbeing and family economic stability measures. All accept public insurance and have higher proportions of high-risk families in their patient population than private practices in their communities. Each focus group was comprised of four to seven attendees for seventeen total participants. Focus groups were conducted using a semi-structured interview guide. Transcripts were analyzed iteratively using thematic analysis. Six themes emerged from the data. Theme identification and subsequent model development was guided by a social ecology perspective (Bronfenbrenner, 1989) in recognition of the interactive and multi-leveled nature of CSA guidance, appraisal, and treatment.

Two themes specifically addressed challenges providers and staff encounter in providing guidance, appraisal, and treatment for CSA: (1) Competing care demands for high-risk children and (2) challenges with appraisal and treatment. Participants identified multiple aspects of providing care for high-risk children that are challenging for prioritizing CSA prevention during visits. Participants recognized children in caregiving situations with resource instability, transience between settings, and frequent movement of people in and out of the home as being at greater risk for a

multitude of health and wellbeing challenges, including CSA. Prioritization amongst multiple needs and risks for children with multiple risk factors posed difficulties for providers and staff. Completing the essential tasks of primary care visits, providing timely anticipatory guidance, and addressing acutely emerging risks or needs within typical visits has left little room to address safety concerns such as CSA that entail ongoing prevention efforts against a less-visible risk.

Time constraints for patient visits was identified as a particular barrier to addressing the needs of patient and families. Time constraints were identified as a concern in appraising child physical abuse by primary care physicians as well (Flaherty et al., 2004). Child sexual abuse appraisal is further complicated by the lack of systematically used tools for appraisal of risk and intervention needs (Flaherty & Sege, 2005).

Difficulties appraising CSA, a clinical problem with rare exam findings, were identified. This is consistent with the literature. Over 95% of children assessed following a CSA disclosure of greatest physical contact, penetration, will have normal anogenital exam findings (Adams et al., 2016). Given the low rate of findings even in cases of acute CSA, physical assessment alone is an insensitive standard for deciding to address CSA during a standard patient visit.

RQ2b: What resources are lacking for primary care providers and staff to provide consistent and effective care for CSA?

Within the identified theme of challenges with appraisal and treatment, gaps in tools and training were identified by focus group participants. A need for effective and

concise appraisal and decision-making tools for CSA including objective and subjective assessments was identified through discussions in the focus groups about current screening practices in the primary care settings. Training needs were identified through analysis of transcript data. Knowledge gaps and areas of needed reinforcement included risk factors, signs, and symptoms of CSA; physical exam techniques and interpretation of findings; effects of psychosocial treatment; and mandated reporting standards.

RQ3c: What interactions related to CSA guidance, appraisal, and treatment occur by primary care providers and staff with children and families and with community resources?

Two of the themes that emerged in the analysis specifically addressed interactions by primary care providers and staff with children and families: (1) Navigating stigma, denial, and avoidance and (2) sporadic interaction for guidance and appraisal. Participants described managing stigma, denial, and avoidance during interactions with children and families regarding CSA. Participants discussed caregiver reactions to anticipatory guidance, risk assessment, and a child's disclosure, including immediate denial of CSA risk or potential occurrence. Participants described many caregivers as being offended or angry at the mention of CSA risk. Caregivers attempted to avoid CSA concerns by not reporting an incident if the alleged perpetrator was no longer around the child of concern. Participants also described children as often denying CSA occurrence after initial disclosure. Complicating interactions with children and families were providers and health care staff using minimizing language or avoidance of topics involving CSA.

Focus group participants discussed difficulties establishing relationships and providing ongoing monitoring for many families due to sporadic interactions from missed appointments and poor follow up. Providers observed children who have the greatest overall health risk picture were more likely to have sporadic primary care contact. Participants discussed the influence of missed appointments on CSA follow up needs, such as counseling and referrals.

The remaining two themes that emerged in the analysis addressed interactions by primary care providers and staff with community resources: (1) Fragmentation of community resources and (2) constrained information sharing with community agencies. Primary care sites outside of metropolitan areas discussed difficulty locating appropriate resources to address CSA concerns as a particular challenge within their community systems. Difficulty connecting families to resources also presented a source of frustration and time stress for staff. Constrained information sharing between community services and agencies was identified as a barrier to timely and effective care. Limitations in information sharing was also reported to diminish risk assessment for CSA and other child maltreatment.

