Shared Vulnerability: A Theory of Caring for Children With Persistent Head Lice

Shirley C. Gordon, RN, PhD

ABSTRACT: Head lice infestation is a worldwide phenomenon that affects persons of all ages. For reasons that are not entirely clear, a number of children experience persistent head lice infestations lasting weeks, months, or years. Little is known about the impact of caring for children with persistent head lice on parents/caregivers. The purpose of this grounded theory study is to explore how parents and caregivers manage caring for children with persistent head lice. Data were obtained through participant observation and in-depth interviews with a purposive sample of 20 parents/caregivers of school-age children with persistent head lice. The researcher identified a 4-stage process of shared vulnerability used by parents/caregivers to manage caregiver strain associated with caring for children with persistent head lice. The four stages included (a) being ostracized, (b) losing integrity of the self, (c) struggling with persistence, and (d) managing strain.

KEY WORDS: caregiver strain, grounded theory, persistent head lice, shared vulnerability, stigma

INTRODUCTION

Head lice infestation is a worldwide phenomenon that affects persons of all ages. The head louse, known as *Pediculus humanus capitis*, is a small parasite roughly the size of a sesame seed in the adult stage. Although head lice are not known to cause disease in the host, they feed on human blood and are known to spread from person to person primarily through direct head-to-head contact. Although considered problematic for some, head lice infections have not been associated with significant morbidity outcomes. Therefore, head lice infestations receive little medical attention or research funding.

For an unknown number of children and adults, head lice infestations can develop into a persistent state lasting for weeks, months, or even years. Gordon (1999, p. 6) defined persistent head lice as three or more active infestations involving the presence of live lice in a period of 6 weeks. Factors contributing to the development of persistent head lice include emerging resistance of head lice to chemical pesticides in commercially available products (Burkhart & Burkhart, 2000; Meinking et al., 2002; Pollack et al., 1999), lack of caregiver knowledge and skill level, repeat reinfestations from known or unknown contact sources, autoreinfestations from viable eggs left on the hair, and lack of access to treatment (Gordon, 1999).

LITERATURE REVIEW

The experience of caring for children with head lice generally begins with detection of an active infestation followed by a process of treatment and repeat inspection until the lice infestation is successfully eliminated. The National Pediculosis Association (NPA; 2001–2004) promotes screening for head lice as a year-round, weekly responsibility of parents and caregivers. Accurate detection is an important factor in confirming active head lice infestations. There is some disagreement in the literature regarding what constitutes an active head lice infestation. The American Academy of Family Physicians (2003) recommends that an active infestation be defined as the presence of live lice. This position is supported by the National Association of School Nurses (2004). However, some individuals and school policies recommend including the presence of nits (eggs) as a positive indicator of an

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Shirley C. Gordon, RN, PhD, is an associate professor at the Christine E. Lynn College of Nursing, Florida Atlantic University, Port St. Lucie, FL.

active head lice infestation (Burkhart, 2005; NPA, 2001–2004). In an authoritative special report on the treatment of head lice, Burgess, Pollack, and Taplin (2003) asserted that the presence of nits in the absence of live lice may “simply be evidence of a past infestation” (p. 11). Pollack, Kiszewski, and Spielman (2000) reported that health care specialists and nonspecialists experience difficulty distinguishing between active and extinct louse infestations and therefore tend to overdiagnose cases of head lice. These studies raise concerns about the effectiveness of excluding children from school for the presence of nits.

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The participation level and accuracy of detection screening performed by parents/caregivers have not been systematically evaluated. Detection screening for head lice can be performed on wet or dry hair, using a variety of combs or visual inspection. Several studies have been conducted in which the efficacy of individual screening techniques using trained screeners has been evaluated. Researchers have reported that wet and dry combing techniques are superior to visual inspections in detecting head lice on children (Mumcuoglu, Friger, Ioffe-Upensky, Ben-Ishai, & Miller, 2001; Roberts, Casey, Morgan, & Petrovic, 2000; Roffe, 2000). DeMaeseneer, Blokland, Willems, and Vander (2000) compared the detection of head lice using traditional scalp inspection with wet combing in school children (*n* = 260) between the ages of 2 and 12 years. The children were inspected by two teams of trained screeners. The first team did traditional scalp inspection whereas the second team did wet combing. Of the 49 children found to have head lice with the wet combing method, 17 (35%) infestations were missed using the traditional visual scalp inspection. These results suggest that training and technique are important factors in accurately detecting head lice and that wet combing is the most effective screening method. Confusion surrounding accurate, efficient detection methods for diagnostic purposes and to determine treatment success may contribute to the development of persistent head lice.

After the identification of head lice, some parents/caregivers receive guidance from health care providers (HCPs) such as school nurses, physicians, and pharmacists, whereas others face treating head lice on their own using commercially available treatments, manual delousing, and/or home remedies. There is a general consensus in the medical literature that only persons with live lice require treatment with a product containing a pediculicide. Prophylactic use of head lice products and environmental spraying for head lice are discouraged as ineffective and potentially dangerous. The recommended first-line treatment for head lice involves the use of over-the-counter products that contain pharmaceutical-grade pesticides (Burgess et al., 2003).

