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Head Start Parent Perspectives on Child Exposure to Secondhand Smoke at Home

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Abstract

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of the Requirements for the Degree of

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Abstract

Children exposed to secondhand smoke (SHS) are at risk of developing ear infections, asthma, wheezing, bronchitis, as well as retarded lung growth. Indoor smoking is the main source of children's exposure to SHS. Despite a downward trend in smoking, children from low income families, especially African American and Hispanic children, continue to be exposed to SHS at a higher rate than their wealthier counterparts. This multiple case study explored the perceptions of 15 parents of 3- to 5-year-old children currently enrolled in Head Start regarding children's exposure to SHS. This study relied on the social ecological model, the theory of reasoned action, and harm reduction for understanding the views of parents and protective behaviors aimed at eliminating children's exposure to SHS in their homes. Data were obtained from semistructured individual interviews and document reviews. Data were analyzed inductively through coding to develop themes and thick rich descriptions of each case and a composite of all cases. Although participants were aware that SHS poses serious threats to the health of children, overall, they lacked knowledge of SHS exposure. They also exhibited a lack of awareness of specific illnesses associated with children's exposure to SHS. Findings from this study might help improve parents' understanding of the health risks associated with exposing children to SHS and possibly help reduce the exposure of Head Start children to SHS through the use of contextualized interventions within the Head Start community

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Dedication

I dedicate this work to my family: Chris, Adaora, Arinze, and Amara. I love you.

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Thank you, Dr. Paige Wermuth, for your support, encouragement, and guidance. I have come this far on my journey because you believed in me. You renewed my hope the day you agreed to go on this journey with me. Words are not enough to express my gratitude to you. Dr. Ches Jones, thanks for all your support and for nudging me forward with your pointed observations. Also, Dr. Magdaline Aagard, your thorough examination of my work and your suggestions were invaluable in propelling me to the finish line. Thank you my Editor, Michael Miller, for your astute observations and suggestions.

To my husband, Chris, thanks for your undying support and for being a doting dad to our three wonderful children; and to my children, Adaora, Arinze, and Amara thank you for teaching me all about love and joy. I am so proud to be your mom and I will forever be grateful to the Almighty for blessing me with each of you.

To my friends, Pat and Angie, thank you for believing in my dreams, and for opening your hearts to my children. I love you both.

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Chapter 1: Introduction to the Study

Introduction

Exposure to secondhand smoke (SHS) poses a serious, but preventable, threat to the health of children (Moody-Thomas, Sparks, Hamasaka, Ross-Viles, & Bullock, 2014; Ortega et al., (2010); Pisinger, Hammer-Helmich, Andreasen, Jørgensen, Glümer, 2012; U.S. Department of Health and Human Services [USDHHS], 2006 & 2014). SHS contains more than 7,000 chemicals, 250 of which are toxic, and 70 of which are classified as chemicals that can cause cancer (Centers for Disease Control [CDC], 2014). Children exposed to SHS are at an increased risk for various illnesses. The U.S. Surgeon General's Report (2014) declared that "middle ear disease, respiratory symptoms, impaired lung functions, lower respiratory illnesses, and sudden infant death syndrome (SIDS)" are "causally linked" to exposure to SHS (p. 5). Others have drawn similar conclusions from their research (Mills et al., 2012; Ortega et al., 2010). In addition, Chen, Hsiao, Miao, and Chen (2013) noted that exposure to SHS has been implicated in impaired cognitive function and increased behavioral problems in children (p. 193).

Globally, 603,000 deaths were attributed to exposure to SHS in 2004 and children younger than 5 years had the greatest burden of upper respiratory infections due to exposure to SHS (Oberg, Jaakola, Woodward, Peruga, & Pruss-Ustun, 2011).

Despite declines in smoking from 1965 to 2014 (CDC, 2016), indoor smoking continues to pose a challenge, especially among lower income families (Butz et al., 2011, p. 466; CDC, 2015). With widespread restrictions on smoking in public places, more smokers have resorted to smoking indoors in their homes (Abdullah et al., 2011;

Wamboldt et al. 2008; Wang, Phil, Ho, & Lam, 2011). Previous studies on the exposure of preschool children younger than 6 years to SHS have provided important advancements in understanding the health effects of exposure to SHS. However, strategies used by parents to protect their preschool children from exposure to SHS are not well understood.

The aim of this multiple case study research was to expand on the scholarship on children's exposure to SHS by increasing understanding of preventive strategies employed by parents of Head Start children to reduce or eliminate children's exposure to SHS in their homes. The results of this research contextualized the preventive efforts used by parents of Head Start children to curb children's exposure to SHS in their homes and may inform future preventive efforts among smokers within the study population.

Protecting children from exposure to SHS is the primary responsibility of a parent (Chen et al., 2013, p. 193). When parents smoke around their children, it has social and health consequences (Ortega et al., 2010). However, as many as 25% to 43% of children in the United States continue to be exposed to SHS at home (Barnoya & Glantz, 2006; Butz et al., 2011; Chen et al., 2013; 06; Hawkins & Berkman, 2011). Therefore, this study was important for understanding the strategies used by the parents of low-income Head Start children to protect their children from exposure to SHS.

Background

SHS exposure results from passively inhaling smoke expelled by a smoker, and side stream smoke from a burning cigarette, or thirdhand smoke, which entails coming in contact with residue deposited on surfaces during smoking (Swindle, Shapley, Kyzer,

Cheerla, & Whiteside-Mansell, 2015). Children are exposed to SHS when their caregivers smoke or leave them in the care of others who smoke. In fact, the Office on Smoking and Health (2006) identified parental smoking as posing the most significant risk for children's exposure to SHS. Similarly, other researchers have posited that children whose caregivers are smokers are at increased risk for exposure to SHS and its concomitant health consequences (Kit, Simon, Brody, & Akinbami, 2013; Ortega et al., 2010). Therefore, I designed this study to gain perspective on how parents of low-income Head Start children view protecting their children from exposure to SHS to gain insight into new avenues for addressing the prevention of exposure to SHS among Head Start children. I selected participants for this study if they responded yes to the question: Do you or anyone in your family smoke cigarettes?

SHS exposure is endemic in low-income populations and has been shown to be specifically more problematic for low-income children whose mothers are smokers (Jones, Cooper, Lewis, & Coleman, 2014; Jones, Hassanien, Cook, Britton, & Leonardi-Bee, 2012; Leung, Ho, & Lam, 2004; Orton et al., 2014). Although the health hazards of exposure to SHS are well understood, approximately 33% of children continue to be exposed to SHS in their homes (Barnoya & Glantz, 2006; Butz et al., 2011; Hawkins & Berkman, 2011). The U.S. Surgeon General reported that 88 million people in the United States are exposed to SHS and, of these, 19 million are children younger than 11 years (USDHHS, 2014). SHS exposure is especially deleterious to the health of young children because their lungs continue to develop well into adolescence (USDHHS, 2014). Current estimates for smoking from the CDC (2014) indicated that 18.1% (42.1 million) of

Americans are smokers. In the United States, a wide disparity exists in smoking and exposure to SHS among the various ethnoracial groups (Wamboldt et al., 2008). People of multiple ethnoracial backgrounds have the highest prevalence of smoking at 26.1%. African Americans account for 18.1% of smokers as compared with 12.5% of Hispanics, 19.7% of White non-Hispanics, and 10.7% of Asians (CDC, 2015). When accounting for age and gender, those within the age range of 25 to 44 years have the highest prevalence of smoking at 21.6%; men were more likely than women to smoke at 20.5%, and for women, the prevalence rate was 15.8% (CDC, 2017). At the prevalence rate of 43%, adults older than 25 years with a General Education Development (GED) certificate surpassed all other groups in smoking. Low-income individuals are also more likely to suffer the health consequences of smoking (CDC, 2017).

Although a limited number of studies have addressed the problem of exposure to SHS at home, most of the studies have focused on testing biomarkers, particulate matter, and the disease burden of exposure. Northcross et al. (2012) used biomarkers—such as levels of cotinine, a metabolite of nicotine, and other particulate matter in the home or in vehicles that transport children to determine the amounts of contaminants absorbed by a child during a specified period of time, while Butz et al. (2011) studied the concentration of such contaminants indoors. In contrast, Brunst et al. (2012) have examined the disease burdens associated with exposure to SHS. In a Taiwanese study, Chen et al. (2013) measured parents' perceptions of smoking around children and its health consequences using sociodemographic data to predict factors associated with exposure to SHS. Previous studies have also established that any level of exposure to SHS is unsafe (U.S.

Surgeon General, 2014). Aligne, Moss, Auinger, and Weitzman (2003) argued that even at 0.02 ng/ml of serum cotinine, children were vulnerable to developing dental caries. As stated by Pisinger et al. (2012), a clearer understanding of specific locations where household members smoke at home and the number of persons that smoke in a home is needed (p. 6).

Similarly, Zaloudíková, Hrubá, and Samara (2012) asserted that "parental concern about smoking prevention" (p. 43) deserves further investigation. Results from a study conducted by Mills et al. (2012) comparing levels of cotinine in a child's saliva and the level of particulate matter in the home were incongruent with cotinine levels, which showed that parents underreported children's exposure to SHS (Max, Sung, Shi, 2012; Mills et al., 2012). A review of the extant literature shows a dearth of information on specific research aimed at protecting children from exposure to SHS based on parental knowledge of the harmful effects of SHS.

Developing protective measures to safeguard children from exposure to SHS may help improve the health of those that are specifically at risk for exposure, especially children who are already dealing with respiratory or other illnesses. As stated by Swindle et al. (2015), exposure to SHS may worsen the health condition of children with chronic illness. Gaining a clear understanding of factors that drive smoking behavior through the perspectives of parents may help protect children from SHS exposure. Data obtained from this study may also provide additional information for use in formulating specific interventions to protect children from SHS exposure. Current legislation provides some protections for exposure to SHS in public places (USDHHS, 2014), including schools and

childcare centers (LaVoie, Quick, Riles, & Lambert, 2015). However, researchers have observed that legislative efforts directed at protecting nonsmokers from exposure to SHS in specific public areas may also be putting children at a greater risk for exposure to SHS children in their homes (Abdullah et al., 2012; Shaw et al, 2012). LaVoie et al. (2015) found that smokers perceived the use of graphic images on cigarette packets as an affront to their rights. Without specific legal safeguards for protecting children from exposure to SHS at home, parents, guardians, and caregivers are left to make their own decisions regarding the best methods for protecting children from SHS exposure. Therefore, parents' smoking behavior has health consequences for their children.

Despite dire health warnings on cigarette packets and other health information regarding the harmful effects of cigarettes, people continue to smoke (USDHHS, 2006). Generally, the incidence of smoking continues to decline across all racial groups, but compared with other groups, tobacco consumption has increased among ethnic minorities while quit attempts have declined (CDC, 2017). With unfettered access to cigarettes and lack of regulation of indoor smoking in private homes, children whose parents are smokers continue to bear the risk of exposure to SHS. Evidence suggests that a dissonance exists between the uptake of available health information and the continued smoking epidemic, especially among low-income earners (Bobak, Jha, Nguyen, & Jarvis, 2000). For example, the CDC (2017) reported that during 2011 to 2012, 67.9% of African American children aged 3 to 11 years were exposed to SHS, in contrast with 29.9% similarly aged Mexican-American children. Exposure of children to SHS is a modifiable risk that can be avoided altogether if no one smoked around children (CDC, 2017).

Ironically, adults whose duty it is to protect children from exposure to SHS and other harms continue to expose children to harmful toxins from SHS. In this study, I assessed parental beliefs regarding the exposure of children to SHS through a social-ecological lens to gain an understanding of the steep social gradient in SHS exposure among low-income families. I used the theory of reasoned action (TRA) to explore the self-efficacy beliefs of parents in protecting children from SHS, and the harm reduction model for explaining the strategies that parents use for protecting children from harm. A confluence of the three perspectives was essential in explaining the smoking behavior of adult caregivers which unintentionally causes harm to children.

Problem Statement

Children's exposure to SHS is a challenging public health issue. It is even more concerning because young children cannot procure cigarettes, nor can they direct adults not smoke around them. However, young children exposed to SHS have increased health risks that range from asthma to ear infections, breathing impairments (Lin et al., 2010; Pisinger et al., 2012), deficits in intellectual capacity, and behavioral problems (Pisinger et al., 2012, p. 2). Approximately one-third of children in the United States live in a household with a smoker (Hawkins & Berkman, 2011). Ortega et al. (2010) posited that SHS is the "leading cause of infant mortality in industrialized countries" (p. 2).

The risk of exposure to SHS is higher among children from low-income families (Jones et al., 2012; Leung et al., 2004; Moody-Thomas et al., 2014; Orton et al., 2014). Based on a review of the literature on the effects of exposure to SHS on young children and infants, the U.S. Surgeon General's Report (USDHHS, 2014), concluded that young

children are at greater risk for adverse health consequences. Previous studies have quantified levels of cotinine and other particulate matter in the home or in vehicles that transport children (Butz et al., 2011; Northcross et al, 2012), measured evidence of children's exposure to SHS through levels of urine or salivary cotinine (Butz et al., 2011; Kalkbrenner et al., 2010), or the disease burden of children exposed to SHS (Brunst et al., 2012). Children are exposed to SHS at home by parents who smoke around them (American Cancer Society, 2015; Kuntz & Lampert, 2016). However, few studies have attempted to explore the perspectives of parents and caregivers on how to protect children from exposure to SHS. I explored the perspectives of Head Start parents on children's exposure to SHS relative to the health of their children, as well as strategies that parents use at home to protect children from exposure to SHS.

Purpose of the Study

In this multiple case study research, I explored the perspectives of Head Start parents on children's exposure to SHS and intentional strategies that parents use to protect children from SHS in their homes. Understanding how parents perceive children's exposure to SHS might help Head Start parents to reduce or eliminate SHS in their homes.

Protective Measures

The only effective means of protecting children from exposure to SHS entails keeping them away from any source of tobacco smoke (U.S. Surgeon General's Report, 2014). Several childcare scenarios or living arrangements may prevent families from attaining this level of protection for their children. For example, the parents or other

cohabiting relatives or friends might be smokers, or a family may entrust the care of their children to unlicensed caregivers, including relatives and neighbors who are smokers. The family may also reside in an apartment complex where smoking is allowed, or live in an apartment or home previously occupied by a smoker. This type of residence may already have thirdhand smoke, which has been implicated in triggering asthma and other respiratory conditions in children (Swindle et al., 2015), even when current occupants do not engage in indoor smoking.

Strategies for Protecting Children From SHS Exposure

In previous studies, the following strategies were identified for protecting children from exposure to SHS (CDC, 2016):

1. Smoking outdoors.
2. Opening windows.
3. Smoking in another room.
4. Using a fan to blow out smoke.
5. Using air purifiers and air fresheners.
6. Using a fan to blow away the smoke.
7. Opening windows and doors to increase cross ventilation to clear the air.
8. Washing hands, using mouthwash.

Research Questions

To add to the understanding of how parents protect their children from exposure to SHS, I recruited parents from a Head Start program. Head Start programs are required to serve children whose family incomes are at or below the federal poverty level (FPL)

for their family size (Head Start Program Performance Standards, 2016). Low-income children are at high risk of exposure to SHS in their homes (CDC, 2016; Jones et al., 2012; Leung et al. 2004; Moody-Thomas et al., 2014; Orton et al., 2014). This study focused on parents of Head Start children because they meet the criteria for low-income families and because they have children younger than 5 years (Head Start Performance Standards, 2016). Children have higher vulnerability to the health effects of exposure to SHS (Hwang, Hwang, Moon, Lee, 2012; Rushton, Courage, & Green, 2003) due to their still-developing organ systems and rapid breathing (U.S. Surgeon General, 2014; Orton et al., 2014).

For this study, I addressed the following research questions:

RQ1 (Qualitative)

How do parents perceive children's exposure to SHS in their homes?

Subquestions

1. How do parents describe exposure to SHS in their home?
2. What are parent's perceived barriers to SHS free homes?
3. What are parents' beliefs about SHS exposure of their children inside their home?
4. How do parents feel about others in their environment smoking around children?

RQ2 (Qualitative)

What specific strategies are parents using to protect their children from SHS exposure?

Subquestions

1. How do parents of Head Start children describe their efforts toward protecting children from SHS inside their home?

2. Are there any motivations for using a specific method to protect children from exposure to SHS in favor of other methods?

3. Do parents consider specific methods of protecting children from exposure to be more effective than others?

Theoretical Framework

This study was grounded in three theoretical models: the social ecological model (SEM), the theory of reasoned action (TRA), and harm reduction (HR). In combination, these models addressed the power of a child's immediate environment in shaping his or her health outcomes, followed by the factors that influence behaviors that produce those outcomes. The models also provided a lens for evaluating actions that mitigate the health hazards of exposure to SHS. These theories were also useful for understanding and explaining the views of parents regarding children's exposure to SHS and the strategies that parents employ to safeguard children from SHS.

The Social Ecological Model

Bronfenbrenner (2005) pioneered the ecological model in the 1970s to fill a gap in developmental science which tended to focus on children's aberrant behavior. The author contextualized children's behavior in the early years on the basis of the influences of the immediate family. Bronfenbrenner noted that the developing child is socialized into a "progressively complex reciprocal interaction" within his or her environment, inclusive of "the persons, objects, and symbols" therein (p. 4). Bronfenbrenner termed the

confluence of developmental processes and environmental influences the “proximal process” because they set the stage for how an individual thrives within their environment and in the larger society (p. 4). Bronfenbrenner also argued that early in the life of a child, the “form, power, content, and direction” of enduring influences and conditions within a child’s larger environment interact to determine the specific developmental outcomes for a child.

Therefore, the SEM posits that behavior is influenced by a multiple of factors, and that the health of an individual is influenced by their personal attributes and is affected by a reciprocal relationship to their social group, their environment, and geopolitical forces (McLeroy, Bibeau, Steckler & Glanz, 1988, p. 355). In addition, the social-ecological model recognizes how biological, environmental, social groups, and policy issues influence behavioral and health outcomes on an individual level. Unlike the medical model, the SEM acknowledges that the dynamic of each social group can interact to foster or hamper health outcomes for individuals within a social group. This model is composed of five levels, each representing a contributing factor in the health of an individual, and it is useful for studying health behavior on the basis of its social antecedents as well as developing interventions for changing health behaviors (McLeroy et al., 1988, p. 357). The following levels are based on the work of McLeroy et al. (1988, p. 355).

Intrapersonal. On the intrapersonal level, a person's characteristics, such as knowledge, attitudes, behavior, self-efficacy, developmental history all interact with forces outside of the individual to influence health outcomes. According to Mangrio,

Hansen, Lindström, Köhler, and Rosvall (2011), "It is widely acknowledged that the social position of the family is closely related to the health risks that small children are exposed to, and so the environment in which children grow up is closely associated with their health" (p. 2).

Thus, familial relationships and close friendships such as exists between mother and child, and family and neighbor may further expose children to SHS. In fact, if the adults in the relationship smoke around children and if smoking around children is considered an acceptable norm, then this will also act to increase the risk of exposure to SHS for children.

Interpersonal processes and primary groups. These include formal and informal social network and social support systems, including family, work group, and friendship networks (McLeroy, et al., 1988). Relative to smoking behavior, these networks can influence children's exposure to SHS. Individuals who belong to what Shaw et al. (2012) has termed a *smoking island* have a core of impoverished support system and social network, which views smoking as an acceptable pastime (p. 38). The implication is that a group's normative practices and activities may supplant any health messages related to smoking and children's exposure to SHS.