Synthesis of Findings

This research represents development of key areas pertaining to caregiver vigilance and primary care challenges needed to develop focused and effective CSA prevention strategies for caregivers. Phase I of the study explored a new proposed cognitive process in a PMT-based approach to caregiver vigilance for CSA. These results add to the literature on factors that influence caregiver risk perception for CSA.

Exploring how sociodemographic and caregiver experience factors influence CSA risk perception was a needed step in exploring influences on caregiver vigilance for CSA. Financial security and caregiver ACE exposure levels were significant in predicting caregiver situational risk perception for CSA across microsystem and exosystem layers of a child's social ecology. One of the most informative findings from the study was that nearly one in four caregivers did not identify any risk settings for CSA. While CSA risk exists across all social ecology levels, the low recognition of risk in higher probability microsystem settings was a critical finding for showing the need to continue to study caregiver risk perception. Another result from Phase I is the development of a 10-option survey item to assess caregiver situational risk perception.

Results from Phase II of the study are important in preparing to address caregiver vigilance for CSA. Primary care settings are a natural fit for prevention efforts for CSA due to the high percentage of families that utilize pediatric primary care. However, the demands placed on primary care staff and the complexity of managing high-risk children and families, in particular, need consideration in planning CSA prevention strategies focused on caregivers. There is minimal literature accounting for how primary care providers and staff address CSA topics in their practices, challenges to address in a successful implementation of prevention work, and what resources they need to fulfill their roles in CSA guidance, appraisal, and treatment. The results of Phase II will add to the literature on primary care challenges in addressing CSA while amplifying both the needs and readiness of primary care providers and staff to prevent CSA.

Limitations

For Phase I, a major area of limitation was how the sample was obtained. While a multi-approach recruitment has potential strengths, including reaching a broader range in age or diversity, if the primary site is limited, one challenge to snowball sampling via social media is the risk of a homogenous sample according to sociodemographic factors. For this study, the sample was highly educated and with less financial insecurity than the state from which the majority of the sample is drawn. Due to limited recruitment of a diverse sample in caregiver gender, race, ethnicity, and education level, as well as financial security, the results cannot be generalized to all caregivers. Demographic limitations in the sample may have obscured significant results for some predictive variables. Of note, all of the respondents who identified four or more ACE exposures were female; had there been a larger number of males in the overall sample, this could have presented an opportunity to better understand risk perception differences by caregiver gender.

While the sample was adequate to what is needed for an exploratory analysis, singularities in some cross-tabulations of categorical variables limited the ability to explore potential variables of interest. Another measurement limitation in Phase I was the low reliability of the chosen measure for life stress, the SRRS, in this sample. Additionally, few child-specific risks for CSA were included in the data collection. It would have been informative to the assessment of caregiver perception of CSA risk if other child-specific factors such as child disability status had been included in the data collection.

Similarly, Phase II had a limited sample. No physicians or physician's assistants participated in the focus groups although providers and other professionals at three clinical practice sites with providers other than nurse practitioners invited to participate. Due to the limited number of focus groups conducted and the homogeneity of the locations of the groups (high proportion of lower income patient populations), findings may not be generalizable to other settings.

Study Strengths and Contributions to the Literature

Exploring CSA prevention from both caregiver and health care provider perspectives was a strength of the study. Using a social ecological perspective in both phases of the study maintained a common thread in the approach to the problem. The original research completed in this study advances knowledge in two areas of needed development in examining CSA risk and prevention, understanding caregiver risk perception for CSA and identifying complexities in primary care affecting CSA prevention efforts.

Few studies have approached the caregiver's role in addressing CSA from the perspective of understanding what contributes to the cognitive processes guiding appraisal and decision-making. Establishing what affects caregiver decision-making about CSA risk and determining how caregivers' perceptions of risk fits into a broader PMT-based model has not been the typical approach in assessing caregiver knowledge and action for CSA risk. The particular focus in Phase I on the concept of situational risk perception, versus general perception of CSA risk, is a novel approach and offers a unique contribution to the literature.