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Commercial pharmaceutical products, such as chemical shampoos and lotions containing pyrethroids, lindane, and malathion, have the potential to be toxic but are generally thought to be effective and safe if used according to instructions provided by the manufacturers (Burgess et al., 2003). Use of these products over time contributes to the development of resistant lice (Burkhart & Burkhart, 2000; Meinking et al., 2002; Pollack et al., 1999). In addition, these products are not 100% ovicidal, leaving up to 20% of louse eggs viable following treatment (Burkhart, 2004; Chosidow, 2000; Frankowski & Weiner, 2002). Pesticide resistance and reinfestation from viable eggs may be a contributing factor in the development of persistent head lice.

Manual delousing with a lice comb has also been studied. Plastow and colleagues (2001) investigated the effectiveness of two head lice management methods: commercial head lice preparations (CHLPs) and manual delousing (bug busting). In a pilot study, 30 children (aged 4–16 years) with live head lice were randomly assigned to two intervention groups. The CHLP group was given an initial dry combing by nurses to be followed by treatment with a commercial product. Children in the CHLP group were treated again 7 days later and received several combings in between. The manual-delousing group was given a pack that consisted of combs, a plastic cape, and written instructions. Participants in this group used a dry combing method every 3rd day for 14 days. Results of the study reported 15.15% (*n* = 8) of the manual-delousing group and 10.10% (*n* = 2) of the commercial product group had total eradication of head lice (absence of live lice at day 14). The researchers did not include data from the parents/caregivers, and they failed to screen close family contacts, which may have contributed to higher reinfestation rates and low overall success rates. In addition, manual delousing and nit removal is a time-consuming, tedious process that many parents are not willing to do.

In their search for effective treatments, parents/caregivers often use home remedies when commercial products and combing methods have failed or if they do not want to expose their children to pesticides or other chemicals. These treatments range from commonly used ingredients such as mayonnaise to resorting to more dangerous treatments such as the use of kerosene (Gordon, 1999). There is little empirical evidence to support the efficacy of these methods or the frequency in which these methods are used (Takano-Lee, Edman, Mullens, & Clark, 2004).

A review of the literature did not reveal any published studies that explored the effect of head lice on the family, the parents/caregivers, or the process of caring for children with head lice. The absence of the experience of parents from the literature was also reported by Koch, Brown, Selim, and Isam (2001). The research literature was also silent on the phenomenon of persistent head lice. Therefore, very little is known about the impact of persistent head lice on families in general or specifically on persons who are responsible for the primary care of children experiencing persistent head lice. What is known is anecdotal in nature, such as parent/caregiver perceptions described as "outsized reactions" and "misplaced loathing" (Burgess et al., 2003, p. 3). The purpose of this study is to explore the experience of caring for children with persistent head lice from the perspective of parents/caregivers.

METHOD

The qualitative, inductive method known as grounded theory was used in this study (Glaser, 1978; Glaser & Strauss, 1967; Strauss & Corbin, 1990). Guided by symbolic interactionism, grounded theorists assume that people who experience a similar situation share a basic social psychological problem that "they may or may not be able to articulate" (Schreiber & Stern, 2001, p. xvii). The purpose of grounded theory is to develop midrange theories aimed at discovering shared social psychological problems and the processes people use to manage the shared problems. The method is particularly helpful in nursing when exploring "how people understand and manage their lives in the context of existing or potential health challenges" (Schreiber & Stern, 2001, p. xvii).

The purposive sample consisted of 20 parents/caregivers who were caring for at least one child with persistent head lice in southeast Florida. For the purposes of this study, the definition of persistent head lice presented by Gordon (1999) was revised to include "persons who experience 3 or more active infestations involving the presence of live lice in a period of 6 weeks" (p. 3) who are not amenable to treatment. Grounded theory studies are guided by a sampling strategy known as theoretical sampling, in which a phenomenon is examined where it is found to exist (Chenitz & Swanson, 1986). Following Institutional Review Board approval, participants were identified through their children and recruited through referrals from public schools (35%), a nonprofit lice treatment facility in South Florida (60%), and word of mouth (5%). The majority of the participating parents/caregivers were mothers (75%, $n = 15$), followed by grandmothers (15%, $n = 3$), one foster father (5%), and one stepmother (5%). Participants identified themselves as Caucasian ($n = 19$, 95%) and Hispanic ($n = 1$, 5%). Ages of the participants ranged from 22 to 73 years old, with an average age of 33 years. The majority of the participants (65%) were single parents and reported that their child/children spent time in more than one home. The number of children in the home ranged from 1 to 6, with an average of 2.6 children. Half ($n = 10$) of the participants reported that their children participated in a free or reduced-cost lunch program at school, and 35% ($n = 7$) experienced financial difficulty obtaining treatment products. Children missed an average of 11 days from school for head lice, with a range of 0 to 37 days. Many of the children (30%, $n = 6$) in the participant families slept in a bed with parents or siblings. This group ranged from 2 to 4 persons in a bed, with mean of 2.6 persons.