Institutional factors. These include social institutions and organizational characteristics, and formal rules and regulations for operations (McLeroy et al, 1988). This level refers to an individual's relationship with the work or school environment, and in this case, policies banning smoking on Head Start campuses. Included are Head Start

staff who intervene to provide referrals to families to address concerns about the health of a child.

Community factors. These include relationships among organizations, institutions, and formal networks with defined boundaries. These could include retail operations where cigarettes are sold, parks, playgrounds, and activities that are considered acceptable in these locations. If smoking is allowed while children are on the playground, then that raises the possibility that children can be exposed to SHS.

Public policy. At the local, state, and national levels, laws and public policies are intended to address the general welfare of the populace. McLeroy et al. (1988) stipulated that community variously defined as *mediating structures*, which include close personal relationships with family and friends and the relationship among organizations and groups; a specified geopolitical boundary has "differing implications for the development and implementation of health promotion interventions" (p. 363).

Theory of Reasoned Action

The TRA as propounded by Fishbein and Ajzen (1975) served to explain the smoking behavior of parents, the intentionality of actions taken to protect children from SHS exposure, the perceived competence of parents in managing the risks associated with SHS exposure, and how reasoned action guides their intent. The TRA focuses on three important aspects of an individual's belief system that drive behavior: (a) A person's beliefs which influence attitude toward the health problem and consequent behavior, (b) subjective norms in the form of social pressure from others within their social group, and (c) control beliefs which are tied to the self-efficacy and how the

individual feels they are able to control the behavior (Ajzen & Fishbein, 2008). The intentionality with which parents act to protect their children from exposure to SHS may be tied to their attitudes toward smoking, quitting smoking, how the people in their social group view smoking, and the individual's perceived ability to control SHS around their children.

Harm Reduction

Proponents of harm reduction believe that when a behavior poses risk to a person or others around them, the behavior can either be reduced or extinguished to mitigate harm toward self or others. With regards to smoking, when a smoker is unwilling or unable to quit, harm reduction is the only available option for protecting children. As stated by Leung, et al. (2004), only three out of 10 smokers who attempt to quit smoking do so successfully despite available aids to support quitting and "psychobehavioral interventions" (p.688). Wamboldt et al. (2008) found that banning indoor smoking reduced the number of cigarettes smoked, but did not completely eliminate children's exposure to SHS. Evidence presented in the Surgeon General's Report (2006, 2014) concluded that no amount of exposure to SHS is safe. Similarly, a prospective study to examine the effects of SHS on the health of infants whose parents used harm reduction measures to reduce their exposure to SHS found that hospital admissions were higher for infants whose parents smoked "with poor smoking hygiene" by an odds ratio of 1.28 compared to those with better "smoking hygiene" with an odds ratio of 1.00 at 95% confidence interval (Leung et al., 2004, p.687). Good smoking hygiene requires smoking away from a child's immediate environment while poor smoking hygiene refers to

smoking from a distance of at least 3 meters proximal to the child (p.687). This research examined these theories as applied to parents' perception of SHS exposure relative to the health of the children, their relationships with their familial and social groups, and how these translate to behaviors and practices that help or hinder children's exposure to SHS.

Nature of the Study

This study used qualitative methods, specifically the multiple case study to explore the views of Head Start parents and the strategies they utilize at home to safeguard children from exposure to SHS. I chose the multiple case study design because it allows for obtaining data from multiple cases and data sources to gain insight into a specific problem (Creswell, 2007, 2009). The qualitative approach helped to discover how parents attempt to mitigate harm by exploring strategies used to reduce children's exposure to SHS, which is a primary focus of this dissertation. This study also used the social-ecological model to understand and explain how parents perceive SHS exposure, and parents' protective health behaviors. Additionally, the theory of reasoned action was useful for explaining how parental beliefs either facilitates the exposure of children to SHS or helps to protect children from exposure to SHS. To understand how parents protect children from SHS is congruent with the concept of harm reduction which was useful for understanding the actions of parents toward maximizing opportunities to protect children from SHS exposure. Currently, evidence suggests that parents lack the confidence to implement smoke-free households which reduces the amount of cotinine exposure of children (Mills et al., 2012).

Participants consisted of 15 parents of Head Start children recruited from 4 of 13 program locations in the Northwest of Houston, Texas. Each participant was the parent or legal guardian of a currently enrolled Head Start child ages 3 to 5 years old. The inclusion of a parent in the study was based on a positive response to the question: Do you or anyone in your household smoke cigarettes? Parents who agreed to participate in the study were recruited and were included in the study. The Head Start campus and the participants were selected using purposive sampling.

Definitions

The following definitions are intended to disambiguate words or clauses used in this study and promote uniform understanding:

Biomarkers: Biomarkers or biological markers are "objective indications of medical state observed from outside the patient – which can be measured accurately and reproducibly" (Strimbu & Tavel, 2010), for example, amount of hair or salivary cotinine.

Carcinogen: Substances that can trigger cellular changes in the DNA and potentially cause cancer (American Cancer Society, 2015).

Cotinine: Cotinine is a metabolite of nicotine (Hwang et al., 2012). The Centers for Disease Control and Prevention (2013) defines cotinine as a product of nicotine found in the body of people exposed to SHS or other tobacco product.

Secondhand smoke (SHS): Exposure to SHS is the involuntary inhalation of smoke from the burning cigarette—side stream and expelled smoke from a smoker (Orton et al., 2014; CDC, 2014).

Thirdhand smoke (THS): THS exposure entails contact with deposits from cigarette smoke that have settled on indoor surfaces including furniture, walls, carpeting, and clothing (Ciaccio & Gentile 2013; Martins-Green et al, 2014; Winnikoff, Friebely, Tanski, Sherrod, Hovell, & McMillen, 2009).

Risk Factors: Specific determinants of health or disease. Some risk factors can be modified and others cannot. Modifiable risk refers to actions or behaviors that can be changed, eliminated, or modified to prevent illness. For example, quitting smoking to reduce the risk of children's exposure to SHS and its associated health problems is one way of attenuating the risk of exposure to SHS.

Harm Reduction: Action(s) taken to mitigate, change, or decrease the harm associated with exposure to any harmful substance which does not present the threat of imminent danger, but for which long-term consequences are not desirable (Canadian Paediatric Association, 2010).

Protective Behavior: In the context of this research, protective behavior includes all behaviors intended to separate children from the source of SHS to reduce children's exposure to SHS.

Intentionality—According to Siewert (2006) "Intentionality is the *aboutness* or *directedness* or *reference* of mind (or states of mind) to things, objects, states of affairs, events." For the purpose of this study, intentionality refers to thoughtful, deliberate actions taken to prevent the exposure of children to SHS prior to lighting a cigarette, or when a parent encounters someone who is smoking in the presence of their children.

Assumptions

It was assumed that participants would provide honest answers to the questions related to their children's exposure to SHS, as this will enhance understanding of their perspective on protecting children from exposure to SHS. It was also assumed that parents are inherently protective of their children's well-being, and thus will be willing to cooperate with a researcher if they believe that their participation will be beneficial to their children. Additionally, it was assumed that parents would be willing to discuss their perceptions in furtherance of understanding how to protect children from SHS exposure. Also, I assumed that the parents would be amenable to sharing their perceptions since they were fully informed of their rights to anonymity, respect, and the choice to terminate and/or withdraw their consent to participate in this study.

Scope

This study focused on the perspectives of Head Start parents on children's exposure to SHS and intentional strategies used by parents to protect children from SHS. The participants were drawn from four of 13 Head Start sites located in Houston, Texas. Although a plethora of information exists on children's exposure to SHS, these studies have focused largely on collecting data on the levels of exposure.

Delimitations

In line with the purpose of this study which was to explore how Head Start parents protect their children from exposure to SHS, only parents of Head Start children that self-identify as smokers or reside with a smoker or smokers could participate in this study. For the purpose of this study, a Head Start parent was defined as the parent or

guardian on record with the Head Start agency. Participation in the study was open to mothers, fathers, or both parents, and court-appointed guardians. Each participant was interviewed separately. This research was focused on the strategies used by Head Start parents in Houston, a large metropolitan area, to protect their children from exposure to SHS within their home environment. I conducted the study during the spring of 2016-2017 Head Start program year.

Limitations of the Study

The results of this study may not be generalizable to other populations due to the specific questions addressed by the study and the sample size. Generalizations to other Head Start participants or persons of low socioeconomic status will require a large-scale study using additional metrics such as age, gender, ethnicity, educational attainments and other factors known to impact health behavior. The results obtained from this study reflect the responses given by 15 low-income Head Start parents who participated in this study, and should be applied with caution as their perceptions may not be shared by Head Start parents in other regions of the country. Also, the results obtained from this research may only be useful in explaining the protective behaviors of Head Start parents in the Head Start campuses from which participants were recruited.

Significance of the Study

This study highlighted the need to focus more effort on research that reduces the exposure of young children to SHS. Data obtained from this research is intended to increase understanding of child exposure to SHS and strategies used by parents to prevent children's exposure to SHS at home. It is anticipated that insight from this data will also

help Head Start providers in developing training programs that will improve the air quality for children by eliminating children's exposure to SHS at home and supporting children's healthy development. One of the primary goals of Head Start is to promote the overall health and development of children and their caregivers through education (Head Start Performance Standards, 2016).

In addition, it is important to focus more effort on research that reduces the exposure of young children to SHS. As suggested by LaVoie et al. (2015), successful smoking interventions should account for the perspectives of the target population in its design. Otherwise, resources may be wasted on interventions to which these groups cannot relate. SHS is a byproduct of lifestyle choices of parents and caregivers (American Cancer Society, 2015). As postulated by Shaw et al. (2012) due to stigmatization, the home is becoming the only place where smokers can exercise their freedom to smoke (para 3). By the same token, Graham cited by Bobak et al. (2000), also noted that smoking was probably one of the few things that a poor person can do of their own volition (Bobak et al., 2000). Also, eliminating smoking indoors may help improve children's healthy development and reduce the risk of morbidity and mortality associated with exposure to SHS (Lopez, Collishaw, & Piha, 1994).

By answering the research questions, I sought to engender more discourse on the smoking behavior of parents and any intentional actions taken by parents to protect their children from exposure to SHS. This may increase understanding of how parents perceive exposure to SHS with regard to the health of their children, and provide more useful knowledge on how to develop future intervention programs aimed at eliminating SHS.

Prevention of exposure to second-hand smoke is an important public health goal, and eliminating children's exposure to SHS in their homes is necessary for preventing immediate as well as long-term health consequences (Max et al., 2012). Failed prevention efforts indicate that a different approach is necessary.

Social Change Implication

Prevention of second-hand smoke exposure is an important public health goal. Because children come in contact with SHS in different ways, identifying how parents view children's exposure to SHS and how they protect children from exposure may help to increase understanding of children's exposure; and inform the focus of future intervention efforts with parents to reduce exposure. In addition, the Office of Head Start might also use information obtained from this study to expand its parent and community engagement policies to educate Head Start parents on how to protect children from exposure to SHS.

Summary of Chapter 1

SHS exposure poses a serious threat to the health of young children. Despite clear indications that SHS is responsible for many childhood illnesses and premature death in the pediatric population, the prevalence of smoking, especially among the poor, remains high. Regulations designed to preserve the rights of nonsmokers have helped to decrease exposure to SHS in many public venues. However, the same policies may stigmatize smoking by making indoor smoking the favored choice for many smokers. Evidence indicates that most children are exposed to SHS inside their homes or vehicles. Research has also shown that levels of the biomarker, cotinine are highest for children whose

parents smoke, apartment dwellers, and low-income families. Children from low-income families who are on the steep end of the socioeconomic gradient continue to bear the highest burden of exposure to SHS (Orton et al., 2014). The information provided in this chapter established that children from low-income families continue to be exposed to SHS at home and that more attention needs to be directed toward research on how parents view children's exposure to SHS, and how to protect children from the health risks associated with SHS. Hence, I designed this study to add to the knowledge. In chapter 2, I presented further evidence in support of the research and discussed literature review strategies and the theoretical framework for the study.

Chapter 2: Literature Review

Introduction

SHS exposure is a preventable health hazard (Pisinger et al., 2012; Rosen, Noach, Winickoff, & Hovell, 2012; World Health Organization [WHO], 2017). Children exposed to SHS are at increased risk of respiratory problems, asthma, sudden infant death syndrome (SIDS), asthma flare-ups, frequent hospital emergency room visits, and other health issues (USDHHS, 2014). However, the WHO (2017) estimated that 890,000 premature deaths occur each year as a result of exposure to SHS with children accounting for 28% of these deaths in 2004. In the United States, 40% of children reside in homes where they are exposed to SHS (USDHHS, 2014). Previous studies have assessed the levels of biomarkers in the blood (Butz et al., 2011) or used a combination of biomarker testing and "self-reports" (Max et al., 2012) to assess children's exposure to SHS and disease burden (Brunst et al., 2012). However, few studies have attempted to explore the perspectives of parents and caregivers on how to protect children from SHS exposure. I attempted to fill that gap by exploring the perspectives of parents of Head Start children on intentional strategies that parents use at home to protect children from SHS exposure. I designed this study with the specific objectives of exploring (a) the parents' perceptions of children's exposure to SHS, and (b) the measures used by Head Start parents to protect children from exposure to SHS.

In this chapter, I addressed current evidence on children's exposure to SHS with a specific focus on factors that influence the exposure of children to SHS, especially preschool children aged 3 to 5 years or younger. This review of literature also spanned

the mortality and morbidity, specifically of illnesses attributable to SHS exposure, smoking behavior of caregivers, and the role of caregivers in preventing the exposure of children to SHS. In addition, I reviewed current preventive efforts by caregivers/parents and pediatricians in preventing children's exposure to SHS.

I present a literature review strategy to aid future retrieval of articles associated with this study. I used keyword searches that were relevant to the research questions to retrieve related articles on Walden University's online library, local libraries, and the worldwide web. The focused search included the following keywords: *children and SHS exposure*, *SHS exposure and preschool children*, *SHS exposure and Head Start children*, *SHS exposure of preschoolers*, and *SHS and poverty*. These served to identify articles related to young children and exposure to SHS. Information obtained from the review elucidated the effect of the continued exposure of children to SHS, and the trajectory of current studies and interventions which, may contribute to shaping future conversations and interventions on children's exposure to SHS.

Four important clarifications are necessary for understanding the focus and target population for the study: First, Head Start children range in age between 3 to 5 years. Second, *caregiver* refers to both parents, legal guardians, and other relatives or friends who care for the child in their home or the home of the child's home. Third, it is helpful to distinguish between the study population and parents whose children attend paid child development centers, public school pre-kindergarten, and those that attend childcare centers sponsored through child welfare back to work programs. Head Start serves children whose family incomes are at or below the federal poverty level (FPL) for their

family size (Head Start Program Performance Standards, 2016). Unlike parents whose children attend other child development programs, Head Start parents play an important role in a tripartite governance of Head Start agencies as mandated by law (Head Start Program Performance Standards, 2016). Head Start parents are the only group with the privilege to act as important decision-makers in the care and education of their children, beyond the parent-teacher conferences afforded parents in public schools and other child development settings. In addition, Head Start programs are required to follow a comprehensive child development plan individualized to the child and family to prepare children for entry into kindergarten. Federal regulations mandate that Head Start programs collaborate with parents to address children's health and safety needs (Head Start Performance Standards, 2016). With this unique offering comes a variety of opportunities for parents to engage with staff in activities geared toward preparing their children for kindergarten and improving their health.

Literature Search Strategy

I conducted the research for this study using Walden University's online library, including, EBSCO, CINAHL Plus, ProQuest Central/Dissertations, Thoreau Multi-databases, and Academic Search Complete. I also conducted additional searches through PubMed Central, Google Scholar, Directory of Open Access Journals (DOAJ), and various reputable peer-reviewed online journals, including Thorax, CHEST, Circulation, Tobacco Control, and Pediatrics. For this review, I only selected literature relevant to smoking indoors and the exposure of children to SHS. Additional selections included articles that helped shed more light on children's exposure to SHS, especially among

low-income families. I only reviewed articles published in English since 2006. Two articles were related to parents' attitudes toward protecting children from SHS.

Theoretical Framework for the Study

The undergirding framework of the SEM recognizes that personal attributes, reciprocal relationship to a social group, the environment, and geopolitical forces work in concert to exert a positive or negative influence on health outcomes through behavioral contingencies (McLeroy et al., 1988, p. 356). Smoking behavior is one such behavior that is influenced by permissibility in social circles and one's innate ability to resist peer pressure to smoke (Pampel, 2005). Succumbing to social pressure to smoke exposes others to SHS.

In addition, the supporting TRA expounds on the smoking behavior of parents, the intentionality of actions taken to protect children from SHS exposure, and the perceived competence of parents in managing the risks associated with exposure. However, to understand harm as a concept, I relied on Mill's Harm Principle (2004) to shed some light on what constitutes harm with regards to polity, legal, and moral arguments on the rights of caregivers to smoke in their own home.

Finally, I grounded the study in harm reduction, which posits that reducing or eliminating harm in one's environment without necessarily extinguishing a harmful behavior can help reduce harm to oneself or others (Canadian Pediatric Society, 2008). This theoretical framework addresses how to reduce the harm caused by the use of addictive, recreational substances when the chance for abstinence is limited. In the context of harm reduction, SHS exposure of children is not an independent phenomenon;

it is the direct result of the smoking behavior of others around the children. Hovell and Hughes (2009) asserted that smoking and its health consequences, including exposure to SHS, are byproducts of behavior that is reinforced by a complexity of physical, social, and financial contingencies, which may include relief from nicotine withdrawal, helping one another light a cigarette, buying someone a drink, or establishing sexual relationships down the line. Others have advanced equally powerful negative contingencies such as low socioeconomic status and lack of knowledge about health consequences as catalysts to smoking and exposure to SHS (Orton et al., 2014). These contingencies reinforce and sustain the smoking behavior or attract others to engage in the smoking behavior, but policies such as those that ban smoking in public places could change the way people view smoking and may help extinguish the behavior (Kuntz & Lampert, 2016, p. 2).

Previous considerations for safeguarding the rights of others have been in the form of legislation banning smoking in public buildings and workplaces; and as of December 2010, 26 states have adopted laws to limit non-smokers' exposure to SHS (CDC, 2011). Worldwide, 109 countries have also implemented laws banning smoking in public places by 2012 (Orton et al., 2014). Specific laws protecting children have been circumspect in avoiding the violations of individual rights to exercise their freedom of choice in their homes. Therefore, only suggestions and guidelines for avoiding children's exposure to SHS are available to parents and caregivers (Centers for Disease Control and Prevention, 2014). However, Guindon and Boisclair (2003) and the WHO (2017) suggested that the most effective way to curb the use of tobacco is to increase taxes which will in turn force poor people and younger people who are equally poor to quit

smoking. Few studies have attempted to explore parents' and caregiver perspectives on how to protect children from SHS exposure.