The use of multiple recruitment strategies, while not part of the original plan for the study, allowed for a more efficient reach of participants without excess time or financial resources. Ongoing purposive approaches when using expanded recruitment strategies such as social media-based snowball are needed and the sample drawn for this study calls attention to the advisability of multiple approaches or platforms if using social media-based strategies to reduce homogeneity. As noted in the limitations, homogeneity along specific sociodemographic variables was the biggest concern with the sample so planning to reduce that risk by how the messages are deployed and to whom would improve the strength of this methodology.

There is little published on pediatric provider and staff knowledge and readiness to address CSA risk in primary care settings. Phase II of this study explored the complexities pediatric primary care providers and staff must manage during guidance, appraisal, and treatment of CSA and makes an important contribution to the literature focused on practice issues and processes for managing CSA risk in practice settings. The results of this study to the literature also bolster efforts to assess feasibility and plan for challenges for researchers planning primary care-based CSA interventions.

Conclusion

There was an identified need for additional research on caregiver assessment of CSA risk (Babatsikos & Miles, 2015; Rudolph et al., 2018). This study explored caregiver assessment of CSA risk in a PMT-based model and identified risks for CSA from a social ecological perspective through analysis of survey data from caregivers of children four to ten years old. In a multinomial regression model, financial security in the home and

caregivers' childhood exposure to adversity or trauma were found to be significant predictors of how caregivers perceived CSA risk in a child's social ecology.

The findings from this study about caregiver situational risk perception for CSA will add to the literature on caregiver assessment of risk. The next step for developing a PMT-based model for caregiver vigilance for CSA will be analysis using the study data to explore how child-specific, caregiver-focused, and home environment variables, and the cognitive process of situational risk perception, contribute to the actions and ongoing monitoring inherent to caregiver vigilance for CSA. A model that extends to what influences actions to protect children from CSA will be useful for future prevention strategy development.

Exploring pediatric provider and clinic staff challenges in providing guidance, appraisal, and treatment for CSA by conducting focus groups in primary care settings identified challenges in managing high-risk families and children's needs across the health spectrum while also providing preventive care for CSA. The study found six themes for pediatric providers and staff addressing CSA care in practice. Appraising and treating CSA and balancing competing care demands for high-risk families were identified as provider role-specific themes. Both navigating stigma, denial, and avoidance and sporadic interaction for guidance and appraisal were identified as proximal processes for providers and staff working with children and families. Fragmentation of community resources and constrained information sharing with community agencies were identified as challenging proximal processes for providers and staff working with the broader surrounding community.

Considering the identified challenges in primary care for addressing CSA is important to successful intervention development. The next steps in preparing for primary care intervention for CSA is to explore the focus group data for findings related to preferred intervention components and design. This data will be supplemented with stakeholder interviews to strengthen feasibility and usability of future primary care-based CSA prevention programs for caregivers. There is an opportunity to affect the public health and individual wellbeing issues caused by CSA in partnership with primary care providers and staff. Design and implementation of feasible primary care-based CSA prevention programs applying PMT provide an infrastructure for effective and sustainable implementation.

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APPENDIX A: INFORMED CONSENT STATEMENT FOR PHASE I CAREGIVER SURVEY

Dear Child's Parent or Caregiver,
I am a Nurse Practitioner and a Ph.D. student at The University of South Carolina College of Nursing seeking caregivers to complete a survey. The purpose of the survey is to gather information about families to identify better ways of helping families keep their children safe. We also hope to help doctors and nurses know more about how they can support families in keeping their kids safe.

Caregivers who qualify to participate are: 1) taking care of at least one child 4-10 years old; 2) at least 18 years old; & 3) able to read and understand English; and 4) can be the parent, grandparent, or other family/friend frequently assisting in taking care of the child. You do not have to live with the child to take this survey.
You are NOT qualified to take the survey if you have ever sexually abused this child or others ever in your care.

Procedures and Duration. The survey will ask yes/no questions about whether difficult events such as violence in the home or parent divorce have happened in your life. Some items ask if events happened when you were a child or an adult, or to children in your family. There are yes/no questions about recent life changes such as a new job, death in the family, or recent divorce. There are questions about how you respond to safety concerns for children. Finally, there are questions about your home, such as how many people live there and whether the children have Medicaid. The survey will take about 15 minutes.