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Data Collection and Analysis

Data collection took place over 3 years using in-depth interviews and participant observation. After obtaining informed consent, parents/caregivers were interviewed and asked to describe their experience of caring for children with persistent head lice. The interviews took place at home or in a private area at a nonprofit lice-treatment facility in South Florida. All

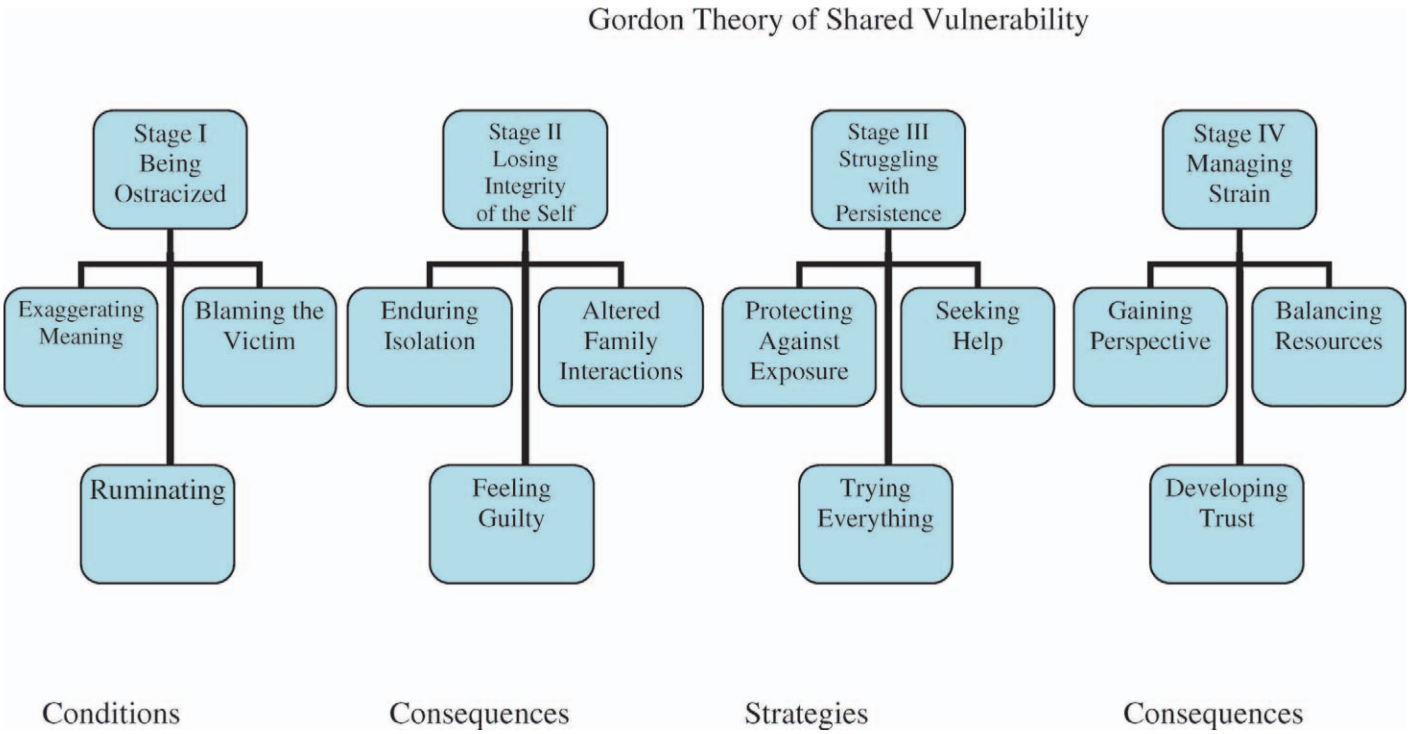

Figure 1. Conceptual Model of the Four-Stage Theory of Shared Vulnerability. ©2007 S. C. Gordon.

interviews were audiotaped with permission. The description began from the time the child(ren) was/were initially diagnosed with head lice. Children were not interviewed for this study.

Data were analyzed using the constant comparative method, in which each line, phrase, sentence, and paragraph from transcribed interviews and field notes was reviewed and compared to identify similarities, differences, and general patterns. Three levels of coding were used in the study. Level I involved substantive codes in the words of the informants. Level II codes moved the data to a higher level of abstraction into categories, and Level III codes involved the development of theoretical constructs that add meaning and scope to the substantive theory (Glaser, 1978). Sampling continued until no new ideas or codes were revealed (theoretical saturation).

