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Interventions to Minimize Distress During Pediatric Primary Care Visits: A Systematic Literature Review

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INTERVENTIONS TO MINIMIZE DISTRESS DURING PEDIATRIC PRIMARY CARE
VISITS: A SYSTEMATIC LITERATURE REVIEW

by

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An evidence based scholarly paper submitted to the
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ABSTRACT

INTERVENTIONS TO MINIMIZE DISTRESS DURING PEDIATRIC PRIMARY
CARE VISITS: A SYSTEMATIC LITERATURE REVIEW

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College of Nursing

Master of Science

Purpose: This literature review is designed to analyze interventions to minimize trauma and psychological stress experienced by pediatric patients during visits with their primary care providers.

Data Sources: An electronic search of the literature was conducted to identify studies from 2008 to 2014 in the following databases: CINAHL, MEDLINE, PsycINFO, and the Cochrane library.

Conclusions: Interventions to reduce a child's anxiety are available and easily executed. When anxiety is decreased, children are able to approach medical situations with a sense of comfort, achievement, and control. Decreasing stress can assist children in developing trusting relationships of the health care system as adults.

Implications for Practice: An awareness of these interventions can guide health care providers in being a patient advocate in implementing these interventions.

Search Terms: Pediatric, Out-Patient, Primary Care, Distress

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Interventions to minimize distress during pediatric primary care visits: A systematic literature review

Introduction

Children visit a primary care provider for multiple reasons. Visits may include well-child exams, immunizations, treatment of chronic illnesses, and for acute trauma such as a broken bone or need for stitches. In 2000, the American Academy of Pediatrics released preventive pediatric healthcare recommendations, suggesting a child visits their health care provider 31 times from birth to age 21 for general well exams alone (American Academy of Pediatrics [AAP]), 2011. During these office visits, children often demonstrate negative reactions, including aggression, withdrawal, lack of cooperation, regressive behaviors, and difficulty coping with and recovering from procedures. Both physiological and behavioral distress –is demonstrated by children even when the health care is not invasive or painful. This distress can interfere with the delivery of needed medical attention (Rodriguez, Clough, Gowda, & Tucker, 2012). While it is not possible to avoid all distress, it is important to minimize distress and anxiety children may experience during their health care visits. Barkley and Stephens (2000) found when anxiety is decreased; children are able to approach medical situations with a sense of comfort, achievement, and control.

In general, stress in children is typically caused by situations that are new, unfamiliar, or unpredictable. These situations have unclear expectations, cause a fear of failing, or anticipation of something unpleasant (Washington, 2009). Children with inadequate coping skills may have behavioral, emotional, and cognitive disturbances that can negatively affect the child's physical and mental well-being. Ignoring the distress of children or allowing them to use ineffective

coping skills, will exacerbate the potential effects stress has on physical and mental health. The ways children learn to cope with stress in childhood will undoubtedly follow them through adolescence and may shape their coping patterns in adulthood. Ineffective coping during times of psychological stress is a major risk factor in the development of psychopathology later in life (Brenner, Parahoo, & Taggart, 2007; Compas & Boyer, 2001; Von Baeyer, Rocha, & Salmon, 2004). Essentially, the experiences of children with the health care system may affect their attitudes towards it as adults.

Primary care providers, due to frequent interactions with pediatric patients and their families, are in a unique position to minimize the stress of the experience. Providing children and their parents with tools to prevent and manage stressful situations will help minimize their distress (Washington, 2009).

The purpose of this systematic literature review is to evaluate interventions to minimize trauma and psychological stress experienced by pediatric patients during visits with their primary care providers. Evidence reviewed will focus in on four main areas and include: (a) influence of the physical environment; (b) parental participation in care and how it affects the child's ability to cope with stress; (c) the child's preparation for appointments and procedures; and (d) how interactions with office and clinical staff may minimize psychological distress.

Methods

An electronic search was conducted to identify studies from 2008-2014 in the following databases: MEDLINE, CINAHL, and PsychINFO. A variety of search terms were used and include: pediatrics, children, anxiety, fear, stress, primary care, well-child checks, coping, health facility environment, interior design, and physician offices were used to conduct the search.

Different term combinations were utilized depending on the topic being searched. For example, when researching physical environment, search terms pertaining to the environment were used.

Inclusion criteria included studies on children 0-18 years of age and published in English. Initially articles were searched from 2008 to 2014. To provide additional information and insights older articles were included. Articles that focused on the coping strategy of distraction were excluded due to the vast amount of information already available. References from selected articles were reviewed for additional articles. Thirty-one articles met the inclusion criteria and were included in the review.

Results

Many interventions to minimize distress experienced by pediatric patients have been examined in the literature. For this review, physical environment, parental participation, child preparation, and staff interactions will be discussed. Where research articles were available, they were used. However, when research was not available expert opinion was considered. Following is a review of findings for each of these topics.

Physical environment

Studies have shown the design of healthcare facilities can improve overall healthcare quality by reducing staff stress, minimizing patient stress and anxiety, increasing patient safety and satisfaction, enhancing patient-doctor communication and improving healthcare outcomes (Rice, Ingram, & Mizan, 2008; Ulrich & Zimring, 2008).