Risks and Discomforts. I am not gathering identifying information about you or your children. Some survey questions ask for yes/no answers about difficult situations that may have occurred in your life. These will not link to information about who you are. There are no questions such as your or your child's name, address, or date of birth in the survey. Survey answers will be analyzed as a group (200 or more caregivers across Southeastern US).

Voluntary Participation. You are in no way obligated to answer the survey. The link to access this survey is in a separate computer program than Facebook or other online platform where you clicked to participate-the survey and its de-identified data are in a password-secure non-profit survey program called Redcap, via the University of South Carolina Arnold School of Public Health. If there is a question you do not want to answer, I respect your right to leave it blank. You are free to stop participating in this study at any time.

Costs. There will be no costs to you for participating in this study.

Optional drawing. If you choose to complete the survey, you will have the option of entering a monthly drawing for 4 chances for a $25 gift card. If you enter the drawing, you will leave contact information in a separate link/paper from your survey answers. There is no information kept linking your contact to your answers.

Future Participation. You will be asked about potential participation in future child safety studies-this is optional and separate from the survey and the gift card drawing. If I may contact you, your contact information will be mailed in separately or at a separate survey link. I will have a coded file with a survey participant number and your phone/email to contact you in 1-2 years about a follow-up study on your family since this survey. I cannot guarantee your information remains confidential before it goes into the protected file but will take every effort to protect your information, including never putting your name or contact information on the printed documents.

If you have any questions or concerns about this survey, please contact Kate Chappell (at the bottom). If you have any questions about your rights as a research subject in this study you may contact Lisa Marie Johnson, IRB Manager, Office of Research Compliance, University of South Carolina, 1600 Hampton St, Suite 414D, Columbia, SC 29208, phone: (803) 777-7095 or email: LisaJ@mailbox.sc.edu.

Thank you for your help.
Kate K. Chappell, MSN, APRN, CPNP-PC
University of South Carolina College of Nursing
XXX-XXX-XXX or email xxxxxxxxxx@gmail.com

APPENDIX B: PHASE I CAREGIVER SURVEY

Social Re-adjustment Rating Scale (SRRS)

Fill in number of times (1, 2, 3, etc.) each has occurred for you in the past year. If an event has not occurred for you in the past year, leave blank. If an event has happened more than once in past year, put the number of times total in past year.

Life Event	**Number of occurrences in past year**
Death of a spouse	
Divorce	
Marital separation	
Jail term	
Death of close family member	
Personal injury or illness	
Marriage	
Fired at work	
Martial reconciliation	
Retirement	
Change in health of family member	
Pregnancy	
Sex difficulties	
Gain of new family member	
Business readjustment	
Change in financial state	
Death of close friend	
Change to different line of work	
Change in number of arguments with spouse	
Mortgage more than $51,000	
Foreclosure of mortgage or loan	
Change in responsibilities at work	
Son or daughter leaving home	
Trouble with in-laws	
Outstanding personal achievement	
Spouse begins or stops work	
Begin or end school	
Change in living conditions	
Revision of personal habits	
Trouble with boss	
Change in work hours or conditions	
Change in residence	
Change in schools	

Change in recreation	
Change in worship activities	
Change in social activities	
Mortgage or loan less than $51,000	
Change in sleeping habits	
Change in number of family get-togethers	
Change in eating habits	
Vacation	
Major holiday season (such as Christmas)	
Minor violations of the law	

Extended Assessment Survey

Select one response for each item. For these items “this child” means a 4-10 year old child you regularly care for.

	very unlikely		**neither likely nor unlikely**		**highly likely**
1. How likely do you think it is that this child will encounter a sexual abuse risk situation during the next year?	1	2	3	4	5
2. How likely do you think it is that this child will encounter a sexual abuse risk situation during the next 5 years?	1	2	3	4	5
3. If you prevent this child being alone with extended family members or family friends, how likely do you think it is that this child will encounter a sexual abuse risk situation during the next year?	1	2	3	4	5
4. If you prevent this child being alone with extended family members or family friends, how likely do you think it is that this child will encounter a sexual abuse risk situation during the next 5 years?	1	2	3	4	5