RESULTS

Caregiver strain emerged as the shared basic social psychological problem in caring for children with persistent head lice. As one mother stated, "You just can't image how stressful this [head lice] is! It takes over your whole life." Parents/caregivers in the study experienced stress from the moment their children were diagnosed with head lice, throughout treatment efforts, and long after their children's head lice infestation had ended. The term *caregiver strain* was chosen by the researcher to denote the enduring nature of the perceived stress participants associated with caring for children with persistent head lice.

> Caregiver strain emerged as the shared basic social psychological problem in caring for children with persistent head lice.

The term *shared vulnerability* describes the process parents/caregivers used to manage caring for children with persistent head lice. Shared vulnerability expresses the experience of suffering the same openness to injury as their child. Glaser's (1978) constant comparative method was used to break the data into codes, identify categories of codes, and develop theoretical constructs by uncovering relations between the codes such as conditions, strategies, and consequences. The process of shared vulnerability was derived from the data as having four stages: (a) being ostracized, (b) losing integrity of the self, (c) struggling with persistence, and (d) managing strain. A conceptual model of the theory of shared vulnerability is presented in Figure 1.

Stage I: Being Ostracized

Stage I describes the conditions under which caregiver strain associated with persistent head lice was experienced by the participants. Head lice infestation is a stigmatizing condition in the United States. It is often associated with being unclean, living in poverty, and/or poor parenting (Burgess et al., 2003). Immediately following the identification of head lice, parents/caretakers in the study experienced a sense of being set apart from others or being ostracized. In his classic work on stigma, Goffman (1963) described the stigmatized as being socially discredited on the basis of an undesirable attribute that sets them apart from normal society. Persons who are stigmatized are not accepted by "normal people" (Goffman, 1963, p. 8) and are often considered not quite human, inferior, and dangerous. One participant said, "I overheard his best friend's mother tell her son it wasn't safe to come over to our house." In this study, the stigma associated with having head lice was dramatically increased if treatment strategies used were unsuccessful, if reinfestation occurred, or if the infestation became chronic. Being ostracized involved exaggerated meaning, blaming the victim, and ruminating.

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Exaggerating Meaning. Parents/caretakers in the study expressed a tendency to exaggerate the seriousness of head lice and to negatively evaluate their ability to successfully treat the infestation.

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> When the school called to tell me my daughter had lice, I was horrified and embarrassed. By the time I got there to pick her up, I was furious!
>
> Head lice is a dirty, nasty disease. I mean, is there really anything worse, more disgusting?
>
> I've been trying to get rid of these things for 4 years! No matter what I do, they keep coming back. You start to believe you will never win.

This exaggerated negative mind-set contributed to higher levels of perceived caregiver strain and is in stark contrast to the tendency of HCPs to minimize the impact of head lice (Burkhart, 2005). For example, Sciscione and Krause-Parello (2007) concluded that "head lice infestation is an inconvenience at best" (p. 20).

Blaming the Victim. HCPs place considerable faith in the efficacy of head lice treatment products containing pediculicides, which are advertised to be highly effective. Participants felt that HCPs assumed persistent head lice occurred because parents failed to treat their child, used the wrong treatment products, or used treatment products incorrectly. Participants believed that blaming the victim was also based in part on an understanding that, unlike chronic illnesses, persistent head lice was a curable condition that was allowed by parents to become chronic.

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> They keep telling me I must be doing somethin' wrong. I'm following all of the instructions to the letter and it just keeps coming back!!
>
> People need to be educated that it's not our fault. Stop blaming the parents. We didn't ask for this. My house is clean and everything. I'm doing everything I can. The school needs to share the blame in all this. What are they doing?

Ruminating. Participants described having repeated negative thoughts about head lice. Intrusion of unwanted thoughts or rumination was described as interfering with their daily functioning.

> I think about it [head lice] all the time. I can't sleep. I feel them crawling even when they're not there.

Participants talked about the continuation of intrusive thoughts long after head lice was successfully treated because the risk of reinfestation was always present. One mother described it this way:

> I try to stay busy . . . to keep from thinking about getting head lice from coming back again. At the first sign of itching, I'm all over them [children].

Stage II: Losing Integrity of the Self

As a consequence of the conditions described in the initial stage of shared vulnerability, parents and caregivers experienced losing integrity of the self. As one mother said, "It [head lice] defines you and your children. It changes how people see you. How you see yourself." Participants experienced losing integrity of the self through enduring social isolation, altered family interactions, and feeling guilty.

Enduring Social Isolation. Enduring social isolation was described by participants as a shared consequence of being ostracized. Social isolation affected the whole family. Participants described feeling isolated from community and school settings.

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> I can't remember the last time we had our hair done. Ya know, they throw you out—right in front of everybody if you have lice. I'm afraid to go back there.
>
> They only let her come to school to take the FCAT exam. They made her sit on a plastic chair away from all her friends. It makes me cry to think about it.

As a result of repeated forced absences from school, some parents even faced criminal charges.

> Dealing with the school really adds to the stress. They keep sending her home, and now they've turned me into the state attorney's office like I'm some kind of criminal for God's sake!