Various strategies can be used to create harmonizing and healing spaces. The use of natural light and windows has been found to lead to a feeling of serenity and calm (Norton-Westwood, 2012). Having age appropriate spaces also adds to a healing environment. For

example, Tivorsak et al. (2004), found adolescent patients felt more comfortable in provider offices that reflected their interests and were not childlike in nature. They desired office spaces that displayed music groups or sport posters, and where medical advertisements and paraphernalia were hidden. Children prefer play apparatuses, like play kitchens or racetracks, which they are familiar with and to which they can relate. Color was also found to foster healing spaces. Children liked colors blue and green, and preferred pale to mid-color ranges. White is the least preferred color among young people and children (Coad & Coad, 2008; Park & Park, 2013).

Decorations in healthcare facilities create a caring ambience for everyone. Art is essential in providing a welcoming atmosphere for patients and families. While unable to heal disease, art contributes to a sense of well-being. It creates an embracing and comfortable environment (Capon, 2012). The artwork should be hung at child-eye height and placed in windowless rooms. This provides children something to view and discuss, therefore decreasing their anxiety. Music is another environmental factor that may decrease distress and anxiety. Music therapy has many physiological and psychological benefits and can aid in a holistic approach when caring for children (Austin, 2010). Research suggests that listening to music, especially live music enhances relaxation, provides distraction, and assists patients to verbalize their hospital experience (Preti & Welch, 2011). Music also helps parents and patients focus on something other than illness and provides familiarity to the environment.

Parental Participation

Allowing parents to be present and involved in their child's care is beneficial. Parents need to be given strategies specifically related to the child but also methods to minimize their

own stress. Research suggests that elevated parental stress may result in increased anxiety levels in children. (Abaied & Rudolph, 2009; Patterson & Ware, 1988; Piira, Sugiura, Champion, Donnelly, & Cole, 2005). Strategies that help parents minimize their stress include allowing time for them to express their worries and concerns. Parental strategies and tools must also be based on the specific environment and needed care. Parents should be provided a specific role designed to support their child. For example, if the parents need to assist in keeping their child still for a procedure, a quick explanation of how to hold the child in a position of comfort would be beneficial. Yet the parental role should not be to restrain the child, as it can be distressing to both the parent and the child (Brenner et al., 2007; Hull & Clarke, 2010; Patterson & Ware, 1988). Appropriate roles should be simple such as comforting, supporting, or distracting the child.

Children's distress during medical procedures is greatly influenced by adult behavior including parents and staff (McMurtry, Chambers, McGrath, & Asp, 2010). Staff, parents, and child must be a team during a procedure and it is essential they work together. Studies show parental presence does not negatively affect the staff caring for the patient (Hull & Clarke, 2010; Piira et al., 2005; Stephens, Barkey, & Hall, 1999). Planning a procedure with the child and parent by soliciting their opinions increases cooperation and demonstrates respect. During the procedure patient praise is of utmost importance. Interactions should include emphasis on positive behaviors instead of correcting negative behaviors. However adult reassurance, such as statements "It's ok," are often associated with escalation in a child's stress, whereas distractions often result in increased child coping.

Child Preparation

Preparation of the child is an important aspect of care. Greater knowledge about the health care setting has been linked to less child distress (Rodriguez, Clough, Gowda, & Tucker, 2012). Children who engaged in age appropriate teaching prior to their surgical procedure had time to process the teaching, developed coping skills, possessed a sense of control, and appeared to have a better outcome, than their peers who did not have the interventions (Perry, Hooper, & Masiongale, 2012). Timing of preparation is more effective, if it is age specific. Preschool aged children need to be prepped just prior to the procedure, probably no sooner than one hour due to their limited ability to retain a great deal of information. However, school aged children prefer advance teaching and benefit from having time to process what they have learned (Gordon et al., 2010; Patterson & Ware, 1988). It is important to inquire about previous experiences with medical procedures before teaching. Studies suggest if the child has had previous medical procedures, advanced preparation may cause anxiety (Patterson & Ware, 1988; Rodriguez et al, 2012).

Play is an important part of a child's preparation since play is an integral part of a child's life, and is needed even when the child is sick. Experts suggest play as a common method for promoting effective coping, reducing distress and-normalizing the experience (American Academy of Pediatrics [AAP], 2006; Burns-Nalder, Hernandez-Reif, & Thoma, 2013). Age-appropriate therapeutic play is an essential component of the holistic care of pediatric patients (Li & Lopez, 2008). A child life specialist may be used to engage the child in therapeutic and medical play, which facilitates coping during situations that might otherwise be overwhelming.

Medical play allows children to be exposed to and play with safe medical equipment which minimizes anxiety and provides information to children (Burns-Nalder et al., 2013).