Value Supervision Subscale

Select one response per item. For these items "this child" is a 4-10 year old child you regularly care for or who is your child.

	not at all true	**a little true**	**somewhat true**	**mostly true**	**completely true**
1. I don't let this child out of my sight for too long.	1	2	3	4	5
2. When this child is with certain people, I monitor him/her more closely than when s/he is with other people.	1	2	3	4	5
3. I can leave this child alone for long periods of time without worrying something will happen.	1	2	3	4	5
4. To keep this child safe, I need to be closely supervising at all times.	1	2	3	4	5
5. I think that at his/her age, this child is quite capable of keeping him/herself from injury.	1	2	3	4	5
6. As long as I generally know where this child is and what s/he is doing, I don't have to go check on him/her.	1	2	3	4	5
7. When we are at home, it works out fine for me to just wait until this child calls or comes to get me if s/he needs help.	1	2	3	4	5
8. I sometimes snoop around this child's room or belongings to be sure I haven't missed something I should be aware of.	1	2	3	4	5
9. I think it is important to monitor children closely even at these ages.	1	2	3	4	5
10. By 6-10 years of age, I think that only children who are poor at following rules need constant supervision.	1	2	3	4	5

11. I always check to see what this child is doing when s/he is out of sight for long.	1	2	3	4	5
12. I usually only allow this child to play with friends when an adult is around to supervise closely.	1	2	3	4	5
13. I think it is best to keep a child busy than let them have too much free time on their hands.	1	2	3	4	5
14. I believe this child will follow the rules even if I am not there watching him/her.	1	2	3	4	5
15. One way or another, I always figure out what my child is up to.	1	2	3	4	5

Risk Behavior Diagnosis Scale

Select one response for each item. For these items "this child" means the 4-10 year old child you regularly care or your child.

	strongly disagree		**neither agree nor disagree**		**strongly agree**
1. I am able to keep this child from being alone with extended family members or family friends to prevent sexual abuse.	1	2	3	4	5
2. Keeping this child from being alone with extended family members or family friends is easy to do to prevent sexual abuse.	1	2	3	4	5
3. Keeping this child from being alone with extended family members or family friends to prevent sexual abuse is convenient.	1	2	3	4	5
4. Keeping this child from being alone with extended					

family members or family friends works in preventing sexual abuse.	1	2	3	4	5
5. Keeping this child from being alone with extended family members or family friends is effective in preventing sexual abuse.	1	2	3	4	5
6. If I keep this child from being alone with extended family members or family friends, this child is less likely to experience sexual abuse.	1	2	3	4	5

Adverse Childhood Experiences (ACE)

These questions are about you and your childhood. Check the box that best fits your experience.

While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household **often** or **very often**…
   Swear at you, insult you, put you down, or humiliate you?
   or
   Act in a way that made you afraid that you might be physically hurt?
   □ Yes(1) □ No(0)

2. Did a parent or other adult in the household **often** or **very often**…
   Push, grab, slap, or throw something at you?
   or
   Ever hit you so hard that you had marks or were injured?
   □ Yes(1) □ No(0)

3. Did an adult or person at least 5 years older than you **ever**…
   Touch or fondle you or have you touch their body in a sexual way?
   or
   Attempt or actually have oral, anal, or vaginal intercourse with you?
   □ Yes(1) □ No(0)

4. Did you **often** or **very often** feel that…
   No one in your family loved you of thought you were important or special?
   or
   Your family didn't look out for each other, feel close to each other, or support each other?
   □ Yes(1) □ No(0)

5. Did you **often** or **very often** feel that…

You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?

or

Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?

□ Yes(1) □ No(0)

6. Were your parents **ever** separated or divorced?

□ Yes(1) □ No(0)

7. Was a parent or other adult in the household:

Often or **very often** pushed, grabbed, slapped, or had something thrown at them?

or

Sometimes, often, or **very often** kicked, bitten, hit with a fist, or hit with something hard?

or

Ever repeatedly hit at least a few minutes or threatened with a gun or knife?

□ Yes(1) □ No(0)

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?