Even after the child no longer had head lice, parents reported having to endure long-term social isolation.

> My son doesn't want to go back to school. Everyone knows we've had head lice. We don't have it anymore, but no one wants to play with him or his sister.

Altered Family Interactions. The presence of head lice also altered the way family members interacted with one another. For example,

> Her father and brother won't come near her. They treat her like a leper. It's not her fault. She is usually close with her dad at night watching TV and stuff. She doesn't understand . . . she is just a baby. It breaks my heart.
>
> When I lay down with her to read a book at night, we both wear shower caps to keep our heads from touching.
>
> When we watch TV together, you know, everyone piles into the bed with popcorn to watch a movie; he has to have his head down by our feet to keep the rest of us from getting lice. I know it makes him feel bad.

Feeling Guilty. It was expected that "good people and parents" could successfully treat their children. In the context of persistent head lice infestations, participants felt guilty for not being able to cure their child's infestation and for any mistreatment their child suffered as a result of having head lice.

> My daughter's going to flunk math 'cause of all the school she's missed. I don't know what to do—I feel like it's my fault. She really likes school, and they won't let her go. She keeps asking why, saying she hasn't done anything wrong.
>
> It makes me feel bad, ya know? I can't get rid of the lice. What kind of mom am I?
>
> My husband is clueless, he's like, what's goin' on? Why can't you just take care of this? Like it's that easy. I don't know why.

Stage III: Struggling With Persistence

Stage III describes strategies parents/caregivers developed to cope with caregiver strain and shared vulnerability. Struggling with persistence included controlling exposure, trying everything, and seeking help.

Protecting Against Exposure. Parents/caregivers struggled to protect their children, themselves, and family members from exposure to reinfestation and having the secret exposed that someone in the family had lice. One strategy to protect against exposure involved limiting all unnecessary family and social contacts.

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> We don't go anywhere we might be in close contact to anyone else—not even to the movies. The other day I saw someone in line at the drug store staring at my head. I got out of there fast.
>
> I was paranoid to visit my in-laws with my girls having lice. We just stopped doing the Christmas thing at their house.
>
> I don't let her go over to anyone's house or have anyone over. I just can't risk it.

Participants also protected themselves and their family from exposure by keeping secrets to prevent others from finding out a family member had lice.

> There is no way I would ever tell her [school nurse]. I don't want my kids labeled as licers. I've heard the horror stories. They never let you forget.
>
> I know I should tell the neighbors we have lice, but I just can't. You have no idea how people with lice are treated.
>
> It's just this big family secret. No one knows. No one is going to know.

Trying Everything. It was common for parents/caregivers to describe being overwhelmed with the persistent nature of their child's head lice. As a result, they described the strategy of trying everything. "You name it, I've tried it." As described earlier in the literature (Gordon, 1999), some parents/caregivers resorted to ineffective and unsafe treatment strategies.

> I [bleached] my house from top to bottom. I even threw out all our sheets, pillows, and mattresses. Anything I thought might help.
>
> When I think of some of the things I've tried—it is pretty scary, like the time I used dog shampoo on my 2-year-old.

Parents/caregivers fatigued from weeks, months, and sometimes years of repeated treatments frequently could not remember how often they had treated their children, what treatment products they had used, or if their child(ren) experienced any negative side effects.

> I have been treating them every week for over 2 years. I tried every thing on the shelf and stuff that I had at home like baby oil, mayonnaise—I even tried black hair dye—nothing worked. I can't even remember what all I've used.
>
> I don't remember what [treatments] I used. I was desperate at the time. This has been goin' on for years.

Seeking Help. Participants in the study reported seeking help through school nurses, pediatricians, pharmacists, and the Internet. In the context of persistent head lice, parents/caregivers seeking information were often considered noncompliant and therefore less deserving of health care. Some participants described trying to seek help and information and not finding it.

> I tried to see my son's doctor about this. He said talk to the pharmacist. He didn't even want him [son] to come into the office!
>
> I talked to the pharmacist at the drugstore. He said pick something off the shelf—they all work the same. I didn't want to put a pesticide on my child, but that was all there was—what did I know? I even sprayed my son's bed with the stuff.

After repeated unsuccessful attempts to treat their children for head lice, some participants expressed a call for help and human connection—"Isn't there someone out there who can help us with this?"—and relief at being able to find "live" people willing to help with manual delousing, nit removal, and emotional support.

> I've looked everywhere for help. I even went to the Internet. I'm a single mom. You can't treat yourself. You can't even check yourself!
>
> The school nurse tried to help. She gave us information and all. Nothin' I tried worked. I'm 70 years old; I can't even see them [lice]. No one would help me until now.
>
> Finding [a treatment facility] is a relief. If it wasn't for the availability of this service, I don't think I would ever be a foster parent again. I wouldn't be willing to take on lice again.

Stage IV: Managing Strain

The final stage is managing strain, which was described as a day-to-day process involving gaining perspective, balancing resources, and developing trust.