Review of Literature

SHS exposure is a well-known public health issue whose ill effects are widely documented in the seminal literature. Researchers have noted that the incidence of smoking has continued to fall since the first Surgeon General's report in 1964 (Ciaccio and Gentile, 2013**,** USDHHS, 2014). Ciaccio and Gentile, (2013) and Homa et al., (2015, p.1), reported that even with over 50% decline in exposure to SHS during 2011-2012, approximately 58 million people in the United States, including 15.1million children aged 3-11 years continue to be exposed to SHS (Homa et al., 2015 p.103). Worldwide, the number of children exposed to SHS stands at 40% (Rosen et al., 2014) and domestically, an estimated 33% of children are exposed to SHS in their homes (Hawkins, Chandra, & Berkman, 2012). As noted by Homa et al. (2012), the risk is even greater for low-income children ages 3 to11, with non-Hispanic black children bearing the highest risk of exposure to SHS at 67.9%, compared to non-Hispanic whites at 37.2% risk of exposure, and Hispanic children at 29% (Homa et al, 2015, p. 105).

SHS is composed of a mixture of a smoker's exhaled smoke and smoke from burning cigarette (Hwang, et al., 2012; Ortega, et al., 2010). This mixture contains over 4,000 chemicals; 43 of which are considered carcinogens (American Academy of Otolaryngology-Head and Neck Surgery, 2010; USDHHS, 2014). Current evidence is inconclusive on the amount of exposure necessary to induce health problems in children (Wilkinson, Arheart, & Lee, 2005). As noted by Pawson, Wong, and Owen (2011), eating

certain foods, such as potatoes or tomatoes may temporarily increase cotinine levels. However, researchers agree that no amount of exposure to SHS is safe (Pawson, Wong, & Owen, 2011, USDHHS, 2014).

Although inroads have been made in understanding how exposure to SHS affects the health of children (USDHHS, 2014), the literature on parent's perception of children's exposure to SHS and intentional efforts of parents to prevent exposure among children aged 0-5 years is limited.

As stated by Pisinger et al. (2012), a clearer understanding of specific locations where household members smoke at home and the number of persons that smoke in a home is needed (p.6). Similarly, Zaloudikova, Hruba, and Samara (2012) identified "parental concern about smoking prevention" (p. 43) as deserving of further investigation. Orton et al., (2014) concluded that current evidence is inconclusive as to the efficacy of existing interventions, and as such, future studies need to consider the "context in which smokers live and smokers' environment" (p.3). LaVoie et al., (2015) have also concluded that more parental involvement in the research of issues related to their children's health is needed because parents understand the needs of their children more than anyone else.

Although a limited number of studies have addressed the problem of children's exposure to SHS at home, most of the studies have quantified levels of cotinine and other particulate matter in the home or in vehicles that transport children (Butz et al., 2011; Hwang et al., 2012; Mills et al., 2012; Northcross et al, 2012; Wilson et al., 2013) or have focused on determining evidence of children's exposure to SHS through levels of urine or

salivary cotinine (Butz et al. 2011), or the disease burden of children exposed to SHS (Brunst et al., 2012). As observed by Zaloudikova et al., (2012) most studies regarding children's exposure to SHS have focused on children in middle or high school. Orton et al. (2014) found similar results in their analysis of predictors of children's exposure to SHS. Protecting children from exposure in the home environment is essential for preserving the health of children, but the evidence on intentional strategies employed by parents of Head Start children to protect their children from SHS is sparse.

Sociocultural Determinants of SHS Exposure

Smoking has long been glamorized in movies. The CDC (2014), observed that in 2014 movies directed at youth had the highest incidences of smoking since 2002, and PG 13 movies made between 2010 and 2014 have maintained almost the same level of smoking or showed actors using other forms of tobacco (CDC, 2014). It has been over 50 years since the U.S. Surgeon General's first report that warned that smoking causes serious health problems (USDHHS, 2006). Since then, the federal government, states, and other local jurisdictions have enacted laws to protect nonsmokers from exposure to SHS thereby reducing the number of places where smoking is accepted and providing many options for supporting those who want to give up smoking (CDC, 2014). Despite all these developments, many individuals continue to smoke.

Determinants of children's exposure to SHS include socio-demographic factors such as education, employment, income, lifestyle, race, and ethnicity. As observed by Skeer, George, and Siegel (2004), 4 states and 950 cities have enacted laws and policies establishing smoke-free zones or preventing smoking in restaurants. However, these laws

may be creating the opposite effect of increasing health disparities among lower income groups. Skeer et al. (2004) noted that these health disparities may be increasing partly because wealthier and better-educated towns have proven to be more successful in enacting and enforcing smoke-free legislation, despite a lack of uniform legislation governing smoke-free laws in the U.S. Further, there are cultural differences in smoking behavior (Shiva & Padyab, 2008). Whereas adults can immediately remove themselves from SHS exposure, children often have to stay with the adult smoker because they are family members or caregivers (Levy, Rigotti, & Winickoff, 2011; Shaw et al., 2012). Hwang et al. (2012), cited several disadvantages that place children at increased risk of harm from SHS, including a) Compared to adults, children have higher respiratory rates and consume more food and drinks than adults relative to their size, b) due to their smaller size, children stay close to the ground where they are exposed to more toxins, c) a child's immune system is still developing, and d) children spend time sitting close to their parents or adult caregivers (p.36). However, even when caregivers understand the dangers of exposing children to SHS, Robinson and Kirkcaldy (2007) found that parents preferred to blame their children's health problems on 'genetics' and 'pollution.' In contrast, Wilson et al., (2013), showed that mothers were motivated to protect their children from exposure to SHS when they became aware of the harm associated with exposure to SHS.

Socioeconomic Status and the Exposure of Children to SHS

Children, especially those from low socioeconomic backgrounds continue to be exposed to SHS in their homes (Hwang et al., 2012; Levy et al., 2011). A disparity exists

in children's exposure to SHS and this is manifested in higher rates of children's exposure to SHS and higher disease burden among those in the lowest rungs of the socioeconomic strata (Ortega et al., 2010; Pisinger et al., 2012). In fact, the Centers for Disease Control and Prevention (CDC, 2010) found that during 2007-2008, exposure to SHS as measured by levels of "serum cotinine" declined from 52.5% to 40.1%. However, during the four-year period from 1999-2002, when the greatest declines were observed; the prevalence of exposure to SHS remained highest among low-income non-Hispanic blacks and low-income children ages 3-11 years and 12-19 years (CDC, 2010). This argument was buttressed by Max et al. (2012) who stated that blacks and Hispanics had higher exposure rates and associated disease burdens (Max et al., 2012). In addition, Bobak et al. (2000) asserted that poor people consume more tobacco products and are also more at risk for diseases associated with SHS exposure. Similarly, Pampel, Kruger, and Denny (2010) observed that low socioeconomic status (SES) groups tended to engage in unhealthy behavior such as smoking regardless of cost, and not health promoting behavior such as walking, which has little-associated cost.

Health Consequences of SHS Exposure of Children

SHS exposure poses serious health threats to nonsmokers (Hwang et al., 2012; Kuntz & Lampert, 2016; Orton et al., 2014). Exposure to SHS causes illnesses and premature death (USDHHS, 2014). Also, exposure to SHS cost 10.9 million DALYs lost in 2004 with children bearing 61% of the disease burden through "lower respiratory infections" (Öberg, Jaakkola, Woodward, Peruga, Prüss-Ustün, 2010 p.1& 5). In 2004,

approximately 40% of children lived in households where they were exposed to SHS (Öberg et al., 2010).

Evidence shows that the children whose parents or caregivers smoke are at higher risk of exposure to SHS and its associated health consequences (Rosen et al., 2014, Kalkbrenner et al., 2010; Orton, et al., 2014). Öberg, Jaakkola, Woodward, Peruga, and PrüssUstün (2011), estimated that SHS exposure accounts for an estimated 603,000 deaths and 28% of those affected worldwide are children. In the US, 776 infants died from maternal exposure to SHS in utero during 2006-2010 (Max et al., 2012). Mills et al. (2014) conducted a study that examined factors influencing exposure to SHs among Scottish children aged 1-5 years and found that children whose parents, especially mothers, smoked were at considerably high risk of exposure. Other studies support this assertion (Jones et al., 2012; Leung et al. 2004; Moody-Thomas et al., 2014; Orton et al., 2014). In a systematic review, Cook and Strachan (1999) concluded that the odds ratio of children exposed to SHS experiencing respiratory illnesses and symptoms of middle ear disease were between 1.2-1.6 with preschool aged children at the highest risk. Similarly, the U.S. Surgeon General's Report (USDHHS, 2014), asserted that exposure to SHS adversely affected the respiratory health of children.

Risk Factors Associated with SHS Exposure

Asthma

Asthma is a respiratory illness which causes coughing, wheezing, shortness of breath, and chest pain (CDC, 2016). Although asthma is not directly caused by exposure to SHS (USDHHS, 2014), evidence shows that exposure to SHS can exacerbate the

symptoms of asthma (Kit et al., 2013). Children whose parents smoke have a higher risk of upper respiratory illness, including asthma flare ups (USDHHS, 2014). In a cross-sectional study using National Health and Nutrition Survey (NHANES) data for youth aged 4 to 19 years, Kit et al., (2013) found that 1 in 6 youth with asthma continue to be exposed to SHS at home despite a continued decline in the incidence of smoking (Kit et al., 2013; USDHHS, 2014).

Inner Ear Infections

Moreno, Furtner, and Rivara (2012) in their advice to parents who want to quit smoking reported that 292,950 children have ear infections each year; and any family member who smokes "raised the risk of ear infections for their children" (para. 4). Ninety percent of children will experience inner ear infections before the age of 6 months and 4 years. However, Moreno et al. (2012) asserted that frequent ear infections, defined as three or more in the past year, were a result of children's exposure to parental smoking.

Behavioral Problems

Other Health issues for children include behavioral problems. In a cross-sectional survey aimed at examining the potential association between confirmed exposure to SHS and specific mental health disorders among children and youth, Bandiera et al. (2011), found that children exposed to SHS showed symptoms of major depressive disorder, generalized anxiety disorder, attention deficit and hyperactivity disorder, and conduct disorder (p.5).

Cardiovascular Disease & Other Health Effects

In conducting a systematic review of cardiovascular disease in children, Metsios, Flouris, Angioi, and Koutedakis (2011) found conclusive evidence for deteriorating lipid profiles and vascular function in children exposed to SHS. In a recent study, Joehanes et al. (2016) examined the long term effects of smoking on 16 cohorts of 2433 current smokers, 6518 formers smokers, and 6956 never smokers, and found that smoking causes epigenetic change by methylation – chemical changes in gene functions that do not necessarily lead to changes in DNA sequence. The researchers also noted that most of the changes disappeared after 5 years of quitting smoking, but some of the changes persisted for 30 or more years and could serve as sensitive biomarkers for lifetime exposure to SHS. Separating children from sources of exposure to SHS is necessary to reduce harm to their developing bodies (Joehanes et al., 2016).

Social Modeling

Lessov-Schlaggar et al. (2011) concluded that exposure to SHS at home increases children's susceptibility to adopting smoking later in life; a stance shared by others (Kuntz & Lampert, 2016; Shiva & Padyab, 2008; Zaloudikova et al., 2012). As stated by Faletau, Glover, Nosa, and Pienaar (2013), a child's future health behavior will be predicated on the examples that are currently being set by parents. Moreover, the CDC stated that over 80% of adult smokers tried their first cigarette prior to the reaching the age of 18 years (p.1139). Not only did blacks retain higher levels of cotinine in their body, they also tended to smoke more cigarettes (Faletau et al., 2013).

Lung Disease

The U.S. Surgeon General's report (CDC, 2014), showed that exposure to SHS stalls the normal growth of the lungs in children and increases the incidence of severe asthma attacks. Stocks and Dezateaux cited by Hwang et al., (2012) conducted a review of literature related to children's lung health and found that children exposed to parental SHS "demonstrated a reduction in forced expiratory flows" (p. 36). Through a review of literature, Stead and Lancaster (2007) found that reducing the number of cigarettes smoked and smoking less toxic alternatives helped improve quit rates among smokers; however, they did not find any conclusive evidence that reducing the number of cigarettes smoked or switching to less toxic alternatives had any long-term health benefits for smokers and those exposed to SHS. Additionally, the best protection from smoking related illnesses is abstinence from smoking (CDC, 2014).

SHS at Home

Preventing exposure to SHS at home is a difficult task. Researchers have suggested that voluntary smoking bans at home and in cars will protect children from exposure to SHS (CDC, 2014; Homa et al., 2015; Orton et al., 2014). In a Swedish study, Zaloudikova et al. (2012), interviewed 766 children ages 6 to11 years old to determine their level of exposure to SHS in their homes. These authors found that parents' educational attainment and type of family composition significantly affected-children's exposure to SHS, especially for children whose mothers or step-mothers had low educational status (p.40). In addition, the authors noted that only 36.3% of the children dared to ask adults not to smoke near them, but adults granted their requests only 17% of

the time (p.40). Biological evidence of exposure to SHS is higher for children whose parents are smokers (Johansson, Hermansson, & Ludvigsson, (2004). Even so, Mills et al. (2012) compared levels of air impurities with parental reports of children's exposure to SHS in their homes and found that in contrast with cotinine levels, exposure to SHS was under reported by parents (Mills et al., 2012). Max et al. (2012) drew similar conclusions from their study of economic implications of exposure to SHS. However, using a combination of parent questionnaires and the analysis of cotinine levels in the urine of children 2.5 to 3 years old, Johansson, Hermanson, Ludvigsson (2004) found that smoking outside with the doors closed was the best available method but not necessarily the most effective in protecting children from SHS exposure.

According to Ciaccio and Gentile (2013), researchers investigated the effects of smoking outdoors versus indoors and found that smoking outdoors did not completely alleviate problems presented by exposure to SHS when children's symptoms persisted despite a disruption from indoor smoking. National Academies Press (2007) reported that children have a higher likelihood of exposure to SHS at home due to the amount of time they spend at home. In addition, Levy et al. (2011) asserted that "the impact of exposure to SHS is concentrated" among the population of low-income since these children are the most likely to reside with a smoker (p. 1). Bobak et al. (2000) found that poor people smoke more, and compared to whites, blacks tend to retain higher levels of the serum cotinine—the chemical metabolite that shows how much nicotine the body has absorbed, and how it influences disease.

Although some researchers have argued that legislation banning smoking in public places has been responsible for driving smokers indoors, others have ascribed this act to self-sustaining social and cultural contingencies which continue to support indoor smoking (Hovell & Hughes, 2009). Based on a review of available evidence, the U.S. Surgeon General concluded that there is no safe level of exposure to SHS (CDC, 2006; Wilson, Klein, Blumkin, Gottlieb, & Winickoff, 2010). From the foregoing, any level of exposure to SHS has short or long-term implications for lung and heart health. It appears that many obstacles interfere with establishing a smoke-free environment. First and foremost are the rights of the individual smoker versus the rights of non-smokers, and more specifically, the rights of children; and secondarily, the continued exposure of children to SHS despite available smoking cessation and other available interventions.

Thirdhand smoke refers to remnants of SHS left on surfaces inside a home or other enclosed structures where people smoke or used to smoke (Ciaccio & Gentile, 2013, p.2). It appears that long after a smoker vacates an apartment, remnants of SHS that settled on surfaces throughout the unit continues to affect the health of new tenants. Thirdhand smoke presents additional exposure issues, especially in multi-units where smoking is permissible (Ciaccio & Gentile 2013; Martins-Green et al., 2014; Winnikoff, Friebely, Tanski, Sherrod, Hovell, & McMillen, 2009).

Financial Burden of Children's Exposure to SHS

SHS exposure imposes serious health and financial consequences on the economy. Globally, an estimated 40% of children are exposed to SHS; and in 2004, there were 603,000 premature deaths attributable to SHS exposure, 28% of whom were

children (Öberg et al 2010, p. 5). According to the CDC, despite the decrease in smoking, an estimated 88 million people in the US are exposed to SHS. Of those, 54% are children between the ages of 3-11 years (CDC 2017). Domestically, the cost of treatment for SHS related illnesses between 2000 and 2012 was $133 billion, and the amount rose to $289 billion when lost productivity was taken into account (American Cancer Society, 2015) this number has since risen to $300 billion dollars, according to the (CDC, 2017). Based on the number deaths from exposure to SHS, the U.S. incurs 600,000 years of potential life lost and $6.6 billion in lost productivity annually (Shi, Sung, & Shi, 2011, p. 2176). This number remains unchanged in 2015 (CDC, 2017). In a U.S. study involving children who lived with adult smokers, Levy et al., (2011) found that although children with Medicaid expenditures had almost twice the likelihood of living with a smoker, the overall amount spent on their health care visits was not significantly higher than for children living with non-smokers. However, when explored by emergency room visits, and prescription drug expenditures, the results were statistically significant for children living with smokers (p.4).

Evidence suggests that a dissonance exists between the uptake of available health information and the continued smoking epidemic (Lopez et al., 1994), especially among people of low socioeconomic status. Each year in the U.S., an estimated 443, 000 people die from tobacco related illnesses while medical expenses for illnesses related to exposure to SHS and lost productivity top $193 billion annually (USDHHS, 2014). On an individual level, a smoker spends about $1,640.00 to $3,810.00 a year on a “pack a day habit” (Tobaccofreekids.org, 2017, para. 1), thereby, reducing the disposable assets

available to the family by up to 10% (WHO, 2017). Also, medical emergency room visits and time spent tending to a sick child may affect the family's income. The Surgeon General's Report of 2006 (cited in USDHHS, 2014) stated that 60% or 22 million U.S. children ages 3-11 years were still being exposed to SHS at home (CDC, 2014).

Summary

In this chapter, I provided a detailed review of current literature pertaining to children's exposure to SHS. I also offered information on the literature search. In addition, I explained the basis and theoretical underpinnings for this research on children's exposure to SHS, the health effect of children's exposure to SHS, the the socioeconomic consequence of SHS on children; and illuminated the reasons for additional understanding of parent's perspectives on preventing children's exposure to SHS.

Gaining the perspective of parents on how to protect children from SHS may help to further advancements in planning for cessation interventions and lend new avenues for working with parents to safeguard the health of children by eliminating exposure to SHS in their homes. The next chapter contains details on the research methodology and why it was chosen for this particular study.

Chapter 3: Research Method

Introduction

In this chapter, I provide information on the multiple case study approach and its relevance to the research topic and questions. In addition, I expound on the suitability of the case study as the qualitative research design of choice for this study, and I discuss the rationale for choosing the Head Start population for the study. Further, I address the recruitment strategies, data collection, management, and analysis. In addition, I cover the role of the researcher and issues related to bias. I also discuss the credibility, dependability, confirmability, and transferability as important elements of trustworthiness in research.

The purpose of this multiple case study was to explore the perspectives of low-income Head Start parents on children's exposure to SHS inside their homes and to discover preventive strategies they employ at home to protect children from exposure to SHS. According to the CDC (2014), the only effective measure for protecting children from the harmful effects of SHS is to avoid smoking and ban smoking around children. Despite the Surgeon General's warnings regarding the consequences of smoking (CDC, 2014), children continue to experience a high rate of exposure to SHS in their homes. Evidence suggests that children from low-income families face the greatest risk of exposure to SHS (Kit et al., 2013). Although previous studies have documented the level of exposure to SHS in children and the health consequences of such exposure (Metsios et al., 2011), little is known about intentional strategies employed by Head Start parents to protect children from exposure to SHS for preventive health. As advances continue to be

made in understanding the pathways through which exposure to SHS hampers the health of children (CDC, 2014), involving parents in prevention efforts is essential for more attainable outcomes (Canadian Paediatric Society, 2008).