□ Yes(1) □ No(0)

9. Was a household member depressed or mentally ill, or did a household member attempt suicide?

□ Yes(1) □ No(0)

10. Did a household member go to prison?

□ Yes(1) □ No(0)

Demographic & Environment Survey

1. Your Age: _____ years

2. Your Gender:

☐ Male(0) ☐ Female(1) ☐ Nonbinary(2)

3. Your Race:

☐ White/Caucasian(0)

☐ Black/African American(1)

☐ American Indian/Alaskan Native(2)

☐ Asian(3)

☐ Pacific Islander(4)

☐ Biracial or multiracial(5)

4. Your Ethnicity:

☐ Hispanic(0) ☐ Non-Hispanic(1)

5. Your Education:

☐ Completed less than 8th grade(0)

☐ Some high school(1)

☐ Completed high school or GED(2)

☐ Some college or career training(3)

☐ Completed 2-year college (Associate's degree) or career training program(4)

☐ Completed 4-year college (Bachelor's degree)(5)

☐ Completed graduate school (Master's or Doctoral degree)(6)

6. Your Employment:

☐ Employed full-time(0)

☐ Employed part-time(1)

☐ Full-time homemaker or home-based work (such as a family farm)(2)

☐ Full-time student(3)

☐ Unemployed(4)

☐ Retired(5)

☐ Disabled(6)

7. Your Marital Status:

☐ Never Married$_{(0)}$

☐ Living with a partner, not married$_{(1)}$

☐ Married$_{(2)}$

☐ Divorced/Separated$_{(3)}$

☐ Widowed$_{(4)}$

8. Children (17 or younger) in your home or under your regular care (at least weekly). Include biological or stepchildren you have regular contact with even if not weekly (such as a custody/visitation agreement or a parent working away from home):

Child 1: Age _____ years & **Gender** ☐ Male$_{(0)}$ ☐ Female$_{(1)}$
Child 2: Age _____ years & **Gender** ☐ Male$_{(0)}$ ☐ Female$_{(1)}$
Child 3: Age _____ years & **Gender** ☐ Male$_{(0)}$ ☐ Female$_{(1)}$
Child 4: Age _____ years & **Gender** ☐ Male$_{(0)}$ ☐ Female$_{(1)}$
Child 5: Age _____ years & **Gender** ☐ Male$_{(0)}$ ☐ Female$_{(1)}$
Child 6: Age _____ years & **Gender** ☐ Male$_{(0)}$ ☐ Female$_{(1)}$

How many of the children above are biological or stepchildren you have regular contact with but see less than once a week?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ more than 6

9. Are one or more children in your care on Medicaid or currently Medicaid-eligible?

☐ No$_{(0)}$ ☐ Yes$_{(1)}$ ☐ Unsure$_{(2)}$

10. Your relationship to the 4-10 year old children under your regular care. Select more than 1 choice ONLY if you have different relationships with different 4-10 year old children in your care. DO NOT include relationships to children under 4 or over 10 years old in your care**:**

☐ Biological Parent$_{(0)}$

☐ Biological Grandparent$_{(1)}$

☐ Foster Parent$_{(2)}$

☐ Stepparent$_{(3)}$

☐ Adoptive Parent$_{(4)}$

☐ Other Family Member$_{(5)}$-Specify: _____

☐ Family Friend$_{(6)}$

☐ Paid caregiver (nanny, babysitter)$_{(7)}$

11. You live in:

☐ This child's main home (5 or more full days/nights per week)(0)

☐ This child's part-time home (1-2 full days/nights per week)(1)

☐ Neither of the above(2)

12. In your home:

Total number of adults (18+) living there full-time (INCLUDE yourself in the number): _____

Total number of children (<18) living there full-time: _____

13. What is the ZIP code for your home? _____ (will be used to group surveys from same area)

14. How would you describe your home? *Choose only one.*

1 adult household:

☐ Single-parent home(0)

☐ Single-adult home *(you are not the child's current/assigned parent)*(1)

OR

2-adult household:

☐ 2 parents of different genders *(A mother and a father)*(2)

☐ parents of different genders, one parent is children's stepparent
*(A mother with a stepfather **or** a father with a stepmother)*(3)