Gaining Perspective. Participants struggled to put head lice in perspective. "You just have to get over it, ya know? It's just lice." They alternated back and forth between seeing head lice as the worst thing that ever happened to recognizing that head lice is not a direct threat to the health of their children and families.

> Sometimes I think lice never killed anyone, but then there are times I think I will never live through this.

Participants struggled to put head lice in perspective.

Some of the participants in the study felt the school personnel themselves needed to gain perspective.

> They [school staff] call you from school like it's a big emergency. You have to drop everything rush to the store to buy treatments, get to the school, and then spend hours treating your kid and cleaning the house. I get exhausted just thinking about facing it again. When are people going to realize it's just lice?

Balancing Resources. Treating head lice involved significant expenditures for treatment product, dry cleaning, cleaning products, and laundromat fees, in addition to costs associated with lost wages and missed school days. Participants struggled to balance financial and human resources.

> The [product] is $20 a treatment, and there are four of us. I have treated my kids so many times I have lost track of how much it is costing us. What can I do? I have to get the kids back in school.
>
> Every time they [day care staff] find lice, I have to leave work and go get her. I finally lost my job because they [employers] couldn't depend on me. What am I supposed to do now? She is too little to leave home alone, and no day care will take her with lice.
>
> My husband and I trade off—sometimes he stays with the kids. I couldn't do this alone.

Developing Trust. In the face of persistent head lice, participants struggled to develop trust with family members, parents, teachers, school nurses, and other HCPs. As time went by, participants found they had to trust people if they were going to be successful in getting rid of head lice. As one mother put it, "At some point you just have tell people and trust they do the right thing by checking their own kids and not making a personal issue out of it." Some participants found it difficult to trust the school nurse and feared their child would be labeled and targeted.

> I tell my kids to go to the bathroom and stay there during head checks at school—I don't ever want the school nurse finding out we have lice again. I won't have my kids targeted.

Other participants found the school nurse to be an important source of information and support.

> Once I broke down and told her [school nurse] we were having problems, she worked with me to get through this. She listened to me when I thought I would lose my mind.

DISCUSSION

Caregiver strain affects coping strategies and has the potential to affect the health of the caregiver, the child receiving care, and other family members. Caregiver stress has been found to have a strong correlation with health outcomes of children who are chronically ill (Sallfors & Hallberg, 2003) and who experience chronic pain (Cole & Reiss, 1993). Parental stress has also been found to be useful in predicting episodes of wheezing in children with asthma (Wright, Cohen, Carey, Weiss, & Gold, 2002). The level of strain expressed by the participants in this study suggests that the psychological ramifications of caring for a child with persistent head lice may directly influence the health of the parent/caregiver and contribute to the indirect costs of treating head lice, such as missed workdays brought about through exclusion policies. The extent to which increased caregiver strain contributes to the overuse or inappropriate use of lice treatment products is not known. The current study raises concerns about the degree and impact of caregiver strain associated with caring for children with persistent head lice on the family and suggests that persistent head lice may be best studied from a family perspective. Participant responses indicate that head lice policies leading to forced absences from school contribute to caregiver strain. However, the data suggest that exclusionary school policies alone are not sufficient to explain the depth of caregiver strain experienced by the participants. Being ostracized was experienced by participants in other community settings, such as day care centers, camps, churches, neighborhoods, and hair salons.

> The level of strain expressed by the participants in this study suggests that the psychological ramifications of caring for a child with persistent head lice may directly influence the health of the parent/caregiver and contribute to the indirect costs of treating head lice, such as missed workdays brought about through exclusion policies.

This study also raises concerns about the level of stress experienced by children with persistent head lice. There are no studies in the literature that have attempted to identify the number of children who experience persistent head lice or that have explored their level of stress. Caregiver responses in this study suggest the level of stress experienced by the children may be significant.

Vulnerability has been conceptualized as "susceptibility to health problems, harm or neglect" (Rogers, 1997, p. 65). In this context, vulnerability is viewed negatively as something to avoid. The concept of vulnerability has also appeared in the literature to denote "the ever-present, common [shared] condition of all sentient beings and a condition of nurses' access to understanding patients' conditions" (Malone, 2000, p. 1).

The concept of shared vulnerability has been explored in the context of comorbidities such as alcohol and drug use (Sher, Gotham, Erickson, & Wood, 2003), anxiety disorders and depression (Wittchen, Kessler, Pfister, & Lieb, 2000), and posttraumatic stress disorder and depression (O'Donnel, Creamer, & Pattison, 2004). The comorbidity model of shared vulnerability suggests that exposure to one behavior or condition increases an individual's vulnerability to another behavior or condition.