Children can be taught coping skills in preparation for being within a healthcare environment. Effective coping methods may include procedural information given through verbal dialogue, films, therapeutic play, rehearsal, or modeling. Other skills may include relaxation exercises, breathing exercises, distraction, positive self-talk, guided imagery, and hypnosis. Teaching these skills to a child should include verbal instruction and modeling (Burns-Nalder et al., 2013; Patterson & Ware, 1988). Selecting the most effective coping skills may be age specific. Children tend to choose coping skills familiar to them and a part of their daily lives. Reinforcement will give children confidence in their coping skills (Salmela, Salanterä, & Aronen, 2010).

Staff Interactions

Effective staff interactions with children requires a knowledge of child development. How a child reacts and understands a medical procedure is linked to their developmental stage and understanding. These stages guide the provider in selecting interventions to decrease anxiety (Hearst, 2009). Children aged 0-2 decrease anxiety through the child/parent bond. Parents should be encouraged to talk, sing, rock and cuddle their infants. Toddlers aged 3-5 years require parents to set limits and give positive comments because this age group often reacts to fear by throwing tantrums. Information given to toddlers should involve the senses. For example, providers may provide information about how this procedure will feel, or what the child may smell. Children 6-10 years old fear the loss of autonomy. Coping strategies that help them maintain their autonomy are often very effective such as guided imagery or distraction.

Adolescents want to remain independent, therefore providing them options and allowing them treatment choices, will assist in decreasing their distress. Adolescents older than 16 want privacy and dignity. They should be allowed to give their own consent and have the opportunity to be seen by health care providers without their parents. It is important that adolescents be given the chance to have input into the decision-making process regarding their health care. If the adolescent's parents are present, they should be encouraged to collaborate with their child and consent to a treatment plan agreeable to both the parents and the patient (Hearst, 2009).

Communication is a critical skill that can be learned by healthcare providers (Levetown, 2008). Clinicians are encouraged to communicate openly and with compassion. Children should be active participants in their plans of care. When working with families communication can be effective at its simplest level. Health care providers should join with parents to reassure and comfort a baby while undergoing a vaccination. Once the infant approaches the age where they can comprehend conversation, small talk can be used to cue both parent and child of their responsibilities, and may provide distraction for the child. Small talk should be used to cue bravery through a painful procedure (Plumridge, Goodyear-Smith, & Ross, 2009).

Discussion

Health care providers are key in the experience of patients. It is important for pediatric patients to have positive experiences with health care, as these experiences may influence their future feelings and involvement in the health care system. Thirty-one articles were referenced in this literature review. From these, four factors were identified that may assist in decreasing pediatric patient distress while receiving health care. A comforting physical environment can assist in the healing process. Art pieces and music were shown to be effective in making the

spaces more familiar. However, children have their own insights, and their opinions may be beneficial in the design of healthcare offices or spaces designated for pediatric patient care.

Parental participation in healthcare and medical procedures of their children was found to be beneficial for the parent and the child. However, parents need to be prepared and given strategies to assist them in comforting and supporting their child. These strategies need to be age specific. Distraction and positive reinforcement were found to be effective, whereas reassurance was found to may cause distress to young children.

Child preparation has been found to be effective in decreasing distress. The majority of child preparation was completed through therapeutic play. A child life specialist may facilitate coping and model skills patients can use to decrease anxiety. A child's development age will determine which coping skills would be most helpful during times of stress. When upset or stressed children tended to utilize the coping skills most familiar to them

Health care staff also impact the distress experienced by a child. The AAP encourages health care providers to be good communicators, stating communication is one of the most effective aspects in providing care to children. Knowledge of a child's developmental level will assist in knowing how to best comfort the child. For example, small talk was found to be beneficial in distracting the patient.

One of the limitations of this review was the sparse amount of recent research studies available on this topic. A second limitation is the lack of studies reviewing physical environment. Most of the articles used in this review were based on expert opinion in the field.

Implications for practice

Strategies influencing pediatric distress in a primary care situation is an important consideration. Usually, no single intervention will reduce the child's distress, but rather a combination of the strategies may be effective. Modifying the physical environment has been found to be effective in creating a soothing, comforting environment.

Health care providers can play a pivotal role by observing the patient for distress and implementing strategies to reduce the stress. Primary care of children includes assisting the parent to decrease stress by being a partner with their child in the healing process. Taking the time to prepare and educate both the parent and patient will aid the healing process.

Decreasing pediatric patient anxiety and distress at the primary care level is essential to creating healthy attitudes toward healthcare as the child ages and becomes an adult. Though distraction has been studied a great deal, other strategies to reduce pediatric patient distress are lacking. Directions for further research should include trials of these types of interventions aimed at decreasing the pediatric patient's anxiety.

Conclusion

Children will receive the majority of their healthcare in a primary care setting. Interventions to reduce a child's anxiety are available and easily executed. Available literature and articles identify a benefit to minimizing distress of pediatric patients while receiving healthcare. Awareness of these interventions can guide health care providers in being a patient advocate. When anxiety is decreased, children are able to approach medical situations with a sense of comfort, achievement, and control. Essentially, decreasing trauma and stress can assist children in developing trusting relationships of the health care system as adults.

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