Research Design and Rationale

In this section, I introduce the research design and discuss its relevance to the research questions. In this study, I intended to increase understanding of how parents perceive children's exposure to SHS and how parents protect children from exposure to SHS. I addressed two main questions, each with subquestions aimed at obtaining in-depth understanding of parents' perception of children's exposure to SHS and intentional strategies they employ to protect children from exposure.

RQ1 (Qualitative)

How do parents perceive children's exposure to SHS in their homes?

Subquestions

1. How do parents describe exposure to SHS in their home?
2. What are parent's perceived barriers to SHS free homes?
3. What are parents' beliefs about SHS exposure of their children in inside their home?
4. How do parents feel about others in their environment smoking around children?

RQ2 (Qualitative)

What specific strategies are parents using to protect their children from SHS exposure?

Subquestions

1. How do parents of Head Start children describe their efforts toward protecting children from SHS inside their home?

2. Are there any motivations for using a specific method to protect children from exposure to SHS in favor of other methods?

3. Do parents consider specific methods of protecting children from exposure to be more effective than others?

Various studies have examined the effects of exposure to SHS on children's health, how parents manage the frequent emergency room visits for children with asthma, and the economic cost to the individual and family, as well as the economic cost to society for children that are ill due to asthma and upper respiratory infections. Protecting children from exposure to SHS is important for safeguarding the health of children and preventing future health problems for those not already impacted by the problem.

The qualitative paradigm provides an avenue for exploring a phenomenon using various methods that draw on personal contact with the study participants (Creswell, 2009; McLeod, 2008). It uses various methods of inquiry which include observations, indepth interviews with a single participant or groups, or specific social groups using the "*idiographic approach*" (McLeod, 2008). The qualitative method allows a researcher to gain in-depth knowledge of a particular issue or topic as opposed to quantitative methods which focus on causation and how variables influence one another to produce an outcome (Creswell, 2009). The quantitative method, therefore, is not suitable for my research question which will explore the perspectives of parents to gain an understanding of how

they protect children from SHS exposure. Understanding the perspectives of parents will require indepth interviews aimed at answering the research questions (Creswell, 2009). Further, qualitative researchers also share other characteristics such as viewing their role in research as that of a participant observer. They adopt a theoretical lens for their research, collect data in natural settings, engage in direct interaction with individual participants, and rely on a variety of data sources and data collection methods for their studies (Creswell, 2009; Yin, 2014). The qualitative researcher employs an interpretive approach and inductive reasoning for data analysis (Creswell, 2009). In addition, the qualitative researcher looks at multiple factors to provide a holistic account or a "larger picture" that emerges from the analysis of the study without relying on "tightly prescribed" research plans (Creswell, 2009, p. 176).

Creswell (2007, 2009) detailed several qualitative approaches chief among which are the narrative approach, phenomenology, grounded theory, and ethnography. In contrast to my research which is concerned with gaining the perspectives of low income Head Start parents on children's exposure to SHS, the narrative approach focuses on the life story of an individual as told by that individual which is then "restoried" by the researcher with the goal of developing a narrative about the individual (Creswell 2007, p. 54). The narrative approach is most suited to biographies and stories about an organization with an advocacy lens (p. 55).

Phenomenology

On the other hand, researchers choose phenomenology when the goal of the research is to focus on understanding the essence of a lived experience (Creswell, 2007)

The lived experiences of the Head Start parents is not the focus of my study, therefore, the phenomenological approach will not be suitable for exploring the perspectives of the participants (Creswell, 2007).

Grounded Theory

Grounded theory as the name implies is used for developing theories based on data from the field of sociology. It studies a process, action or interaction, none of which are the bases for my study of HS parent's perspectives on the exposure of children to SHS.

Ethnography

The ethnographic approach requires a long time for data collection. Ethnographic researchers need to be grounded in cultural anthropology, a field that is not familiar to this researcher. It relies on describing and interpreting shared patterns of the culture of a group. Ethnography studies similar cultures with the aim of describing the culture and themes about the group and the functioning of the culture-sharing groups (Creswell, 2007).

Case Study

Yin (2014) posited that the case study method is suitable for understanding the occurrence of a phenomenon (Head Start parent perceptions of child exposure to SHS) and intentional strategies which parents use to protect children from exposure within the context of participation in Head Start program (context). As stated by Creswell (2009), a qualitative approach is suitable when a tangible lack of theory from previous research is evident on the subject. According to Creswell (2009), data obtained from a qualitative

study is not intended for use in supporting or refuting a hypothesis, and the intent of my study is not to support or refute any existing theories, but to explore the views of parents on how to protect children from SHS exposure, and obtain information which might help in designing future intervention programs to curtail Head Start children's exposure to SHS. The qualitative method is suitable for obtaining a complete picture of each participant using a variety of methods (Keele, 2011; Creswell, 2009; Yin, 2014). The case study method is suitable for exploring, explaining, or describing a person, an event, process, or groups (Yin, 2014, Creswell, 2007, 2009).

Although all qualitative methods share many attributes, they each have some unique features which make them suitable for specific types of studies. Creswell (2007). The case study is well suited to studies in multiple disciplines and the choice of qualitative approach depends on the research questions to be answered (Creswell, 2009; Keele, 2011; Stake, 1995). The case study is multidisciplinary and can be used to study a phenomenon within its natural or real-life context (Creswell, 2009). Creswell (2007) and Stake (1995) identified three kinds of case study: The intrinsic, the instrumental, and the collective. The intrinsic case report is undertaken to learn about a unique phenomenon, the instrumental case study uses a particular case for indepth exploration of a specific issue, and the collective case study examines multiple cases simultaneously to gain an understanding of a "particular issue" (Crowe et al, 2011, p.2). Stake (1995) stated that in the collective case study, the instrumental case study is "extended to several cases" (p.123). I chose the multiple case study method because it allows for studying individual

cases sequentially to gain a broader perspective on how parents protect children from exposure to SHS.

Fifteen low-income parents of currently enrolled Head Start children participated in this study. The goal of this research was to explore strategies used by parents to protect children from exposure to SHS in their home. This research is important for the Head Start community due to the program's focus on preventive and ongoing healthcare for children and their families (Head Start Performance Standards, 2016). I interviewed 15 parents of Head Start children who self-identified as smokers or live with other household members who are smokers. I chose to limit my studies to Head Start families because as a group, they meet specific requirements as mandated by law (Head Start Program Performance Standards, 2016). To qualify for Head Start services, families must reside within a specified service area, meet income requirements, and have children between the ages of 3-5 years (Head Start Program Performance Standards, 2016). Head Start programs are mandated to provide comprehensive Head Start services to 3-5-year old children from low socioeconomic backgrounds (Head Start Program Performance Standards, 2016).

The Role of the Researcher

My role was to understand how parents protect their children from exposure to SHS based on intentional strategies they employ in doing so. To accomplish this goal, I interviewed 15 Head Start parents who self-identified as smokers or lived with a smoker. I clarified and set aside my biases and my understanding of children's exposure to SHS, and became an instrument through which participants could express their views on

children's exposure to SHS (Creswell, 2009). I also explored how participants protect children from exposure to SHS to prevent long-term health problems. I collected data by utilizing open-ended questions which I developed to collect data through in-depth interviews with each participant. I also reviewed agency records provided by the research partner for additional data. Silverman (2000) described the interview with open-ended questions as the gold standard for qualitative research; while Roulston, deMarrais, and Lewis (2003), demonstrated that the interview setting can produce undesirable outcomes for the novice researcher (p.649). To ensure that I was prepared to effectively address each interview situation, I presented the interview questions for review by one doctoral level researcher, a Master's level researcher, and three Head Start parents to address any 'item difficulty' and 'internal consistency' (Johanson & Brooks, 2010). In addition, I honed my interview skills by practicing with colleagues to ensure that-participants could fully express their views on protecting children from exposure to SHS. I utilized a tape recorder, with permission from each participant to record their words verbatim for increased rigor.

Selection Criteria

Participants included Head Start parents whose children are enrolled in four of the 13 Head Start sites in Northwest Houston, Texas. For the purpose of this study, low income refers to families whose incomes were at or below the federal poverty level. Also, for clarity Head Start students were considered at risk if they lived with a smoker, regardless of familial relationship. Hence, to participate in this study, a parent had to self-identify as a smoker or identify as residing with a smoker. To qualify for Head Start, a

child has to be three years of age at the time of enrollment and the child's birthday must fall within the acceptable cut off birth date for school enrollment as observed by their school district (Head Start Program Performance Standards, 2016). The child's family income also has to fall within 100-135% federal poverty level (FPL) or below for their family size. The family must also reside within a specified zip code as defined by the Office of Head Start and assigned to the grantee Head Start Program (Head Start Program Performance Standards, 2016).

Obtaining Consent From a Head Start Program

I obtained written authorization from the Head Start program prior to recruiting participants. The Head Start Program has an established protocol for approving researchers to conduct studies with participants in any of their campuses. According to the partner agency's policy document, the agency's Institutional Review Policy Committee (IRPC) meets, as needed, to review requests for recruitment of parents and staff for research, observation of enrolled children, or any other data collection activity involving children, including any requests for archival program data protected by confidentiality laws. The IRPC only grants permission to researchers who provide the following evidence: Copy of an IRB approval from an accredited university, or a copy of a detailed proposal, or grant application. According to this policy document, the individual researcher must also provide proof that the proposed study meets all requirements of the Office for Human Research Protections (OHRP) of the USDHHS. Information in the procedure also indicates that members of the IRPC are also required to complete Module 2, "Investigator Responsibilities and Informed Consent." The course,

composed of three training modules, is offered on the OHRP website (The Office of Human Research [OHRP], n.d.). Once the required information is presented to the agency, the IRPC has two weeks to review the information and determine its compliance with agency research policy. The researcher is then given a go-ahead for recruitment and or data collection. I provided the partner agency with my IRB approval (IRB approval #2017.05.0518:07:59-05'00') and supporting documents once I received approval. Upon receipt of the documents, the partner agency's executive director issued a letter of authorization with approved locations for data collection.

Sampling Strategy/Participant Selection Logic

I utilized purposive sampling, more specifically, criterion sampling for my research. Criterion sampling allows a researcher to select cases based on desired characteristics needed for the study (Noble & Smith, 2015; Palys, 2008). By selecting Head Start parents who smoke or reside with smokers for this research, I was able to conduct this study with low-income families on their Head Start campuses.

Sample Size

I recruited 15 participants using a convenience sample of Head Start parents who met criteria for the study. This study was open to one or both parents, and if both participated, they were each treated as an individual participant. I conducted indepth interviews with 15 parents of Head Start children who self-identified as smokers or reported living with a smoker. Moody-Thomas et al., (2014) used 15 participants in their Head Start intervention study. Although Creswell (2007) recommends 4-5 participants as typical for case studies, he also stated that the researcher should decide on a number that

works for their particular study (p. 76). Obtaining information from various sources adds to triangulation and increases the rigor of qualitative studies (Creswell, 2007). In this case, I gained a broader perspective from members of the Head Start community by interviewing 15 participants.

Recruitment

I posted recruitment flyers (see *Appendix C*) at the four selected sites, once I received IRB approval for my study. The flyers contained a brief summary of the study, a short description of potential participants, and the contact information of the researcher and Walden University.

Data Collection and Management

Data were derived from individual interviews with 15 low-income Head Start parents and from a review of the research partner's company documents. For the interviews, I used a semi structured format with open-ended questions. Open-ended questions are the gold standard for face to face interviews (Silverman, 2000). The open-ended questions were structured to reflect the research questions. As part of the interview, I discussed demographic information, including the age of the participant, educational and employment status, type of residence, number of smokers and number of residents within each household. I also reviewed documents for trends in smoking, asthma, and absenteeism for Head Start parents involved in the study to gain a deeper understanding of parents' perspectives on children's exposure to SHS and strategies on which parents rely to protect children from exposure to SHS. Socioeconomic factors play a major role in initiating exposure to SHS (CDC, 2014/2015). Data from this study are

intended to deepen understanding of the family household dynamics by contextualizing the responses of each participant. I tape recorded the interviews and personally transcribed them to ensure fidelity and confidentiality. The interview questions are in *Appendix A.*

Data Analysis Plan

I analyzed the data based on the four cognitive processes of data analysis as identified by Morse (1994): comprehending, synthesizing, theorizing, and re-contextualizing. The steps included coding of data. Comprehending the perspectives held by Head Start parents on exposure to SHS and how it affects the health of children was enhanced by coding and identifying "beliefs and values in the data" (Morse, 1994, p.38), and linking them to existing theories. I also employed coding and content analysis to extract significant themes that were found to be common among the responses given by the participants with regards to my research questions (Creswell, 2007). Next, I merged the patterns that developed into theories that coalesced the responses of the various respondents and linked them to existing theory (Morse, 1994, p.33) to aid understanding of the data. As stated by Morse, synthesis is complete and saturation is achieved when the pooled data can no longer yield additional information upon further analysis (p.38). Re-contextualization involved reviewing the theory to see how it fits with the research questions and forming explanatory or hypothetical statements based on the themes that emerged from the data analysis. The degree of abstraction obtained from the re-contextualization helped to determine the generalizability of the theory (Morse, 1994). Morse's methods are similar to those advanced by Creswell (2009) and Guba (1981) for

ensuring trustworthiness: Credibility, dependability, confirmability, and transferability. For each of these elements, I utilized the analytic techniques advanced by Yin (2014): pattern matching, explanation building, and cross-case synthesis. These steps complemented Morse's analytical approach and served to confirm the identified themes.

Data Storage Procedures

I transcribed all audio recorded data into a Microsoft Word® document and secured the transcripts in a password-protected personal computer. I have also secured a copy of the printed transcripts and field notes in a locked cabinet in my home. I will remain the only one with access to these documents. I destroyed the tape recordings at the completion of member checking. I will discard the rest of the data at the end of five years in compliance with Walden IRB recommendations.

Trustworthiness

In qualitative research, the goal of the researcher is to develop meaning that is anchored in the research questions and design (Roulston et al., 2003). Therefore, I ensured that procedures for data collection were appropriately tailored to the research questions to increase credibility (Creswell, 2009). I also used a semi-structured interview guide to ensure consistency across cases. Noble and Smith (2015) suggested that adding a different source of data helps bring different perspectives to the data. In this case study, I used individual interviews and document review as the primary tools for data collection (Noble & Smith, 2015). To achieve rigor in research, a researcher must demonstrate that the study has credibility, dependability, confirmability, and transferability (Lincoln and Guba, 1985). However, the interview process by its very nature is conversational and

might generate other questions and probes that might help in understanding the perspectives of the participants (Roulston et al., 2003). Therefore, I remained open to other interpretations that emerged from the research data.

Credibility

The qualitative approach embraces the existence of multiple realities (Creswell, 2009). Therefore, I acknowledged and clarified my own thoughts and experiences regarding children's exposure to SHS to prevent bias in how I developed my research questions. I also applied the same consideration in choosing the research participants, and in analyzing, and interpreting data obtained from the study (Carcary, 2009, Creswell, 2009; Noble & Smith, 2015; Roulston et al., 2003). I had to keep in mind that I was an instrument through which the perspectives of the participants were being conveyed (Creswell, 2009). I used several sources of information, such as data from partner agency documents, individual interviews, and literature review. I also used theoretical triangulation to present a holistic view of factors that perpetuate or protect children from exposure to SHS (Denzin, 2006). Credibility also relates to how well a chosen design will aid in accurately describing the perspectives of the participants. Therefore, I utilized audio tapes for recording the interviews to ensure that data were fully captured from each participant. In addition, I debriefed with peers to help "uncover" and address any biases and faulty assumptions (Noble & Smith, 2015, p. 35).

Transferability

In qualitative research, the generalization of findings is not the focal point (Creswell, 2009). However, information obtained from a research study is intended to

benefit specific interests. By providing thick rich descriptions and verbatim transcriptions of the interview data, interested parties can determine the relevance of the results for their particular purpose (Noble & Smith, 2015).

Dependability

The audit trail includes all decisions made relative to the research design and data collection (Carcary, 2009). To increase dependability, I utilized an audit trail and reflexive journaling, prior to and during data collection to clarify my own biases. I used audio recordings for the interviews, took notes during interviews, and once the interviews were completed for each person, I transcribed the audio recordings into Word® documents which I shared with participants for verification. Finally, I conducted member checking to ensure that each participant had a chance to review their own transcripts and provide additional feedback. As suggested by Carcary (2009), I engaged in peer debriefing for feedback on how well I accounted for bias and faulty assumptions in design, data collection, and analysis. I presented all data objectively and as stated in the words of the participants.

Confirmability

The confirmability of any study depends on "the truth value, consistency, and applicability" (Noble & Smith, p.34). I clearly presented the views of the participants and utilized an audit trail and member checking to increase trust in the data I collected. In addition, I was open about my experiences as a child who was exposed to SHS during the first 18 months of my life. I also acknowledged my personal biases while remaining open to gaining the perspectives of individual participants (Noble & Smith, 2015).

Ethical Considerations

Researchers face many ethical challenges which may include study design, "anonymity, confidentiality, informed consent," and the influence participants and researchers may exert on each other (Sanjari, Bahramnezhad, Fomani, Shoghi, & Cheraghi, 2014, p.3). Briggs (cited in Roulston et al., 2003), noted that the role of the researcher must be examined on the basis of the interaction with the participant as an essential part of the data gathering process. I obtained training from the National Institute of Health (NIH) on "Protection of Human Research Participants." I also obtained approval from Walden University's Institutional Review Board (IRB Approval #2017.05.0518:07:59-05'00'), prior to recruiting participants for my study. In addition, I also had to provide the partner agency with an IRB approval from Walden University, as well as obtain written approval from the partner agency management, prior to recruiting participants for the study. Although I collected data from the organization where I am currently employed, my role in the organization has limited contact with parents. In my role as the director of compliance and research for the partner organization, I provide training to approximately 46 Policy Council members who are parents of children chosen by other parents from various program sites to represent them as policy makers. This training is solely focused on the roles of the parent representatives as stipulated in the Head Start Performance Standards (2016). During the time of data collection, only 30 of the 46 parents had children enrolled at the Head Start sites, the rest were parents of Early Head Start children, ages newborn to 3 years. These parents were not involved in the Institutional Review Committee established by this organization and I did not have any

direct personal contact with any of them after the training ended. The program had over 2,368 families during the study period. None of the parents who participated in the Policy Council volunteered for the study. Parent volunteers who met criteria for participation in the study received full informed consent and were accorded the right to privacy, confidentiality, and informed consent.

Treatment of Human Participants

All participants were fully informed of the purpose of the study, which was to explore Head Start parents' perceptions of children's exposure to SHS in their homes. My research adhered to the ethical principles of research, which requires researchers to protect the "health, dignity, integrity, right to self-determination, privacy, and confidentiality of the research participants" (World Medical Association, 2017).

Informed consent requires that participants be fully informed of all aspects of the study to aid them in deciding whether or not to participate in the study. Participants were treated with dignity. Orb, Eisenhauer, and Wynaden (2001) suggested that recognizing the autonomy of participants allows for open and honest sharing of information, thereby encouraging a "balanced relationship" (P.94). Prior to the interview, I explained the purpose of the research and reviewed the consent form with each participant. I informed each participant that I was a doctoral student at Walden University conducting a dissertation study. I also informed participants of their role and their rights to privacy, to choose whether or not to participate in the research, to withdraw their consent, and to terminate the interview at any time. In addition, I explained to each participant that I will keep their information confidential and that each of their names and other personally

identifying data will not be included in the published dissertation. I further advised the participants that I am the only one that will have access to their data. I also informed participants that they can refuse to answer any questions if it makes them uncomfortable and that they had the right to withdraw their consent and terminate participation at any time. Finally, I informed participants that their participation will not pose any risk to their health.