Studies have also been conducted that explore conditions under which vulnerability is shared between individuals. In a study by Malone (2000), shared (or mutual) vulnerability was described as occurring in response to the recognition by emergency room nurses that they "could just as easily be those in need of rescue" (p. 9) as the persons they were caring for. Nurses in the Malone study used myth making and distancing as defenses against shared vulnerability. Saakvitne (2002) described increased vulnerability to vicarious traumatization (VT) experienced by therapists when patients shared traumatic events with them. VT was defined as "the negative transformation of the therapists' inner experience as a result of his or her empathic engagement with and responsibility for a traumatized client" (p. 443).

The current study describes vulnerability shared between family members. The concept of shared vulnerability emerged from the data to describe the process parents/caregivers used to manage caring for children with persistent head lice. Shared vulnerability conceptualized the experience of suffering the same openness to injury as their child. The study suggests that events or conditions associated with persistent head lice that are potentially injurious to the child are also potentially injurious to parents/caregivers. For example, participants described the social isolation of the whole family in response to public awareness of the detection of head lice in an individual child.

This study was limited to 20 families experiencing persistent head lice in southeast Florida and is the first study to describe the phenomenon from a parent/caregiver perspective. The incidence of persistent head lice may vary dramatically across geographic areas. Therefore, individual and community responses may also vary. Although this study provides insight into the impact of persistent head lice on parents/caregivers, more studies are needed to determine the usefulness of the theory in guiding school nursing practice.

IMPLICATIONS FOR SCHOOL NURSING PRACTICE

School nurses play an important role in the identification and care of children with persistent head lice. In caring for children with persistent head lice and their families, the nurse answers the call to come to know the child, parent/caregiver, and family to ground nursing responses in "what matters most" (Boykin & Schoenhofer, 2001, p. 59) to them. What mattered most to participants in this study was caregiver strain. Based on the presentation of shared vulnerability in this study, meaningful nursing responses directed at reducing caregiver strain might include eliciting stories of caregiver strain associated with caring for children with persistent head lice, validating the personal struggle of shared vulnerability while respectfully offering information on treatment options, and supporting treatment attempts.

It is clear in this study that excluding children from school for head lice contributes to caregiver strain. Therefore, school nurses should take the lead in intentionally shifting away from adversarial, ostracizing approaches to head lice management in schools to a more caring approach through educational programs aimed at reducing the stigma associated with head lice and by advocating for the adoption of school head lice policies that are less exclusionary.

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School nurses also have a responsibility to call for and participate in research studies that evaluate the effectiveness of existing head lice policies and educational programs. For example, field studies that evaluate the impact of head lice policies on school attendance are needed. School nurses should also call for and participate in studies that explore how lice treatment products are used in the home and the effect of caregiver strain on the safe use of these products.

CONCLUSION

This study contributes to a better understanding of the experience of caring for children with persistent head lice from the perspective of parents/caregivers. Using a qualitative grounded theory approach, participant observation and in-depth interviews with 20 parents/caregivers provided the data from which shared vulnerability emerged as the process used to manage caregiver strain associated with caring for children with persistent head lice. The process of shared vulnerability is depicted in a four-stage conceptual model. The stages of shared vulnerability are (a) being ostracized, (b) losing integrity of the self, (c) struggling with persistence, and (d) managing strain. Understanding the process of shared vulnerability may be useful to school nurses in creating interventions that are meaningful to parents/caregivers caring for children with persistent head lice and in directing future research studies.

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REFERENCES

American Academy of Family Physicians. (2003). *Head lice treatment guidelines. Wet combing for head lice: Feasibility in mass screening, treatment preference and outcome*. Retrieved April 27, 2004, from www.findarticles.com/cf_dls/m3225/6_67/98626762/p1/article.jhtml

Boykin, A., & Schoenhofer, S. (2001). *Nursing as caring: A model for transforming practice*. Boston: NLN Press.

Burgess, I., Pollack, R., & Taplin, D. (2003). *Cutting through the controversy: Special report on the treatment of head lice*. Morristown, NJ: Premier Health Care Research.

Burkhart, C. G. (2004). Relationship of treatment-resistant head lice to the safety and efficacy of pediculicides. *Mayo Clinic Proceedings, 79,* 661–666.

Burkhart, C. G. (2005). A dermatologist's response to the American Academy of Pediatrics guidelines on head lice. *Journal of Drugs in Dermatology, 4,* 14–15.

Burkhart, C. G., & Burkhart, C. N. (2000). Clinical evidence of lice resistance to over-the-counter products. *Journal of Cutaneous Medicine and Surgery, 4,* 199–201.

Chenitz, W. C., & Swanson, J. M. (1986). *From practice to grounded theory.* Menlo Park, CA: Addison Wesley.

Chosidow, O. (2000). Scabies and pediculosis. *Lancet, 355,* 819–826.

Cole, R. E., & Reiss, D. (1993). *How do families cope with chronic pain?* Hillsdale, NJ: Lawrence Erlbaum.

DeMaeseneer, J., Blokland, I., Willems, S., & Vander, R. (2000). Wet combing versus traditional scalp inspection to detect head lice in schoolchildren: Observational study. *British Medical Journal, 321,* 1187–1188.