☐ same-gender parents *(2 mothers or 2 fathers)*(4)

☐ same-gender parents, one parent is children's stepparent
*(A mother with a stepmother **or** a biological father with a stepfather)*(5)

☐ 1 parent and 1 non-parent
(A mother with a grandmother, a father with a roommate, etc.)(6)

OR

3-adult or more household:

☐ includes 1 parent and 2 non-parents(7)

☐ includes 2 parents and 1 non-parent(8)

☐ all adults in home are non-parents(9)

15. As an adult (18 years old to present), have you experienced violence or abusive situations?

This could include domestic violence, threats to your health or safety by a specific person, sexual assault, an unwanted sexual encounter, a physical assault you did not initiate, or other violent or abusive situations.

☐ No(0) ☐ Yes(1)

If Yes: How many violent or abusive situations have you experiences since you turned 18 years old?

'Situation' means completely separate situations by different persons. ***(Example: If you had one unwanted sexual encounter at 19 and one physical assault at 24, put "2." If you have had one relationship that included several instances of domestic violence over time, put "1.")***

Number of situations: _____

16. Has a child in your care experienced sexual abuse? Include children now living in your home or spending regular, frequent time in your home. Include children from your home in the past-those who are still children and those who are now adults.

Do NOT include children you were caring for as part of a job (nanny, babysitter, camp counselor, etc.) or who visited your home but were not under your repeated or ongoing care (such as your child's friend who spent the night).

☐ No(0) ☐ Yes(1)

If Yes: How many situations involving sexual abuse have occurred to children who were in your care? Remember to only include the children you were providing ongoing care for.

'Situation' means completely separate situations for different children and/or different abusers. ***(Example: if one child was abused at ages 2 and 10 by different persons, put "2." If one child was abused by one person at age 6 and also at age 8, put "1." If one child was abused at age 4 and a different child at age 4, put "2.")***

Number of situations: _____

17. Think about all the places this child goes. Which places do you consider risky for possible sexual abuse for this child?

☐ I do not think this child/children are ever at risk for sexual abuse.(0)

OR Select all that apply:

☐ Home(s) where child lives(1)

☐ Homes of other family members(2)

☐ Homes of family friends(3)

☐ Homes of the child's friends(4)

☐ School(5)

☐ Day care/child care(6)

☐ Church/Religious activities(7)

☐ Activities/lessons (sports teams, scouts, dance lessons, karate lessons, etc.)(8)

☐ Indoor public places (community center, stores, etc.)(9)

☐ Outdoor public places (parks, sports fields, fairs or other group gatherings, etc.)(9)

☐ Around the neighborhood(10)

18. Which of the following actions have you taken related to children 4 to 10 years old in your care?

☐ I haven't done any of these actions(0)

OR Select All that Apply:

☐ Taught children to avoid strangers(1)

☐ Talked to the children's other caregivers (parents, grandparents, etc.) about risky situations for sexual abuse(2)

☐ Talked to the children about safe touch or good vs. bad touch(3)

☐ Checked the sex offender registry for your neighborhood or other areas children spend time in(4)

☐ Had rules about who can watch the children alone or can be together in rooms alone in your home/other places(5)

☐ Had rules about children being on the computer or using/playing with a cell phone(6)

☐ Had rules about where children are allowed to go(7)

☐ Had rules about what children are allowed to watch, read, or listen to(8)

☐ Checked internet or phone history for devices children have access to(9)

If any actions selected:

18b. When did you last take any of the actions in your answer?

☐ In the past month(0)

☐ In the past 3 months(1)

☐ In the past 6 months(2)

☐ In the past year(3)

☐ More than a year ago(4)

19. Who/where would you prefer to receive information about preventing child sexual abuse? Please select all that apply.

☐ Discussion with Healthcare Provider (MD, NP, PA) at primary care office(0)
☐ Discussion with Nurse at primary care office(1)
☐ Brochures in the primary care waiting room or in the mail(2)
☐ Discussion with teacher/staff at child's school/day care(3)
☐ Looking at websites(4)
☐ Watching a television or news program(5)
☐ Attending a meeting at church(6)
☐ None-I would not want to receive information about preventing child sexual abuse from any of the above(7)

APPENDIX C: INFORMED CONSENT STATEMENT FOR

PHASE II PRIMARY CARE FOCUS GROUPS

Dear Primary Care Office Provider or Staff Member,

I am a Nurse Practitioner and a Ph.D. student at The University of South Carolina College of Nursing seeking primary care staff to participate in a focus group discussion at your place of work. The purpose of the discussions is to gather information to identify better ways for primary care offices to support families in keeping their kids safe. I also hope to identify office set up factors that I need to consider when designing a future prevention program for primary care offices to use with families.