Ethical Issues in Recruitment of Participants

Orb et al., (2001) posited that qualitative research involves interacting with people in their natural environments and may present ethical concerns related to access to participants and role confusion for the researcher. I collected data from my place of employment, which has strict rules on how to access participants for research through an Institutional Policy Review Committee responsible for approving researchers for access to participants. I provided the committee with my IRB approval once I received it and followed the principles of autonomy, beneficence, and justice as articulated in the Helsinki Principles (World Medical Association, 2017) in all my interactions with the participants. As described earlier in this chapter, I fully informed each participant of the purpose of the study, their rights to informed consent, as well as their rights to withdraw their consent or refuse to participate.

Selection Bias

To avoid selection bias, I recruited participants from four of the largest sites out of the partner agency's 13 program locations. I posted recruitment flyers at those sites. On the flyers, I acknowledged my employment in the company, but also explained that I

was collecting these data as a student at Walden University. Further, I indicated on the flyer that participation was voluntary, and participants could withdraw their consent and terminate participation at any time. I recruited 15 participants for individual interviews.

To ensure non-biased recording of data, I utilized a multi-modal approach which involved the tape recording of interview sessions, note-taking, member checking to clarify information, and a guided interview format to maintain context across cases. Through a peer debrief process, I also ensured non-biased presentation of the perspectives of the participants (Noble & Smith, 2015).

Confidentiality

To protect the confidentiality of the participants, each of them was assigned a pseudonym. All data collected from participants was de-identified on the case report to protect their confidentiality. All data connected to the research participants are protected under lock and key when not in use and I am the only one with access to this cabinet.

I conducted all interviews inside an office at the program site where each participant's child or children attend Head Start. This prevented participants from being burdened with additional travel to meet at a centralized location. It also prevented unwanted intrusions by family members and allowed for privacy which made it easier for the participants and me to focus on the interview.

In addition, each participant received a $10.00 Walmart gift card. Researchers from several universities in Houston conduct research at the Head Start sites. Each group offers stipends to offset the cost of transportation. Houston Texas is a sprawling city with

challenging traffic, and by offering the incentive, participants were able to offset the cost of traveling to the interview site.

Summary

I have detailed the research methodology for my dissertation research in this chapter. I have chosen the multiple case study design to elucidate the perceptions held by Head Start parents on the exposure of children to SHS in their homes. This study included a sample of 15 Head Start parents whose children were currently enrolled in the program. Participants were selected by use of purposive sampling. Data collection included face to face interviews with participants and a review of documents provided by the research partner. I recorded the interviews in audiotape and reviewed and recorded data from the partner agency's documents as field notes. Data were analyzed by coding and the results were categorized thematically. The results include thick rich descriptions and verbatim transcriptions of the tape-recorded interviews.

Chapter 4: Results

Introduction

The purpose of this qualitative multiple case study research was to explore the perspectives of Head Start parents on children's exposure to SHS and intentional strategies employed by these parents to protect children from SHS. The research addressed two main questions: (a) How do parents perceive children's exposure to SHS in their homes? and (b) What specific strategies are parents using to protect their children from exposure to SHS? Each of these questions had subquestions aimed at deepening the understanding of the views of Head Start parents on children's exposure to SHS and the strategies that parents use to protect children from exposure to SHS. This study was approved by the Institutional Review Board at Walden University (IRB #2017.05.05 18:07:59-05'00').

The study participants included 15 Head Start parents with incomes below the federal poverty level. A review of the extant literature has shown that children living in poverty are at the highest risk of exposure to SHS (CDC, 2016; Jones et al., 2012; Leung et al., 2004; Mills 2014; Moody-Thomas et al., 2014; Orton et al., 2014). Head Start children are particularly at risk for exposure to SHS due to their low socioeconomic status (Head Start Performance Standards, 2016). However, scant literature accounts for the perspectives of parents and caregivers on how to protect children from exposure to SHS. I designed this study to fill this gap.

I obtained data for this study from the responses of each participant to the interview questions. I analyzed these responses to identify the views of individual

participants relative to both the research questions and the theoretical underpinnings of the study. I analyzed the data through manual coding using the following cognitive processes: comprehending, synthesizing, theorizing, and re-contextualizing, as advanced by Morse (1994).

In this chapter, I provide details on participants' demographics, research setting, the recruitment strategies employed for the study, data collection, storage, analysis, and evidence of trustworthiness. I also provide a brief profile of each participant. I present the findings of the research study in two steps. In addition, I grounded the research questions in three specific theories, which were reflected in the data analysis. The results are aligned with the research questions. Although the participants' responses are presented thematically as discrete findings, some overlap occurs among the themes.

Instrument Validation

Prior to obtaining IRB approval, the open-ended questions that I developed were reviewed with three Head Start parents and two seasoned researchers for input and comments, which resulted in slight modifications to the arrangement of probing questions. These changes did not affect the research questions but helped to increase clarity. This research addressed two central questions as presented below:

RQ1 (Qualitative)

How do parents perceive children's exposure to SHS in their homes?

Subquestions

1. How do parents describe exposure to SHS in their home?
2. What are parent's perceived barriers to SHS free homes?

3. What are parents' beliefs about SHS exposure of their children in inside their home?

4. How do parents feel about others in their environment smoking around children?

RQ2 (Qualitative)

What specific strategies are parents using to protect their children from SHS exposure?

Subquestions

1. How do parents of Head Start children describe their efforts toward protecting children from SHS inside their home?

2. Are there any motivations for using a specific method to protect children from exposure to SHS in favor of other methods?

3. Do parents consider specific methods of protecting children from exposure to be more effective than others?

Setting

I collected data from my current place of employment. I posted flyers at four Head Start sites during the last 2 weeks of program activities in the spring of 2017, due to the timing of the IRB approval. The condition was such that end of year activities was occurring at the Head Start sites and most of the families were present when I posted the flyers on their parent bulletin board at the recruitment/interview sites. As a result, I recruited many of the participants on the day that I posted flyers at the site where their children attend Head Start.

Demographics

The participants included 15 Head Start parents drawn from a large urban East Texas city during the spring of 2017. They comprised of eight African American females, seven Hispanic/Latinos including six females and one male. Participants ranged in age from 24-45 years old and had between 1 and 6 children with an average number of 3.38 children per household. Of the 15 participants, 11 completed high school, one reported earning an associate's degree, two reported attaining 11th grade and one attempted 8th grade. Seven of the participants self-identified as smokers, while the other eight reported living with at least one smoker. Of the smokers (n=7), one was male. Six of the seven participants that self-identified as smokers also lived with another smoker. Participants had an average annual income of $18,667. See Tables 1 and 2 below:

Table 1

Participant Demographics

Characteristics	Factor	Frequency
Age range (y)		
	24-34	11
	35-45	4
Ethnicity		
	African American	8
	Hispanic	7
Gender		
	Female	14
	Male	1
Educational attainment		
	Associate's degree	1
	High school diploma	11
	Less than high school diploma	3

Table 2

Participant's Socioeconomic Characteristics

Characteristics	Factor	Frequency
Marital status		
	Married	5
	Single	10
Employment status		
	Employed	9
	Hispanic	8
Household income		
	Under $10,000	4
	$10,000–$20,000	6
	$20,001–$31,000	5
Housing status		
	Apartment	1
	rental home	11
	Owner occupied home	3
	Reside with relatives	

Note. Household Income (household includes a single parent or a married couple with one or more children).

Participants' Sketches/Background

Participant 1

Hope (pseudonym) is 35-year-old African American female. She is married with 7 children, two of whom are under age six. Both of her children attended Head Start. She is a non-smoker, but she resides with her fiancé who is a smoker. She attended a trade school but is currently unemployed.

Participant 2

Lisa (pseudonym) is a 33-year-old, single, African American female with six children. Her youngest three children are still under six years of age. Two of her children are currently enrolled in Head Start with one starting kindergarten this fall. She is a

smoker who is currently trying to quit. She has some college credits and is currently unemployed.

Participant 3

Nora (pseudonym) is a 45-year-old, married, Hispanic female with two children. She is a non-smoker whose husband has been smoking for 17 years. She has one child enrolled in Head Start and another in kindergarten. She holds a high school diploma and is currently unemployed.

Participant 4

Emily (pseudonym) is a 23-year-old, single African American female with two children. Both children are under age six years. One of her children is currently enrolled in HS, and the other in kindergarten. She is a smoker. She completed high school and is currently a school bus driver.

Participant 5: Rose (pseudonym) is 39-year-old African American female, she is married with two children. Her younger child attends Head Start. She is a non-smoker. She has some college credits and is currently unemployed.

Participant 6: Nina (pseudonym) is 31-year-old a single African American female who lives with her fiancé and she has 6 children with the youngest two under five years of age. She is employed as a waiter, and she has some college credits. She resides with her grandmother and fiancé both of whom are smokers.

Participant 7: Brandy (pseudonym) is a 38-year-old single, Hispanic female with two children. Her youngest is 4 years old. She is a smoker. She attained 8th-grade education and later earned her GED. She is currently employed as a maid in a hotel

where she cleans rooms.

Participant 8: Elena (pseudonym) is a 24-year-old Hispanic female. She is married and has one child who is four years old. She attended trade school and is currently employed in a supermarket. She is a non-smoker.

Participant 9: Sandy (pseudonym) is a 34-year-old African American female. She is single and has a 5-year-old son. She completed 11th grade and is currently enrolled in a GED program. She is a smoker and lives with her mom who is also a smoker. She is currently employed as a cashier in a restaurant.

Participant 10: Darcy (pseudonym) is a 35 year old Hispanic female, a self-described casual smoker who only smokes at parties. She is married with five children the youngest of whom is five years old. She attained a high school diploma and is currently employed in a roofing company where she writes up estimates for roofing jobs.

Participant 11: Leesha (pseudonym) is a 32-year-old African American female. She is married with three children, and one of her children is 5 years old. She is a college student. She is a non-smoker, but her husband is a smoker. She is currently employed as a server in a restaurant.

Participant 12: Natalia (pseudonym) is a 33-year-old Hispanic female. She is married with 2 children both of whom are under five years of age, and both of whom attend Head Start. She is a smoker. She holds an associate's degree in child development and is currently a Head Start teacher.

Participant 13: Jenny (pseudonym) is a 26-year-old Hispanic female with two children one of whom is three years old. She is a non-smoker. She has two children one

of whom attends Head Start. The second child is in third grade. Jenny has earned some college credits, and she is currently employed as a waitress in a chain restaurant.

Participant 14: Deidre (pseudonym) is a 29-year-old, African American mother of 5 children ranging in age from 1 to 6 years old. She completed 11th grade and stated she needs to return to school for her GED. She works as a cashier at a large grocery store. Two of her children attended Head Start and will be in kindergarten and first grade, respectively. Her three year old will remain in Head Start, while her youngest two attend Early Head Start. She is a smoker.

Participant 15: Alex (pseudonym) is a 27-year-old unemployed Hispanic male, married with 5 children. Two of his children attended Head Start in Center A, and a third one will be entering Head Start this fall. He currently has two children in Early Head Start. The names of all participants have been masked to protect their privacy.

Data collection and Storage

Data collection was in the form of face to face interviews. I met with each participant at their child's program site where she reviewed the consent form with each participant and obtained their written consent prior to beginning the interview process with them. I also provided participants with the option of choosing a pseudonym which will be used in the case report in place of their real names. The interviews were tape recorded to ensure non-biased recording of data. I also supplemented the voice recording with jotted notes for backup and confirmation of unclear recordings (Carcary, 2009). Each interview lasted approximately 40-45 minutes. As part of clarifying researcher bias, I revealed that I am a non-smoker who was exposed to SHS in my home early in life. I

used a semi-structured, open-ended interview format for data collection to maintain context across cases. At the conclusion of the interviews, I transcribed all the tape-recorded interviews into a Word® document, and then I converted the recordings to an MP3® file format and saved all in a password secured iCloud® account. All transcripts were de-identified and placed in the same locked cabinet with the signed consent forms. Member checking was completed once the recordings were transcribed. Member checking was conducted through face to face meetings with 12 participants. These meetings were more informal and lasted approximately 10-15 minutes, depending on the participant's availability. Two participants were displaced during the Hurricane Harvey and could not be located for follow up. One participant declined to follow up. Through a peer debrief process, I ensured non-biased presentation of the perspectives of the participants (Noble & Smith, 2015).

Data Analysis

Data analysis was based on the four cognitive processes advanced by Morse (1994) which include comprehending, synthesizing, theorizing, and re-contextualizing. The inductive process utilized in the data analysis for this research involved the following: I printed out the transcripts, read and reread each participant's responses and underlined answers that were related to the purpose of the research. I then compared participants' responses to my research notes to ensure that I had included all their comments. Next, I analyzed the contents of the transcripts synthesizing the data from each participant's transcript into codes and noted any developing patterns (Morse, 1994; Creswell, 2007). While reading and rereading each participant's responses, I highlighted

comments that were related to the research questions, wrote down memos and codes against important phrases and sentences. I then looked for patterns among the codes generated from each participant's transcript. Next, I compared the codes for their meanings. This was followed by synthesizing and merging closely related codes into themes.

Finally, the codes were further analyzed for content and merged into final themes (theorizing). For example, the following paragraph was separated into four units based on the meanings from information provided by P3, Nora (pseudonym) who said of her husband's smoking:

> Sometimes it is hard to keep the home smoke free. He is in the back of the house. But when you open the door, the smoke comes in; the children sometimes visit him in the office, but I try to let them know that the office is for daddy.

1. Sometimes it is hard to keep the home smoke free. He is in the back of the house
2. but I try to let them know that the office is for daddy.
3. The children sometimes visit him in the office,
4. but when you open the door, the smoke comes in.

The identified codes included 'barrier to smoke-free home' as well as 'strategy for protecting children from SHS,' and location and source of SHS exposure, and are included in Table 3.

Table 3

Sample Codes

	Codes	Sentence
1	Difficult to keep home smoke free home	Sometimes it is hard to keep the home smoke free. He is in the back of the house.
2	Keeping children away from SHS	But I try to let them know that the office is for daddy.
3	Location and source of SHS	The children sometimes visit him in the office.
4	SHS infiltration	But when you open the door, the smoke comes in.

Upon further analysis of the data, code a) was assigned to the theme, 'barriers to making a home smoke-free', b) was assigned to the theme 'protecting children from SHS', c) remained unassigned because it was not part of the research goal and it was not found to be a prevailing situation across cases, and 4 was unassigned for the same reason.

This analytical process was iterated first for each participant's transcript (Berg, 2004), then was collectively applied to all transcripts. In all, I identified 11 codes and through an inductive process, I sorted the codes into categorical labels or themes, isolated meaningful patterns, and then identified final themes.

Further, I merged the patterns into themes which were then linked to existing theories for explaining the findings (Morse, 1994, p.33). Lastly, I recontextualized the findings by determining how the theories fit with the research questions. As noted by Morse (1994), the degree of abstraction obtained from the re-contextualization plays an important role in determining the generalizability of the findings.

With regards to additional data collected for this study, Noble and Smith (2015) argued that adding a different source of data brings different perspectives to the data. For example, I was able to determine the percentage of enrolled children with asthma

compared to the prevalence of asthma as reported by participants. In this case, I used both the participant interviews and records review as sources of data. Additionally, the interviews involved 15 participants while the document review encompassed health data for all enrolled children. Only data that the partner agency will typically share with the public were reviewed. Information from these data was incorporated into the case report as appropriate.

The principal themes generated from this study include a description of children's exposure to SHS, awareness of health consequences of exposure to SHS, barriers to a smoke-free home, strategies to protect children from SHS, and ambivalence toward quitting smoking. The discrepant findings differ from the other findings because, even though they are important in understanding how parents perceive children's exposure to SHS and the strategies they utilize to protect children from exposure, they were not identified across all cases.

Evidence of Trustworthiness

In qualitative research, the goal of the researcher is to develop meaning that is anchored in the research questions and design (Roulston et al., 2003). Therefore, I tailored the procedures for data collection to the research questions to increase credibility (Creswell, 2009). Further, to achieve rigor in research, a researcher must demonstrate that the study has credibility, dependability, confirmability, and transferability (Lincoln & Guba, 1985). However, as observed by Roulston et al. (2003), the interview process by its very nature is conversational and might generate other questions and probes which help in understanding the perspectives of the participants. Thus, I used a semi-structured

interview guide to ensure consistency across cases and probe deeper into the perceptions of participants regarding children's exposure to SHS. The following are the steps I undertook to ensure the trustworthiness of this research study:

Credibility

Denzin (2006), identified 4 types of triangulation which enhance the credibility of qualitative data. These include: a) data triangulation with a focus on multiple sources of data; b) investigator triangulation which allows for multiple researchers to collect and analyze the same data from varying perspectives, c) theory triangulation which involves using multiple theories to interpret study findings, and d) methodological triangulation which involves using various methods to collect data. For this study, I used three of the four types of triangulation, namely: Data, theory, and methodological. Data triangulation entailed utilizing two sources of data, including interviews with 15 participants and a review of archival documents. Leading researchers have argued that adding a different source of data brings different perspectives to the data, therefore strengthens the credibility of the research (Berg, 2009; Creswell, 2007; Denzin, 2006; Noble & Smith, 2015). I also employed theoretical triangulation by using three theoretical perspectives to explain the health behavior of participants, and methodological triangulation which included using a tape recorder, and note taking for data collection (Denzin, 2006).

Data Verification

I tape-recorded all interviews and personally transcribed the recordings to ensure accuracy. I also ensured that the voices of participants were heard and that their views were fully represented by conducting transcript reviews and member checking with each

participant to verify for accuracy (Merriam, 2002). I also utilized peer debriefing which involved a review and feedback on the case report by the dissertation chair, and two mentors. One of the researcher's mentors earned a Ph.D. in public health and has taught and mentored students for over 10 years, and the second mentor is a widely published professor in the school of nursing with over 20 years of experience nurturing medical and nursing students. As stated by Noble and Smith (2015), peer debriefing helps to "uncover" and address any biases and faulty assumptions (Noble & Smith, 2015, p. 35) in a case report. In addition, I included thick rich descriptions of the data using verbatim statements of the participants in the case report (Creswell, 1998).

Transferability

Although generalizing the findings of a study is not the focal point of a qualitative design (Creswell, 2009), the information obtained from a research study is intended to benefit specific interests. To increase transferability, I provided rich, thick descriptions and verbatim transcriptions of the interview data which will allow interested parties to determine the relevance of the study for their specific purpose (Merriam, 2002; Noble & Smith, 2015). I also provided the views of various Head Start parents for comparison based on the high number of participants involved in the multiple case study.

Dependability

To increase dependability, I developed an audit trail which includes all decisions that I made relative to the research design and data collection (Carcary, 2009; Merriam, 2002). In addition, I used reflexive journaling, prior to and during data collection to clarify personal biases. Further, I transcribed all audio recordings of the interview into a

document and compared the transcripts with notes that I took to supplement my recordings of the interviews. Finally, I conducted second interviews with participants for member checking to review their own transcripts; and peer debriefing for feedback with faculty members and two other researchers on how well I accounted for bias and faulty assumptions in design, data collection, and analysis (Carcary, 2009). Feedback from my research mentors and the other two mentors mentioned above was critical in correcting some of the assumptions I made in my interpretation of the data.