Frankowski, B. L., & Weiner, L. B. (2002). Head lice. *Pediatrics, 110,* 638–643.

Glaser, B. G. (1978). *Theoretical sensitivity*. Mill Valley, CA: Sociology Press.

Glaser, B. G., & Strauss, A. (1967). *Discovery of grounded theory.* Chicago: Aldine.

Goffman, E. (1963). *Stigma: Notes on the management of a spoiled identity.* Englewood Cliffs, NJ: Prentice Hall.

Gordon, S. C. (1999). Factors related to the overuse of chemical pesticides in children experiencing persistent head lice. *Journal of School Nursing, 15*(5), 6–10.

Koch, T., Brown, M., Selim, P., & Isam, C. (2001). Towards the eradication of head lice: Literature review and research agenda. *Journal of Clinical Nursing, 10*(3), 364–371.

Malone, R. E. (2000). Dimensions of vulnerability in emergency room nurses' narratives. *Advances in Nursing Science, 23*(1), 1–11.

Meinking, T. L., Serrano, L., Hard, B., Entzel, P., Rivera, E., & Villar, M. E. (2002). Comparative in vitro pediculicidal efficacy of treatments in a resistant head lice population in the United States. *Archives of Dermatology, 138,* 220–224.

Mumcuoglu, K. Y., Friger, M., Ioffe-Upensky, I., Ben-Ishai, F., & Miller, J. (2001). Louse comb versus traditional scalp inspection to detect head lice in schoolchildren: Observational study. *Pediatric Dermatology, 18,* 9–112.

National Association of School Nurses (NASN). (2004). Pediculosis in a school community. Retrieved February 3, 2007, from http://www.nasn.org/Default.aspx?tabid=237

National Pediculosis Association (NPA). (2001–2004). The no nit policy: A health standard for children and their families. Retrieved February 3, 2007, from http://www.headlice.org/downloads/nonitpolicy.htm

O'Donnel, M. L., Creamer, M., & Pattison, P. (2004). Posttraumatic stress disorder and depression following trauma: Understanding comorbidity. *American Journal of Psychiatry, 161,* 1390–1396.

Plastow, L., Luthra, M., Powell, R., Wright, J., Russel, D., & Marshall, M. (2001). Head lice infestation: Bug busting vs. traditional treatment. *Journal of Clinical Nursing, 10*(6), 775–782.

Pollack, R. J., Kiszewski, A., Armstrong, P., Hahn, C., Wolfe, N., Rahaman, H. A., Laserson, K., Telford, S. R., & Spielman, A. (1999). Differential susceptibility of head lice sampled in the United States and Borneo. *Archives of Pediatric Adolescent Medicine, 153,* 969–973.

Pollack, R. J., Kiszewski, A. E., & Spielman, A. (2000). Overdiagnosis and consequent mismanagement of head louse infestation in North America. *Pediatric Infectious Disease Journal, 19*(8), 689–694.

Roberts, R. J., Casey, D., Morgan, D. A., & Petrovic, M. (2000). Comparison of wet combing with malathion for treatment of head lice in the U.K.: A pragmatic randomized controlled trial. *Lancet, 356,* 540–544.

Roffe, C. (2000). Treatment of pediculosis capitis by dry combing. *Lancet, 355,* 1724.

Rogers, A. C. (1997). Vulnerability, health and health care. *Journal of Advanced Nursing, 26*(1), 65–72.

Saakvitne, K. W. (2002). Shared trauma: The therapist's increased vulnerability. *Psychoanalytic Dialogues, 12,* 443–449.

Sallfors, C., & Hallberg, L. (2003). A parental perspective on living with a chronically ill child: A qualitative study. *Families, Systems & Health, 21*(2), 193–205.

Schreiber, R. S., & Stern, P. N. (2001). *Using grounded theory in nursing.* New York: Springer.

Sciscione, P., & Krause-Parello, C. A. (2007). No-nit policies in schools: Time for change. *Journal of School Nursing, 23,* 13–20.

Sher, K. J., Gotham, H. J., Erickson, D. J., & Wood, P. K. (2003). A prospective, high-risk study of the relationship between tobacco dependence and alcohol use disorders. *Alcoholism: Clinical and Experimental Research, 20,* 485–492.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques.* Newbury Park, CA: Sage.

Takano-Lee, M., Edman, J. D., Mullens, B. A., & Clark, J. M. (2004). Home remedies to control head lice: Assessment of home remedies to control the human head louse, *Pediculus humanus capitis. Journal of Pediatric Nursing, 19,* 393–398.

Wittchen, H. U., Kessler, R. C., Pfister, H., & Lieb, M. (2000). Why do people with anxiety disorders become depressed? A prospective-longitudinal community study. *Acta Psychiatrica Scandinavica, 102*(S406), 14–23.

Wright, R., Cohen, S., Carey, V., Weiss, S., & Gold, D. (2002). Parental stress as a predictor of wheezing in infancy. *American Journal of Respiratory Critical Care, 165,* 358–365.