Staff members who qualify are: 1) currently employed at a primary care office serving children; and 2) able to speak and understand English. Potential participants may be providers, nurses, medical and nursing assistants, and office and managerial staff, as well as any other staff who may be involved in coordinating or providing services in that facility.

Procedures and Duration. The focus group discussion will take place on DATE and TIME in your office. Topics during the discussion will include what the office currently does about child sexual abuse concerns; how office procedures would influence starting a prevention program for child sexual abuse; and areas of concern staff has seen on this issue for the families in their practice. The discussion will last about 45 minutes.

Risks and Discomforts. The focus group will be recorded. You will not be asked to share any personally identifying details in the recording and any specific details of names, places, etc. shared in the discussion will be removed in the transcription and replaced with general terms such as “Family A” or “another primary care office in town.” After the transcription is complete and the study is done, the recording will be destroyed.

Voluntary Participation. You are in no way obligated to participate in the focus group. Whether you participate and answers you give are not documented by your place of work and this is not to be considered part of your job duties. If there is a question you do not want to answer, I respect your right to say no or remain silent during that portion of the discussion.

Costs. There will be no costs to you for participating in this study.

Meal offered in appreciation of your time. If you choose to participate in the focus group, you will be offered [NAME of MEAL, depending on timing of session] to recognize your time and effort.

If you have any questions or concerns about this focus group, please contact Kate Chappell at 803-555-1282. If you have any questions about your rights as a research subject in this study you may contact Lisa Marie Johnson, IRB Manager, Office of Research Compliance, University of South Carolina, 1600 Hampton St, Suite 414D, Columbia, SC 29208, phone: (803) 777-7095 or email: LisaJ@mailbox.sc.edu.

Thank you for your help.

Kate K. Chappell, MSN, APRN, CPNP-PC

University of South Carolina College of Nursing

XXX-XXX-XXXX, xxxxxxxxx@mailbox.sc.edu

APPENDIX D: PHASE II INTERVIEW GUIDE FOR FOCUS GROUPS

Questions below will be asked as appropriate during interview to ensure covering the topic at hand or peripheral concerns. Follow up questions may also be asked based upon comments shared by participants to further explore related concepts.

Questions:

I want to talk about safety as a part of the role for primary care practices. How important is safety teaching in this practice's work with families?

What safety concerns do you have for the children you are caring for?

What concerns do you have for other people hurting children?

If they do not mention sexual abuse as an area of safety concern:

Is concern for possible sexual abuse a safety issue in caring for children?

Are there places or situations where you feel children are more at risk for potential sexual abuse?

How do you handle these safety concerns?

Do you talk to children about these concerns? If so, how do you usually handle this topic?

Do you talk to parents about these concerns? If so, how do you usually handle this topic?

I want to shift now to talk about implementing safety programs in this primary care office. What would you think about parents completing a 2-page survey and then receiving a 5-minute safety teaching about sexual abuse risk in this practice?

Who in the office would be the best fit for providing this teaching?

When would you think the parent should complete the data form? When in the visit should the teaching happen?

Would it be best to have printed materials to give parents, web resources to show them, or other types of teaching materials?

What might make this difficult to do in this practice? What would we need to plan for to make it work?

Would there be positives to providing a CSA prevention training in this office?

What type of information about child sexual abuse prevention would be helpful for families you care for here?

Anything else you think other families might need?

What kinds of resources do families need to improve safety for their children?

Are there any topics you feel you need more information about regarding CSA?

Anything else that you want to share with me about this topic?

Thank you for participating in this study. Your input is helpful to understanding more about parents' efforts to keep their children safe and taken care of, particularly in protecting them from harm from others such as abuse.