Confirmability

The confirmability of any study depends on "the truth value, consistency, and applicability" (Noble & Smith, p.34). I used direct quotes to clearly present the views of the participants and developed an audit trail and member checking to increase trust in the data (Merriam, 2002). In addition, I accounted for my experiences with exposure to SHS and acknowledged any personal biases while remaining open to gaining the perspectives of independent participants (Noble & Smith, 2015).

Theoretical Propositions

This research was guided by the following theoretical propositions: (a) socioecological model (SEM); (b) theory of reasoned action (TRA); and (c) harm reduction (HR). These theories as addressed in Chapter 2 represent the basis for understanding the perspectives of Head Start parents regarding SHS and how they protect children from exposure to SHS. The social ecological model (SEM) focuses on personal attributes, reciprocity among members of a social group, the environment, polity, and the influence they exert on health outcomes for a developing child (Bronfenbrenner, 2005).

On the other hand, the theory of reasoned action (TRA) as postulated by Ajzen and Fishbein (2008), explains a person's health behavior in three important ways: a) how a person's belief regarding a health problem impacts his or her attitude toward the problem, b) how the subjective norms which manifest in social pressure within a group influences a person's behavior toward a health problem, and c) how behavior is also influenced by an individual's self-efficacy or control beliefs. On the other hand, harm reduction refers to legislative actions or actions taken by an individual to mitigate the effect of certain risky health behaviors on others (Canadian Paediatric Society, 2008). Hence the reliance on the research questions and the study design on these theories.

Themes

Study Findings

The findings of this research are presented chronologically using the order of the research questions. Since this is a multiple case study, the individual perspectives of the participants are presented simultaneously to make meaning from their collective voices (Crowe et al, 2011, p.2). The themes reflect the research questions and are in line with elements identified by Yin (2014) for a successful implementation of a case study. According to Yin, a robust analysis of case study data yields units that can be linked back to the research questions (See Appendix A for the interview protocol used for collecting data from participants). Only salient codes which reflect the research questions are addressed in this case report.

The findings of this research are based on indepth interviews with participants using semi-structured open-ended questions, and the review of archival data obtained

from a Head Start Program. The data obtained from this research were analyzed in two steps based on the research questions. The first step addressed participants' perceptions and step two addressed strategies employed by participants to protect children from exposure to SHS.

Research Question 1: How do parents perceive children's exposure to SHS at home?

This research question was aimed at understanding how participants describe children's exposure to SHS in their homes, their beliefs regarding children's exposure to SHS, and their perceived barriers to ridding their homes of SHS. Three themes emerged from the analysis of Research Question 1. These themes were centered on participants' perceptions of exposure to SHS, and they included:

- Description of SHS
- Awareness of health consequences of exposure to SHS
- Barriers to making a home free of SHS

Theme 1: Description of Children's Exposure to SHS

Participants presented descriptions of SHS in the home with diverse arrays of comments which served to magnify their unfamiliarity with the term. Most participants stated that SHS is bad for the children and everyone else exposed to it. According to Hope, "To me it is bad for you, it's probably believed more people are affected by the smoke than the actual smoker." Lisa stated that "SHS is even worse than smoking a cigarette because the kids can inhale it, the fumes and all that." For Nora, "the smell" is the most vexing part of exposure to SHS. She claimed that "SHS is more dangerous, for

me, for children, for everyone…I think they have to put a law--no smoking. It is no good for the children."

In responding to the same question of how parents view SHS exposure of children in their home, both Emily and Rose described SHS in like manner, with Emily stating that children's exposure to SHS meant "The person that is not smoking that (sic) is around smoke" while Rose stated that "SHS is just smoking around children." Natalia's response was also along the same lines. In her view, "When you SHS, you inhale more smoke."

While most of the participants agreed that exposure to SHS is harmful to children, Darcy and Leesha emphasized that SHS just "smells bad." Neither was able to articulate a clear understanding of exposure to SHS. Jenny provided this description of exposure to SHS, stating that when a non-smoker is in the same room where someone is smoking, "You are breathing it in. If you are beside them or near them, you are breathing in the smoke that they throw." Deidre talked about not smoking around kids because "SHS is harmful and just worse for someone sitting around: it is worse for their lungs." In discussing children's exposure to SHS, Alex stated that: "Smoking around the children is the same as giving them cigarettes." All these responses indicate the participants could not clearly conceptualize the exposure of children to SHS. Only Lisa and Jenny's descriptions came close to expressing a clear understanding of SHS as previously described in Chapter 2.

Theme 2: Awareness of Health Consequences of Exposure to SHS

The level of awareness of health consequences of exposing children to SHS varied among participants. However, participants unanimously responded that exposure to SHS can be harmful to children and others. For example, Hope stated that she wants her husband to stop smoking because the smell triggers asthma for her six children. She went on to explain that she has seven children six of whom have asthma.

> Out of 7 kids, 6 of them have asthma…I do not want the kids smelling it because it will trigger their asthma and allergies… I am one of those that think if you know about it, maybe you will change with all the education and everything. I read something the fear is that, and it was saying like children are at a higher risk for … the cancers and asthma it triggers and it hurts the people that's around than the actual smoker. So from reading that article, if I see someone smoking, of course, I won't say anything to them, but I would move the children further away or try to get them away from it the best I can. I just feel like with my younger children if you have like smoke on your clothes it will trigger them like coughing, sneezing, um one will have an asthma attack.

This sentiment was supported by Lisa's account that even the smell left on one's clothes could pose a hazard to the health of children. Lisa also added that "SHS…can cause the kids to get sick, get asthma."

When asked about her awareness of the consequences of children's exposure to SHS, Nora stated "It is no good for the children. The children need to smell fresh air…When the children inhale smoke they get sick." Brandy's whose mom has asthma

expressed a similar view. She stated that she did not know what kinds of illness that children can get if they are exposed to SHS. “I don’t know what they get sick with, maybe bronchitis, maybe lung cancer later on. Those are my guesses.” Emily’s response did not deviate too much from Nora and Brandy’s. Her response was “I know people that smoke around their kids and they get a nasty cough. I would rather, they get it from school if they are going to have a nasty cough, instead of from me.”

Nina who lives with a smoker reported that she has two children with asthma offered this response when asked about the consequences of children’s exposure to SHS, “…save your children’s lives from cancers, lung problems, and other health problems. I smoked years ago, I have not smoked in 5 years, but the smell of it turns my stomach now.”

Elena who resides with her husband and his elderly grandmother responded that she relies on her grandmother who smokes a pack of cigarettes a day to watch her four-year-old son when she is working. Therefore, she worries about the health of her child because she had seen it on television that children exposed to SHS “…start getting like that asthma stuff and all other stuff. They show a little boy with the inhaler mask. That’s all I saw. It scared me.”

Sandy has a five-year-old daughter. Sandy is a smoker, and so is her mother and sister. When asked about how exposure to SHS affects the health of a child, she stated that it causes eye infections and other problems.

> It fills their lungs with fumes from the smoke, I mean, they smell like smoke. I make sure I don’t fill her lungs with smoke. I done lived, she got time. You got to

> stop so the young generation, don't have to live with this from us. My baby has an eye sty and the smoke irritating her eyes gave her an eye infection. She wears glasses, but too much eye infection can make her blind. That's why I do not like to smoke around her, but I still smoke.

Darcy, Leesha, and Natalia were unaware of any health consequences associated with children's exposure to SHS. However, when the same question was posed to Jenny, she responded that "Their lungs get infected, the smoke goes to the lungs. The lungs get infected with the smoke. Their lungs look bad I am assuming." Both Deidre and Alex each responded that their son has asthma and exposing him to SHS will trigger his asthma.

Theme 3: Barriers to Making a Home Free of SHS

Theme three focuses on participants' perceived barriers achieving an SHS-free home. When participants were asked to describe any obstacles making a home free of SHS, they each offered varied explanations.

Hope stated that it has been difficult to maintain a home free of SHS because her husband is a smoker. She described her situation as a "constant battle", between trying to convince her husband to stop smoking and trying to prevent her mother from smoking inside her home. She stated that her mother comes to visit her often and that her mother will occasionally "sneak one in the bedroom" if she did not feel like going outside to smoke. As far as the struggle with her husband's smoking, she stated:

> With my husband, it really feels like um, when he stresses or just has bad nerves, with him I really think that it triggers from his mom passing away, and this was

> before we were together. His sisters tell me that after that he started to smoke, it's like he needed it; he depended on it. So now it is like when something is not going good, it is like a coping mechanism to me, for him. I think that he thinks that it calms him down. He tries to stop, but I notice that he would bite his nails or some other thing. He is trying to stop, it is like one of those things that he might could go for a day or two, and something just triggers him, and he has to have his smoke.

Nora recounts a similar experience in her home:

> My husband, he tries to stop, but he tells me it is hard for him. He smoke electric pipe …but my mother-in-law she smoke for over 20 years, and now she has cancer. My husband has been smoking for 17 years. I pray to God that my husband stop smoking. Sometimes it is hard to keep the house smoke free. He is in the back of the house, but when you open the door, the smoke comes in …I boil the apple and cinnamon and it smells nice in the house. But I put it in the office and open the doors to make the smell go away. What can you do?

Nina reported that she faces similar struggles with her fiancé. She would hide his cigarettes, and make him wash his hands when he is done smoking on the patio. But, she stated that her children are still exposed to SHS "Because it is still on his clothes when he comes in…I have been trying, I hide cigarettes; I throw them in the trash. He'll just go buy another pack." Lisa and Leesha could not identify any barriers. However, Jenny who hails from a tight-knit family stated that all her relatives are smokers. She does not allow relatives and friends to smoke in her home.

According to Sandy, it will be difficult to rid her home of SHS because even though she does not allow smoking in her home, she sometimes finds her mother sneaking around smoking in her home. Her mother resides with her sister who lives next door. All three women are smokers.

> I do not allow my mom to smoke in my house. I make her go to her house across the street. I been caught her sneaking it in the bathroom. We have been wanting her to quit for a long time…It be very difficult with mom, mom do stuff, it will be very difficult. She will wait until I am sleeping, and she will put her head through the door and start smoking, I wake up smelling smoke everywhere. We have our good days, we have our real, real good days. When it get cold, she don't like to smoke outside. I would say like twice a month, I might catch her smoking inside…It will be very difficult to make my home smoke free.

On the contrary, when responding to how she can make their homes free of SHS, five respondents provided answers that were dissimilar, but which also alluded to concerns about the safety of children. Emily who is single responded that she was not sure. She also stated that her children were not exposed to SHS because she only smokes in her bedroom, not around her children. In addition, she said that when her friends come over, she makes sure they go outside to smoke. "I smoke in my bedroom, but they cannot come in the bedroom, like I said, that is my private space."

Rose who reported that her husband smokes half a pack of cigarettes a day, also stated that:

> He is not doing it in front of the kids. My husband never smokes in front of them. As long as he is not smoking in front of the kids, it should be okay. Right? I am going to look into it, and I have asked my husband to quit before, but I cannot force him.

By the same token, Brandy stated that she does not smoke inside her home, and when she smokes by her carport, she said: "I tell them go outside and play." On her part, Elena stated that her home is smoke-free. Similarly, in discussing the barriers to maintaining a home environment that is free of SHS, Natalia stated that she smoked outside due to her husband's asthma, and never around her children. She also indicated her frustration with her stepfather who smoked inside her home.

> I smoke outside. I don't let it get to my kids. They have seen me smoke, but I do not smoke around them. My stepfather has smoked inside our home. It made my husband upset. I had to tell him, I also smoke, I respect my kids and my husband. My husband has asthma, and you are more than welcome to smoke all you want outside, but not inside.

Deidre said she never smokes at home because she has young children. In fact, she says: "We smoke outside on the patio, I am a firm believer in not smoking around kids. My son has asthma, my sister smokes, she was trying to light up in the car and I stopped her." Alex also shared the same sentiment stating: "My children are not exposed to SHS. When relatives visit we smoke outside."

Discrete View

Darcy stated that she never smokes at home. She also talked about how bad it smells in some of the homes where smokers live as she goes around helping her husband with roofing jobs. She emphasized that:

> I burn a lot of sage in the house. To clean the aura, it is quite smoky inside, but it does not have any chemicals. My mom is my neighbor. My brother had a girlfriend where …she would smoke one after another. My kids will go over to my mom and she will just continue to smoke.

Table 4

Themes From Question 1

Research Question 1	Main themes from Question 1
How do parents perceive children's exposure to SHS in their homes?	Description of children's exposure to SHS
	Awareness of health consequences of exposure to SHS
	Barriers to a SHS free home

Research Question 2: What specific strategies are parents using to protect their children from exposure to SHS at home?

Subquestions

1. How do parents of Head Start children describe their efforts toward protecting children from SHS inside their home?
2. How do you go about keeping children away from inhaling SHS?

3. Do parents consider specific methods of protecting children from exposure to SHS more effective than others?

For the focal area of strategies aimed at preventing children's exposure to SHS, the following two themes emerged: Strategies for Protecting Children from Exposure to SHS and ambivalence toward quitting smoking.

Theme 1: Strategies for Protecting Children from Exposure to SHS

Hope held a unique perspective on how to prevent children from exposure to SHS. She reported that at first she negotiated with her husband to stop smoking, but when he started sneaking around, and spending more time with friends, she relented. However she further negotiated conditions under which he could continue to smoke. These included washing up, changing clothes prior to interacting with the children.

> So I was like, I know that you are sneaking and you are going there to smoke…I told him, I can't tell you what to do, you have to want to stop on your own, um, but it is going to be that you can't smoke in our home. When you go outside and when you come in the home, you have to change those clothes, put your smoky clothes somewhere else. Because I don't want to smell it, and I do not want my kids to smell it

Similarly, Lisa pointed out that smoking outside and educating children about the dangers of exposure to SHS is important in keeping them healthy. She also stated that it is important to make sure the smell is not in your clothes. She stated that she tells others that:

> If they are going to smoke, go outside, like take it to the park, try to sacrifice not being at home and smoking, make sure the smell is not in their clothes, in the furniture, in the house, kinda do it in the open space away from the kids.

In discussing the strategies for protecting children from exposure to SHS, Nora stated that she tells her children to avoid their father's work space, she prays for her husband to quit smoking, and she keeps the children from visiting relatives who smoke in their home.

> He smokes in his work, in his car. If he open the door, you can still smell it in his office, the office is in the back of the house. His brother smokes. When he talks, you can smell it. My husband don't smoke when children are around. That's the reason the children don't go to the relatives' house … I say guys don't stay close to the smokers…I pray to God that my husband stop smoking.

According to Emily, her approach to protecting children from exposure to SHS is to smoke in her bedroom and ask her friends not to smoke around her children. The friends are not allowed in the bedroom which she views as her private space.

> I have friends that smoke, but I do not take my kids around them. If someone visits me and they want to smoke, they must smoke outside. I smoke in my bedroom, but they cannot come in the bedroom, like I said, that is my private space.

Rose spoke of her husband sitting in his favorite chair smoking, and she also stated that no one else is allowed to smoke inside her house. "He smokes outside or in the

living room when the children are not there. We have here other relatives that smoke. The relatives smoke inside their house, but not inside my house."

Nina indicated that she does not know if her children are exposed to SHS. She also stated that she does prevent others, including her fiancé from smoking inside her home.

> He smokes in the patio. He is not allowed to smoke in the house. The children are inside when he smokes outside. But when he comes in, he smells like it. The toxins stay outside. Aside from washing his hands, I have never seen him like change his clothes, but I would like for him to do that.

Brandy stated that she only smokes outside, telling children to go outside and play, walks away from the children if they are outside when she is smoking, and avoids visiting relatives who are smokers.

> I do not want children around me when I smoke. I tell them go outside and play. I cannot smoke inside the house, my mama has asthma. When it rains, I smoke around the carport…We rarely visit relatives. I do not want children around smoke because of sickness. Children get sick when they are exposed to smoke. The children have not got sick that is why I smoke outside to prevent them from getting sick.

Elena stated that she will ask people not to smoke around her children or take the children further away from where people are smoking. She stated that she will…"take

them further out when they are smoking. You know in some hospitals, they make you walk all the way down to where you can smoke."

Sandy, in speaking of how to protect children from SHS stated that one should smoke outside, and stop smoking so the young generation does not have to live with the consequences of exposure to SHS for the older generation.

> You should go outside to smoke, your clothes still going to smell like smoke. I smoke and I do not like the smell of smoke in the house …You got to stop for the young generation don't have to live with this from us.

Darcy said she only smokes outside of her home and at parties. She also stated that she does not smoke very often. When asked how she protects her children from SHS, Leesha responded "Keep them away. It is important to keep children away from smoke, and to make sure that they are not around when someone is smoking." Natalia, on her part reported that she smokes outside. "I smoke outside. I don't let it get to my kids. They have seen me smoke, but I do not smoke around them." For Jenny, she intervenes when her children are around other people who are smoking. "Sometime they do hang around relatives when they smoke. If I catch it on time, I tell them, go over there and play." Deidre on her part responded that, "We smoke outside on the patio, I am a firm believer in not smoking around kids." Asked about how he will go about ensuring that his home remained free of SHS, Alex, responded that children needed to be protected from SHS. "Don't smoke around children. Try to stop smoking, keep children away from smoking. I do not smoke in the house, I go take a walk or wait till the children are asleep."

Theme 2: Ambivalence toward Quitting Smoking

For this theme, participants differed in their views. While some participants acknowledged that quitting is difficult, others expressed the view that they did not have to quit smoking. As part of discovering the strategies utilized by parents to protect children from exposure to SHS, participants were asked if they planned on quitting smoking in the next 30 days. Three participants stated that they were going to think about it. When asked if her husband might like to look into quitting cigarette smoking, Hope responded that her husband had tried to quit smoking at her behest, but that he was unsuccessful because he started biting his nails and started staying out later than was usual for him.

> He tries to stop but I notice that he would bite his nails or some other thing. He is trying to stop. It is like one of those things that he might could go for a day or two, and something just triggers him, and he has to have his smoke.

On Lisa's part, she cited several reasons why she needed to quit smoking. She stated that it smells bad on one's clothes, makes children sick. In addition, she stated that as she is getting older, she has become more disciplined and should be able to quit.

> I am going to stop. It makes the spots, discoloration, it happens so fast. The main reason I stopped is that I just buried my mother, she died of lung cancer. Smoking, can take the strength out of your hair. Smoking makes you sick. Just like when someone drinks a lot of alcohol and they stop, they die. Smoking does the same, if you are smoking and you stop, it causes other problems too.

According to Nora, her husband has been smoking for 17 years, he has made some attempts to stop smoking. She stated that he even started to smoke e-cigarettes in an attempt to quit smoking, however, he began smoking the two interchangeably. “My husband he tries to stop, but he tells me it is hard for him. He smokes e-cigarettes. He smoke electric pipe, and then more cigarettes.”

Rose alluded to being perturbed by the possibility that her husband’s smoking may be exposing their children to harmful chemicals. She came to this realization when probed about her thoughts regarding children’s exposure to SHS after she reported that he smokes in the living room. Her response to this question was that she would speak to her husband about smoking outside.

> I will talk to my husband to completely smoke outside, away from the kids. He is not doing it in front of the kids. My husband never smokes in front of them. As long as he is not smoking in front of the kids, it should be okay. I am going to look into it, and I have asked my husband to quit before, but I cannot force him.

When asked if she knew whether her husband was planning on quitting smoking, Nina stated that she hides cigarettes, throws them away, and her husband just goes out and buys some more. “I have been trying, I hide cigarettes; I throw them in the trash. He’ll just go buy another pack. I can’t answer that.” On the other hand, Leesha states that her husband wants to quit smoking: “He says he wants to stop.” Jenny who hails from a close knit family reported that everyone in her family is a smoker. However, only her uncle plans to quit smoking. Deidre and Alex both discussed their desire to quit smoking.

Deidre suggested that it will take more than 30 days to quit smoking. “I kinda want to quit, I do not smoke that much; maybe in the next two months.” However, Alex stated that it is impossible to quit smoking.

> It is impossible to stop smoking in 30 days, it is a mind thing. Some people need a patch, but it is a mind thing. It is something you tell yourself that you need, stop stressing so much and stop buying cigarettes, you know.

In some instances, some of the participants displayed an unwillingness to quit smoking. Darcy stated that she had “no plans on quitting smoking.” Emily emphasized that she had no plans of quitting because she is taking precautionary measures to ensure that her children are not exposed to SHS by avoiding smoking indoors and in her vehicle.

> I have no plans of quitting. No, I do not plan to quit in the next 30 days, and I will not try to quit. I make sure that everybody knows they cannot smoke in the living room or in my car, because they have their car seat.

By the same token, Brandy reported that although she had no plans to quit smoking within the next 30 days, she had been contemplating it for three years.

> I do not plan on quitting in the next 30 days. Maybe next year. I am still debating and hoping that next year, I can quit. I do not think I can just quit in the next 30 days. Don’t smoke that’s the best one. Don’t start smoking. I have been thinking about quitting for the past three years and still got no plans on quitting.

Sandy had an entirely different attitude toward quitting. She stated that she would quit smoking if she found a man who would want to settle down and have a baby with

her. Since she did not have a man, and therefore, no prospect of having a baby, she was going to continue smoking. “If I find a man who wants to have a baby, I will stop smoking. You can’t smoke when you are pregnant. I don’t got no man, I can’t have no baby without no man.”

For Elena whose family resides next door to her 73 year old grandmother, stated that her home is smoke free because she does not smoke and she does not allow anyone to smoke in her home. However, once the children return home from Head Start, they go to grandma’s section of the house where according to Elena, they are exposed to SHS because her grandmother has no desire to give up cigarettes. “Grandma has no plans of quitting smoking, I have told her and she says she has been smoking for so long, and she starts getting anxious when she cannot have a cigarette.”

Discrete Views

Smoking as a Coping Mechanism

When asked if she planned on quitting smoking in the next 30 days, Natalia said that quitting is a choice between taking antidepressants and anti-anxiety mediations which have so many side effects compared to smoking a few cigarettes per day. “The Paxil, I am sleepy, drowsy and I am in a bad mood. And it gives me a headache afterwards. I know the cigarettes do not help either, but they help me calm my nerves.” In this situation, Natalia is using smoking as a coping mechanism for her anxiety similar to Alex and Hope’s husband. While Emily insists on smoking to avoid relapsing into “another bad habit.”

Source of Health Information

For the African American participants, knowledge of exposure to SHS was gained experientially by watching other family members die of cancer, or by having children, spouse or other relatives with asthma. Four of the eight African American participants had a family member or spouse with asthma or a parent or other relative that died from lung cancer or who suffers from emphysema and COPD. Hope was against allowing anyone to smoke inside her home because six out of her seven children have asthma. And also because she found and read an article in her doctor's office about the dangers of exposure to SHS on young children. She decided then that she would make her husband quit smoking, when that failed, she made signs and placed them in her home declaring her home, a no smoking zone.

> I read something the fear is that, and it was saying like children are at a higher risk for SHS, for the cancers and asthma it triggers and it hurts the people that's around than the actual smoker. And so, it's just I have had an aunt pass away from lung cancer, so it is something that is a very--a touchy subject for me. Most people don't want to talk about it, but I am one of those that think if you know about it, maybe you will change with all the education and everything. I put up signs that say no smoking, it's up. I put it everywhere so others know. I don't want anyone to say, oh, I did not know. I try to make it so there is no confrontation or anything. You know the rules coming in and that's how we do it.

Likewise, Nina and Deidre both reported that their children have asthma. Lisa said that she had just lost her mom to lung cancer, and thus was going to quit smoking.

> I am going to stop. It makes the spots, discoloration, it happens so fast. The main reason I stopped is that I just buried my mother, she died of lung cancer. Smoking, can take the strength out of your hair. Smoking makes you sick. Just like when someone drinks a lot of alcohol and they stop, they die. Smoking does the same, if you are smoking and you stop, it causes other problems too.

On the other hand, four out of seven Hispanic participants all reported learning about children's exposure to SHS and its health consequences on television, specifically Channel 45, Univision. One participant even stated she saw it on "Univision and Facebook."

Brandy had this to say about her source of information "SHS is worser (sic) than smoking. I heard about it everywhere, people talking about it on TV and Facebook." Elena had a similar view. "It affects the person that is absorbing the smell than the people smoking it. Other people talking about it. On channel 45-Univision, I wrote it down too." Alex also stated that he had seen the advertisement on television. "It is bad for kids, they talk about it on TV all the time." Natalia stated that she learned about SHS on "By I guess, like conferences and I guess TV, Univision." This is important because understanding how Head Start parents obtain their health information may help in designing campaigns that target specific population groups with health campaigns to abate the indoor exposure of children to SHS.

Table 5

Themes From Research Question 2

Research Question 2	Main themes from Research Question 2
What specific strategies are parents using to protect their children from exposure to SHS in their homes?	Strategies for protecting children from exposure to SHS
	Ambivalence toward quitting smoking

Chapter Summary

The findings of this study are presented in this chapter. The chapter reiterates the purpose of the research which was to explore the perspectives of Head Start parents on how they protect their preschoolers from exposure to SHS in their homes and the strategies they employ to accomplish this task. The participants for this study included 15 parents of Head Start children enrolled in the program during the spring of 2017. Included in this chapter are the settings, demographics, and steps taken to increase the trustworthiness of the study. The findings of the study are based on interviews and document reviews which were analyzed by coding and presented thematically.

Three themes emerged from the first research question: How do parents perceive children's exposure to SHS in their homes? These themes are derived from the responses provided by participants and include: (a) Description of children's SHS exposure, (b) awareness of health consequences of exposure to SHS, and (c) barriers to making a home free of SHS. Two main themes were identified for the second research question: What specific strategies are parents using to protect their children from exposure to SHS in their homes? They included: (a) Strategies for protecting children from exposure to SHS,

and (b) ambivalence toward quitting smoking. In addition, discrete themes related to the use of cigarette smoking as a coping mechanism for anxiety and how participants obtain their health information were identified. Chapter 5 will address the interpretation of the findings, implications for positive social change and practice, limitations of the study, and recommendations for future studies.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this multiple case study was to explore the views of Head Start parents regarding the exposure of their children ages 3 to 5 years from exposure to SHS and to understand the intentional strategies used by parents to protect children from exposure to SHS in their homes. Within this context, the goal of the study was to discover how the views and actions taken by parents with regard to protecting children from exposure to SHS can help attenuate the risk burden of exposure to SHS among low income children. I conducted face-to-face interviews with 15 parents of Head Start children. I used a semistructured interview format for primary data collection. These data were supported by archival documents provided by the research partner, and information extracted from extant literature on the exposure of children to SHS.

I addressed two main questions in this research;

1. How do parents perceive children's exposure to SHS in their homes?

2. What specific strategies are parents using to protect their children from exposure to SHS?

In all, five general themes emerged from the data analysis. The five main themes included the description of children's exposure to SHS, awareness of health consequences of exposure to SHS, barriers to a smoke-free home, strategies for protecting children from exposure to SHS, and ambivalence toward quitting smoking.

This study is important because it underscores the need for continued efforts to reduce children's exposure to SHS in their homes. Research indicates that children from

low-income families are more likely to be exposed to SHS in their homes (Hwang et al., 2012; Levy et al., 2011). Evidence from the literature on SHS also shows that children whose parents smoke are at increased risk for developing breathing problems, including wheezing and coughing (CDC, 2014). Likewise, children exposed to SHS are at increased risk asthma exacerbation (Kit et al., 2013), ear infections (Moreno, Furtner, & Rivara, 2012), and deterioration of lipid profiles and vascular function (Metsios, Flouris, Angioi, & Koutedakis, 2011). Further, Bandiera et al. (2011) noted that exposure to SHS also plays a role in major depressive disorder, generalized anxiety disorder, attention deficit and hyperactivity disorder, and conduct disorder in young children (p. 5).

Previous studies on the exposure of children to SHS have focused on the health consequences of exposure (Brunst et al., 2012), measuring the volume of particulate matter in the home (Northcross et al., 2012), the disease burden of children exposed to SHS, including its health effects, mortality rates, and cost of treating illnesses of children exposed to SHS (Brunst et al., 2012). However, few studies have attempted to explore how parents of preschool children, specifically how those enrolled in Head Start perceive children's exposure to SHS and the steps parents take to protect children from exposure to SHS. I designed this study to fill this gap.

Summary of Key Findings

This section presents a summary of the key findings from the study.

Table 6

Main Themes from the Study

Research questions	Main themes
Research Question 1	Description of children's exposure to SHS Awareness of health consequences of exposure to SHS Barriers to an SHS-free home
Research Question 2	Strategies for protecting children from exposure to SHS Ambivalence toward quitting smoking

The descriptions of SHS offered by the participants revealed that they lacked a clear understanding of the meaning of SHS. Only one of the participants could fully articulate what exposing children to SHS entailed. Overall, their understanding was inconsistent with the current definition of exposure to SHS. Exposure to SHS refers to the involuntary inhalation of a smoker's exhaled smoke and the sidestream smoke from the burning cigarettes (CDC, 2014; Orton et al., 2014).

Participants fared better with their knowledge of the health consequences of children's exposure to SHS. The participants had concordant views of SHS as a threat to the health of children. On the other hand, they held more diverse views on the specific illnesses that can afflict children as a result of exposure to SHS. Only 5 of the 15 participants correctly identified exposure to SHS as a trigger for asthma attacks. This is significant because parents of young children need to recognize signs and symptoms of illnesses associated with reactions to toxicants in order to intervene timely.

In discussing barriers to maintaining a SHS-free home, participants provided various reasons why it will be difficult to reach this goal. Chief among these deterrents, were the familial relationships. Five participants expressed their frustrations over trying to convince family members to give up smoking or not smoke around children. In addition, three participants claimed they never smoke indoors, yet others pointed to the length of time a family member has been smoking and the age of the smoker as reasons they find it difficult to eliminate SHS in their homes. As observed by Zaloudikova et al. (2012, p.40), family composition affects children's exposure to SHS. Depending on which parent is the smoker, it appears that the participants struggle with trying to convince the family member to give up smoking or smoke outside with varying degrees of success.

While addressing specific strategies employed by participants to safeguard children from exposure to SHS, participants provided divergent views. These included negotiating with a partner to avoid smoking around children, issuing an ultimatum to the offending spouse to quit smoking or face separation, hiding cigarettes from loved ones, smoking outside, asking children to avoid smokers, and avoiding visiting relatives.

In furthering the discussion on how to protect children from exposure to SHS, participants were asked if they were planning on quitting smoking in the next 30 days. The answers provided by non-smokers who live with smokers showed they had little control over the situation and that most are aware of the fact that cigarette smoking is partly an addiction (Pampel, 2005), and that only the smoker can decide when they need to quit (Hope). Among smokers, three stated they had no intentions of quitting smoking

since they already practice good smoking hygiene by not smoking indoors. Four more felt that conditions were not right for giving up smoking for various reasons.

Interpretation of Findings

The themes from this research study were presented in the previous chapter. The interpretation of those themes relative to the information in the literature review and the theories that framed the study follow. The themes are rendered chronologically with their interpretations, and the theories are discussed as appropriate to the findings.

Description of Children's Exposure to SHS

The findings from this study showed that although participants were able to describe SHS exposure, most of them could relate to the actual process of passively inhaling a smoker's expelled smoke and sidestream smoke from the burning cigarettes. This attests to their lack of in-depth knowledge of how clinicians view SHS exposure. The inability of participants to fully articulate the meaning of SHS can also be attributed to their levels of educational attainment. Zaloudikova et al. (2012) had previously conducted a study which found that low educational achievement of parents, especially mothers and stepmothers had a significant effect on a child's exposure to SHS at home. Ensuring that parents of Head Start children clearly understand the meaning of child exposure to SHS might help parents clarify if their smoking behavior puts children at risk of exposure to SHS at home. Findings from this research showed that more can be done to increase awareness of exposure to SHS among low income Head Start participants.

Awareness of the Health Consequences of Children's Exposure to SHS

Generally, the participants viewed children's exposure to SHS as a threat to the health of children. On the other hand, they held more diverse views on the specific illnesses that can afflict children as a result of exposure to SHS. Although five of the participants correctly identified exposure to SHS as a trigger for asthma attacks, the rest were significantly misinformed about the health effects of exposure to SHS. This is significant because parents of young children need to recognize signs and symptoms of illnesses associated with reactions to toxicants in order to intervene timely when their children show symptoms of illness.

The ailments that parents associated with children's exposure to SHS comprised a compendium of health problems some of which are associated with children's exposure to SHS and others which were offered as facts, but which had no basis in research. Only 5 of the 15 participants correctly identified exposure to SHS as a trigger for asthma attacks. Asthma attacks are just one of several health problems associated with children's exposure to SHS. Other participants stated that exposing children to SHS causes eye infections, nasty cough, lung infections, and lung cancer in children. Four of the participants said they did not know about the health consequences of SHS on children. Evidence shows that SHS does not cause asthma, (U.S. Department of Health, 2014), but instead, exacerbates the symptoms of asthma (Kit et al., 2013). Also, evidence in the current literature does not support the assertion that SHS causes eye infections in children. However, nasty cough could be symptomatic of other respiratory problems which are caused by exposing children to SHS. Frequently seen among preschool age

children are upper respiratory illnesses and middle ear disease (Strachan & Cook, 1999; USDHHS, 2014). Regardless of the information available to the public on children's exposure to SHS, evidence suggests that as at 2004, approximately 40% of children lived in households where they were exposed to SHS (Öberg et al., 2010). As noted by Orton et al. (2014), lack of knowledge about health consequences serves to sustain smoking among members of low SES. However, Wilson et al. (2013), showed that mothers were motivated to protect their children from exposure to SHS when they became aware of the harm associated with exposure to SHS.

Barriers to Making a Home Free of SHS

Participants were able to clearly articulate barriers to eliminating SHS in their homes. However, among participants, it appears that the most important factor working against maintaining a smoke-free home is the familial relationships among household members. Five of the participants stated that their homes were free of SHS, others reported that making their home free of SHS was a "constant battle" with the household member who is a smoker. Yet others tried to justify their smoking behavior and that of their spouse, or other relatives based on how they viewed the role of smoking in their lives, the age of smoker, or length of time the person has been smoking.

Contrarily, some of the participants did not have a good understanding of how smoke infiltrates all parts of the house from its point of origin due to simple air circulation. They indicated that they only smoke in designated rooms and that they leave the room to go outside when children are around; or smoke in the garage or patio. Some of these participants also believed that their homes were free of SHS.

Finding a balance between maintaining familial relationships and is the most significant barrier to maintaining a home that is free of SHS. Three participants, Hope, Nora, and Nina discussed their struggles with trying to maintain a home that is free of SHS. For example, Hope stated that her husband had attempted to quit smoking in the past, but the effort tried quitting before, but that whenever he attempted to do so, it affected his behavior in a manner that she considered detrimental to their relationship.

> He tries to stop but I notice that he would bite his nails or some other thing. He is trying to stop; it is like one of those things that he might could go for a day or two, and something just triggers him, and he has to have his smoke…I noticed he would want to go to a friend's house and he is not the kind of person who likes to go anywhere.

Nora's account of her struggles with her husband and mother-in-law demonstrates just how difficult it is for even the most proactive partner to prevent the exposure of children to SHS.

For the discrete finding of burning sage to cleanse the air, evidence suggests that combustible material that yields smoke contains chemicals. According to University of California e-Scholarship (2011), when "contaminants are generated in indoor environments in excessive concentrations, they may impair the health, safety, or comfort of the occupants (p.2)."

Strategies for Protecting Children from Exposure to SHS

Nearly all participants demonstrated some knowledge of how to protect children from SHS, but not all were inclined to follow through with a specific plan. Participants

discussed various strategies for protecting children from SHS. Some of the strategies ranged from hiding cigarettes from the smoker, making the smoker go outside to smoke, educating children to stay away from smokers, and demanding specific levels of smoking hygiene from the smoker.

These strategies included negotiating with the spouse or partner to stop smoking, and as stated by Hope, it got to a point when she issued an ultimatum to her husband to quit smoking or leave. When this resulted in undesired outcomes of tension and anxiety for her husband, and increased frustration for her, she dialed back and renegotiated the conditions for her husband's continued smoking. This included specific instructions on smoking hygiene: Smoke outside, and change of clothes, "…You cannot smoke in our home…when you come in the house you have to change clothes, put your smoky clothes somewhere else." These injunctions demonstrate the protective behavior of parents sending spouses and other family members outside to smoke is supported by harm reduction theory which is focused on reducing the harm caused by exposure to SHS. In Lisa's opinion, the most important thing to do is teach children about the dangers of SHS. This shifting of responsibility to children ages three to five years of age may point to a bigger issue of how children from low-income families are socialized to assume greater responsibilities at an early age when they are not able to comprehend the reason for the expectations (Pampel, 2005).

Other participants were less vociferous in their attempts to identify how to protect children from SHS. Emily's approach was to smoke in her bedroom and ask friends to smoke outside. Rose does the same by asking her friends to smoke outside, but her

husband “smokes outside or in the living room when the children are not there.” Similarly, Nina does not allow anyone to smoke inside her home and enforces handwashing for her husband when he comes back into the house. He smokes on the patio. Nina just hides or throws away her husband’s cigarettes, and he goes and buys another one. This behavior, albeit protective, is an expensive intervention which drains the family’s funds. This assertion is supported by evidence that a smoker reduces the family’s liquid asset by $1,640 to $3,810 a year, on a “pack a day habit” (Tobaccofreekids.org, 2017, para. 1).

Leesha stated that her husband wants to quit smoking, and Jenny reported that her family members are smokers, but only her uncle speaks of plans to quit smoking. Both Alex and Deidre want to quit, but they each acknowledged that quitting is difficult and cannot be achieved within 30 days. Brandy also plans on quitting smoking but added that she has been in the planning for three years. Sandy stated that she will quit if she finds who “wants to have a baby. You cannot smoke when you are pregnant. I don’t got no man. I can’t have no baby, without no man.”

Smokers who believe that they practice good smoking hygiene, for example, washing their hands after smoking, not smoking inside the house, or smoking inside the house, but not when the children are home, did not feel like they needed to quit smoking. Smoking hygiene entails “smoking away from a child’s immediate environment” (Leung et al., 2004, p. 688) while poor smoking hygiene involves smoking at least “3 meters” 9.84ft within a child’s environment (p.691). As stated by Hope and Rose, quitting is a decision that can only be made by the smoker. Granted that these spouses cannot force

their husbands or partners to quit smoking, Elena talked about how her children loved to stay with her 73-year-old grandmother after they return home from Head Start since she has to work until later in the evening. Because of this arrangement, she stated that grandma "Grandma has no plans of quitting smoking, I have told her and she says she has been smoking for so long, and she starts getting anxious when she cannot have a cigarette." Natalia did not want to give up smoking because, for her, it will mean going back to prescription antidepressants and anti-anxiety pills. Although it is well established that any combustible material that yields smoke contains chemicals, Darcy insisted that burning sage indoors purified her home even when by her own admission, "it gets quite smoky." (University of California E-scholarship, 2011).

Ambivalence toward Quitting Smoking

To further discover the strategies employed by parents for protecting children from exposure to SHS, parents were asked if they had any plans of quitting smoking within 30 days. Participants' responses toward giving up smoking or smoking outside to reduce the level of SHS inside their homes were ambivalent; more so when their spouse is the smoker. Three of 15 participants stated that they were going to think about quitting smoking (Lisa, Deidre, and Alex). Three participants stated that have tried to persuade their spouses to quit without success. Hope stated it resulted in anxiety for her husband, Nora stated that her husband has been smoking for 17 years and that "it is hard for him to stop. Rose expressed concerns that her children might be inhaling toxins from her husband's smoking and said that she would talk to her husband of completely smoking outside: "I have asked my husband to quit before, but I cannot force him. This is

supported by the work of Pampel (2005), who argued that other social and political forces do work in concert with stress, and lack of resources to foster smoking among members of this group. This is also in resonance with the views of Hovell and Hughes (2009).

Others talked about not knowing whether their children were being harmed by exposure to SHS, especially since the children were not showing any signs of infections. By the same token, three participants (Darcy, Emily, and Brandy) displayed an unwillingness to quit smoking. They insisted that they already take measures such as smoking outside and not smoking a lot, and as such, did not have to give up smoking. One participant stated that quitting will cause her to go back to "another bad habit" (Emily), while another stated that smoking alleviated symptoms of depression and anxiety without the side effects of sleepiness, and irritability (Natalia). One of the participants in acknowledging that smoking has health consequences stated that she found those to be more palatable than the side effects of her medications (Natalia).

Discrepant Findings

Other findings that emerged from this study include the role of cigarette smoking as a coping mechanism in curtailing other addictive behaviors, calming anxieties, and as a substitute for prescription antidepressants. In this situation, Natalia is using smoking as a coping mechanism for her anxiety. She stated that cigarettes calm her down, and works better to control her depression and anxiety compared to her prescription medications which have many side effects. Similarly, both Alex and Emily stated that cigarettes help control anxiety. Hope also indicated that her husband uses it to control his anxiety. This

supports the views espoused by Hovell and Hughes (2009) that smoking is reinforced by a complexity of physical, social, and financial contingencies.

In responding to the probing question of how they gained the knowledge they have on children's exposure to SHS, participants offered two important responses. Three African American participants responded that they learned all about exposure to SHS by reading an article, watching a loved one die of lung cancer, or helping a family member cope with asthma. Among the Hispanic participants, four out of seven reported learning about children's exposure to SHS and its health consequences on television. This shows that choice of media may have an impact on how participants receive health information.

Theoretical propositions

As demonstrated in a previous study, participants continue to smoke even when they understand that exposure to SHS is harmful to the health of children (Robinson & Kirkcaldy, 2007). As noted by Pampel (2005), unlike their higher income counterparts who have decided to abandon smoking for healthier lifestyle alternatives, low SES families and friends continue to behave in ways that perpetuate smoking. Findings from this study show that not only do parents or other household members continue to smoke, the family and to a lesser degree, friendship dynamics also appear to be a factor in children's exposure to SHS.

The views and behaviors espoused by the participants of this study regarding children's exposure to SHS and their accounts of actions taken to protect children from exposure to SHS validate all three theories that guided this research. At the core of a child's health and future health behavior are the actions of the child's parents. Hovell and

Hughes (2009) asserted that smoking and its health consequences, including exposure to SHS are byproducts of behavior. Although they noted that these behaviors are reinforced by a complexity of physical, social, and financial contingencies, the social ecological model (SEM) goes a little further in positing that personal attributes, reciprocity among members of a social group, the environment, and polity, also play key roles in the health outcomes for a child (Bronfenbrenner, 2005).

Further, actions taken by participants to protect their children from SHS are limited by their lack of knowledge of SHS and its associated health consequences. However, all the efforts made by the participants who attempted to limit the exposure of their children to SHS were consistent with the concept of harm reduction. Harm reduction includes all attempts aimed at reducing the use of any substance which places a person or others at risk, in an effort to mitigate the harm. Therefore when participants prevented others or their spouses from smoking indoors, they were attempting to reduce the amount of SHS indoors to benefit the health of their children. Throwing away or hiding cigarettes were also intended as measures to reduce the number of cigarettes smoked by the smoker, and thus the amount of SHS in the home.

The participants who were ambivalent toward quitting and those that could not take a stand on stopping indoor smoking in their homes were influenced by their living arrangements and family dynamics. Their views and actions may also have been influenced by their limited knowledge of SHS and its health consequences, their role in the family, and the power structure within their homes. Their views and actions can be explained through the tenets of the theory of reasoned action (TRA) which are as follows:

1) a person's belief regarding a health problem impacts his or her attitude toward the problem, 2) the subjective norms which manifest in social pressure within a group influences a person's behavior toward a health problem, and 3) behavior is also influenced by an individual's self-efficacy or control beliefs (Ajzen & Fishbein, 2008). As seen with Elena and her grandmother who insists that she has been smoking for too long, normative behavior, such as respect for one's elders and deference to males may factor into the family dynamics which perpetuate indoor smoking and children's exposure to SHS.

Limitations of the Study

This study included a limited sample size of 15 participants drawn from four Head Start sites located in Houston, Texas. Because this was a descriptive study, its focus was limited to exploring the perceptions of Head Start parents on children's exposure to SHS and their preferred ways of protecting children from SHS. The findings reflect the perspectives and personal accounts of smoking behaviors and related practices of the participants which have implications for the health of their preschool children enrolled in Head Start. The findings may not be generalized to Head Start parents in other regions but may be useful for practitioners when considering health topics for improving the living conditions of children within the Head Start community. For a multiple case study, the sample size was higher than customary and allowed for the voices of more Head Start parents to be heard, thus enhancing the credibility of the study. Generalizations to other Head Start parents will require a larger scale study with additional locations such as rural

versus urban Head Start programs, and assess other factors known to impact health behavior.

Recommendations

This qualitative multiple case study was descriptive in nature as it sought to understand how parents of Head Start children view children's exposure to SHS and what strategies they employ to protect children from SHS. Head Start parents who participated in this study discussed their views on the exposure of children to SHS as well as their knowledge of illnesses caused by or exacerbated by exposure to SHS. An analysis of these data showed parents lacked specific knowledge to make health affirming decisions for their children with regard to providing a home environment that is not contaminated with SHS.

It may have been useful to include the perspectives of Head Start staff because they wield a lot of influence over parent involvement in accessing preventive health services for their children. They also have collaborations with local healthcare providers through whom they can further the conversation on eliminating SHS in children's home environment, at least at the county level. The formal and informal collaborations between Head Start staffs and City and County Health Departments allows them access to expanded health fairs where medical personnel can easily share information on consequences of children's exposure to SHS with attendees who are Head Start parents. Staffs also organize annual parent training at the national, State and local levels where this information can also be disseminated to parents of young children

Intervention efforts that are based on increasing parent awareness of the concept of children's exposure to SHS, risks associated with exposure and preventive measures to guard against indoor air contamination with SHS might set the stage for greater awareness of the problem and possibly improve parent's intentionality in protecting children from exposure to SHS. Also, those that plan parent conferences for Head Start programs can use the information gained from this study to increase awareness of the hazards of indoor smoking to young children. Wilson et al. (2013), showed that mothers were motivated to protect their children from exposure to SHS when they became aware of the harm associated with exposure to SHS. Finally, lessons learned from this study can be used to design culturally appropriate, supportive training for Head Start parents that are smokers or those that reside with smokers. Study participants for this study were recruited from four sites in one specific Head Start program in Houston, Texas. The results from this study may only pertain to the participants.

Future research should expand the study to other Head Start programs to learn more about the perspectives of parents, and those of Head Start staff. This will help to obtain additional data that may be useful in designing training programs aimed at eliminating or reducing children's exposure to SHS in their homes and serve to duplicate the research in other locales. In addition, future studies may consider involving more fathers for their perspectives, as well.

Implications for Positive Social Change

Children raised in poverty continue to bear the brunt of exposure to SHS (Levy et al., 2011). Their parents continue to smoke even when they understand that exposure to

SHS is harmful to the health of children (Robinson & Kirkcaldy, 2007). This assertion is supported by data obtained from this study. The Head Start parent participants had low educational attainment, socioeconomic status, and limited knowledge of exposure to SHS and its health consequences for children.

The knowledge gained from this study may be useful for planning educational programs for Head Start parents. It can also be shared at the national and local levels during Head Start conferences as a means of igniting more conversations among Head Start grantees, to engage in efforts to help the families they serve to eliminate SHS from their homes.

On an individual level, parents of Head Start children that participated in this study will benefit from more open conversations with Head Start program staff as this researcher intends to push for more proactive approach for identifying and providing positive support (educating parents about the consequences of SHS to children, and offering assistance for quitting if they are interested), to parents who are smokers to reduce indoor smoking. Those that plan parent conferences for Head Start programs can use the information gained from this study to design culturally and contextually appropriate intervention for parents that are smokers or those that reside with smokers.

This study highlights the importance of finding a more effective means of disseminating health information to the Head Start population. With the ubiquity of social media and various platforms for watching television in this millennium, findings from this study suggest that public health may be able to benefit from providing comprehensive, contextual, culturally sensitive, yet succinct public service campaigns

aimed at reducing or eliminating indoor smoking and reducing children's exposure to SHS. This will help mitigate the negative health consequences that SHS poses to children whose parents smoke inside their homes. Parents did not show a clear understanding of children's exposure to SHS, and its health consequences or how to prevent it from happening. However, they reported gaining what knowledge they possessed on the subject from television and Facebook. As social media continues to evolve, campaigns designed to increase knowledge of children's exposure to SHS must evolve as well, to reach the target population on a larger scale.

Conclusion

This study was designed to increase knowledge regarding the perceptions of Head Start parents on the exposure of children to SHS at home and intentional strategies parents employ at home to protect children from SHS. I used a multiple case study approach to explore the perspectives of 15 Head Start parent participants. These participants were drawn from a Head Start program in Houston, Texas. The findings of this study showed that participants lacked knowledge of children's exposure to SHS, its health consequences for children, and appropriate measures for protecting children from exposure to SHS. The study also highlighted cultural differences in uptake of health information between African American and Hispanic participants with regard to how they acquire knowledge of health information. Among African Americans, the non-smokers reported their source of information as based on observation of sick family members who were smokers and suffered or are now suffering the consequences of their

smoking behavior, while the Hispanic non-smokers based their knowledge on information from Univision television shows.

The principal themes generated from this study include description of children's exposure to SHS, awareness of health consequences of exposure to SHS, barriers to a smoke-free home, strategies to protect children from SHS, and ambivalence toward quitting smoking. Participants lacked the self-efficacy to prevent indoor smoking owing to social and familial contingencies related to childcare, living arrangements, and other factors that perpetuate smoking. Based on the above themes, it is imperative that future studies include a larger number of participants to increase understanding of the smoking habits of Head Start parents and their perceptions of how to prevent children's exposure to SHS. In addition, including similar advertisements in all other television channels might help to increase knowledge of children's exposure to SHS and increase understanding of the consequences of indoor smoking on children. Finally, this study may ignite interest in increasing opportunities for Head Start parents to learn more about preventing indoor smoking, and thereby, reduce children's exposure to SHS.

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Appendix A: Interview Protocol

Head Start Parent Perspectives on Child Exposure to Secondhand Smoke at Home

The purpose of this study is to understand the views of Head Start parents regarding secondhand smoke. I will be asking you some questions regarding secondhand smoke as indicated on the consent form we just reviewed. But first, I am going to ask about your age, race, ethnicity, and other demographic questions. Please let me know if you are uncomfortable with any of the questions. You can refuse to answer a question, refuse to participate in this interview, or withdraw your consent at any time.

Now let us begin:

1) How old are you?
2) What is your marital status?
3) What are your ethnicity and race?
4) What is your level of education?
5) How many children live with you?
6) How many of your children have attended Head Start?
7) How many smokers live in your household?
8) Are you currently employed?
9) What kind of work do you do?

Two Central Questions

RQ1—Qualitative: How do parents perceive children's exposure to SHS in their homes?

Subquestions

1) How would you describe exposure to secondhand smoke in your home?

Probe 1: What is your understanding of exposure to secondhand smoke? Please explain

Probe 2: Do you believe that your children are exposed to secondhand smoke?

Probe 3: Please provide examples of situations where your children might come in contact with secondhand smoke.

2) Are there any barriers to having a smoke free home?
3) What are your beliefs about children's exposure to secondhand smoke inside their homes?

Probe 1: What are some of the risks that secondhand smoke might pose to children?

Probe 2: Describe how smoking around children could affect their health.

Probe 3: How important is protecting children from secondhand smoke?

4) How do you feel about others in your environment smoking around children?

RQ2—Qualitative: What specific strategies are parents using to protect their children from exposure to SHS?

1) How would you describe your efforts toward protecting children from secondhand smoke inside their home?
2) How do you go about keeping children away from inhaling secondhand smoke?

Probe 1: Are there any motivations for using a specific method to protect children from exposure to secondhand smoke in favor of other methods?

Probe 2: Are there specific things that can be done to protect children from exposure to secondhand smoke?

3) Do you consider specific methods of protecting children from exposure to SHS more effective than others?

   Probes 1: What are the best ways to protect children from SHS exposure?

   Probe 2: What would you consider the most important approach to protecting children from exposure to secondhand smoke?

   Probe 3: What are the ways that secondhand smoke exposure can be reduced in the home?

   Probe 4: Are there any strategies you would recommend for preventing exposure to secondhand smoke?

   Probe 5: Do you plan on quitting smoking in the next 30 days? How many times have you attempted to quit smoking? (Applies only to smokers).

   Probe 6: What influenced your decision to attempt to quit smoking?

*Additional probing questions included the following prompts: please elaborate, please tell me more about, x , or is there another way of looking at x (it)?

Appendix B: Consent Form

Appendix C: Recruitment Flyer

[redacted] **Head Start parents**

CONFIDENTIAL CONFIDENTIAL CONFIDENTIAL

Who can participate?

The researcher invites all current Head Start parents who smoke cigarettes or live with a smoker to participate in this study.

Purpose of the Study

To understand the views of Head Start parents regarding secondhand smoke.

Call me at [redacted]@waldenu.edu

.

Appendix D: Letter of Cooperation From a Research Partner

[redacted].

May 8, 2017

Dear Christiana Bekie,

The [redacted] has reviewed and approved your proposal backed by the Institutional Review Board of Walden University and found it to be in compliance with the agency's policies on protecting the confidentiality, safety, and dignity of Head Start families and their children. Based on the recommendations of the [redacted], and my review of your research proposal, I give permission for you to conduct the study entitled Head Start Parent Perspectives on Child Exposure to Secondhand Smoke at Home within the following four Head Start sites: [redacted] As part of this study, I authorize you to recruit parents of Head Start children who identify themselves as smokers, and who voluntarily agree to participate in your study. You may distribute your recruitment flyers which have been approved by the [redacted] in the four sites identified above.

We understand that you will be collecting data by way of parent interviews at each site and that you will also review data from the agency's database. You have permission to work with the MIS manager to extract data that will not violate the confidentiality of program enrollees and their families. The researcher will return to each site for a second meeting with participants during which the researcher will review the transcripts with each participant to ensure accurate representation of her or his interview responses (transcript review). We also appreciate that you will be making a presentation of your findings, and sharing other valuable information with the participants upon completion of your research and that you plan on presenting same at the National Head Start Conference. Each individual's participation will be voluntary and at their own discretion. The agency has agreed to provide you with a meeting room where you can meet with parents to conduct individual interviews. You may use the parent rooms at each of these sites to conduct interviews with research participants, but you must arrange the use of the parent meeting rooms directly with the center director at each site. The center directors will schedule for you to have access to these rooms between the hours of 9:00 a.m. to 2:00 p.m., to minimize interference with program activities. We reserve the right to withdraw from the study at any time if our circumstances change.

You will be responsible for complying with [redacted] Policies. You must immediately notify the [redacted] of any disagreements resulting in conflict between you and any research participant if you are unable to resolve it.
I confirm that I am authorized to approve research in this setting and that this plan complies with my agency's policies.

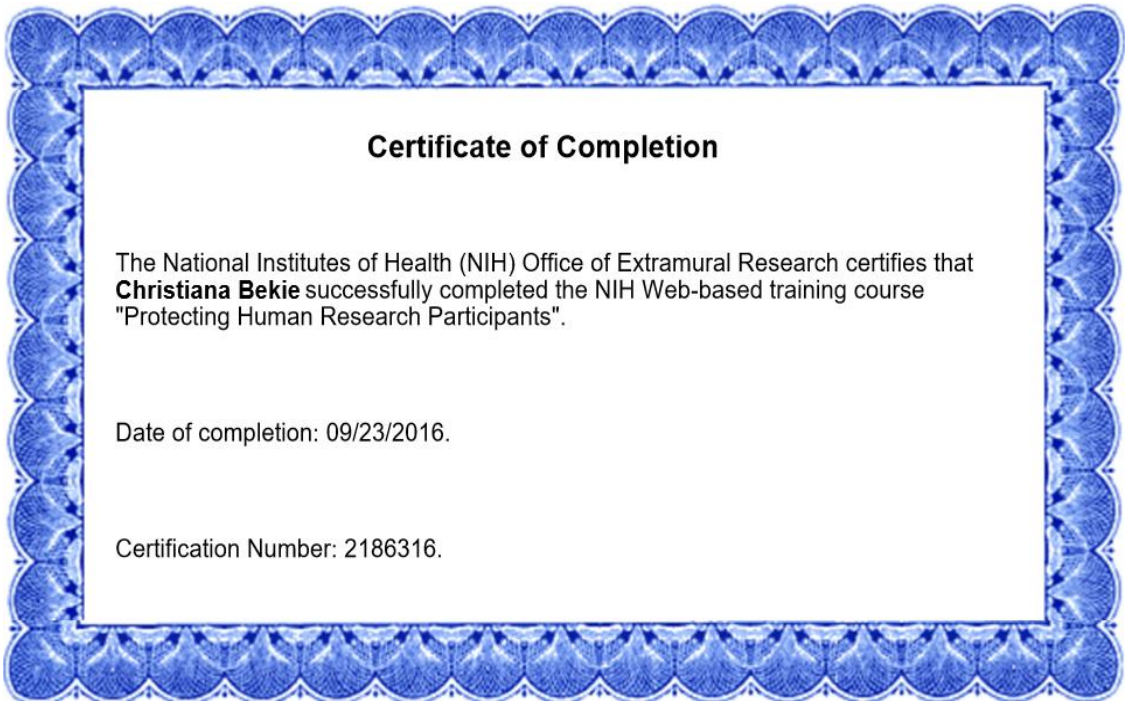
I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

[redacted]

[redacted]

Appendix E: Certificate of Completion



Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Christiana Bekie** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 09/23/2016.

Certification Number: 2186316.