Medical Play Therapy with a Child Life Specialist and its Effects on Reducing Preoperative Anxiety Among Children in Hospitals

Student Example

Department of Human Development & Family Studies, Purdue University

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Abstract

Anxiety is one of the most predominant negative responses that a child may have when preparing for a medical procedure and being in a hospital environment. Preoperative anxiety can have negative effects on the child's health, behavior, coping mechanisms, and recovery. The implementation of medical play therapy with a Child Life Specialist for children in hospitals is one beneficial way that children can become familiar with their environment and medical procedures, as well as reduce stress and negative responses surrounding hospitalization. This two day study with 30 children aged 9-12 will propose an intervention of direct one-on-one medical play therapy with a Child Life Specialist before a procedure while also measuring the children's anxiety levels at various points before the procedure takes place. The State-Trait Anxiety Inventory for Children (STAI-CH) will be used to measure preoperative anxiety levels. By administering this questionnaire to each participant in the study, three different times, the association between preoperative anxiety and medical play therapy can be more accurately determined.

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Hospital settings and medical procedures can be threatening and stressful experiences, especially for children. Being in an unfamiliar environment surrounded by strange, and sometimes scary, medical equipment can result in children's expression of anger, uncertainty, and feelings of helplessness (Li et al., 2016). Among the different types of negative responses induced by hospital or medical experiences, anxiety has been found to be the most predominant. In children who are undergoing surgery, excessive pre-operative anxiety can have an effect on physical and psychological health, impact ability to cope with medical procedures, increase the display of negative behaviors, and inhibit postoperative recovery (He et al., 2013).

There are ways that stress and anxiety surrounding medical procedures can be alleviated by implementing simple activities involving play. Play is a vital part of children's lives and has been found to be an important element of psychological intervention to help children in stressful situations (He et al., 2013). Play is also a great way to communicate with children. Various types of play therapies have been introduced to children and families in hospital settings in order to create and maintain a therapeutic environment. Examples of play therapies used in hospitals and medical settings include preparation play, medical play, distraction play, and developmental play (Li et al., 2016). Preparation play is used to increase a child's knowledge and understanding of medical procedures and equipment. Medical play combines medical equipment, real or fake, and expressive activities to allow children to communicate their feelings and concerns. Distraction play is used while a child is undergoing certain bedside medical procedures. Finally, developmental play is used to promote the continued development of children in hospitals. This

is not the extent of how medical play can be performed, and most can involve combinations of more than one type.

The combination of play and medical preparation can have important benefits for children and their experiences in hospital settings. Children in hospitals who are given the opportunity to play or familiarize themselves with medical equipment are more likely to express their feelings and present fewer negative behaviors (Li et al., 2016). Medical play has also been found to have positive impacts on parental anxiety and satisfaction with the care received (Moore et al., 2015).

Unfortunately, research on the use of medical play and its impact on children in health care settings is still relatively limited and there is also a lack of research on medical play conducted specifically by a Child Life Specialist (Moore et al., 2015). Most of the current research involving medical play and children's health involves nurses and parents providing or directing the play. Child Life is a relatively new field, but Child Life Specialists have unique qualifications and training specific to fostering the development and addressing the needs of children in pediatric hospitals (Moore et al., 2015). This study will focus on medical play directed by a Child Life Specialist because their skills and training focus on the needs of the child and how to best alleviate unnecessary negative behaviors.

A randomized control study design will be used, placing children randomly in either the control group (no intervention) or the experimental group (intervention). The experimental group will receive one hour of one-on-one directed medical play with a Child Life Specialist at least one day before their procedure. The medical preparation play will involve role-play using a doll, as the symbolic 'patient' and the child will manipulate the medical equipment as the 'doctor' or

'nurse' (Hatava et al., 2000). This will allow for the children to familiarize themselves with the medical procedures and equipment.

In order to measure children's preoperative anxiety and how it may change over time, the State-Trait Anxiety Inventory for Children (STAI-CH) will be used. It is a frequently used instrument that has been considered the 'gold standard' for measuring anxiety in children five years and older (He et al., 2015) and has high validity and reliability (He et al., 2013). The STAI-CH questionnaire consists of two twenty-item scales, the first scale looks at short-term state anxiety and the second scale looks at long-term trait anxiety. It is easy to read and can be administered verbally.

The present study will be conducted with 30 children aged 9-12 who are undergoing minor elective surgeries to further assess the relationship between medical preparation play therapy with a Child Life Specialist and preoperative anxiety in children. The intervention used will be preparation medical play in which children will engage in role-playing with dolls and medical equipment. I hypothesize that after the implementation of direct one-on-one medical play with a Child Life Specialist, preoperative anxiety will decrease across the three administrations of the questionnaire: before preparation, immediately after preparation, and morning of procedure.

Methods

Participants

A total of 30 children aged 9-12 who are receiving minor elective surgeries will be sampled. The children studied will have to meet some other criteria such as never having any type of surgery or hospital stay before and having parents or guardians present with them throughout their time in the hospital. Examples of potential minor elective surgeries for children

include tonsillectomies, adenoidectomies, spinal fusion surgery, and bariatric surgery. The type of minor elective surgery will have to require at least a one-night stay in the hospital so that the STAI-CH questionnaire can be taken at three different points in time.

Intervention

The 30 children will be randomly assigned into two different groups, placing 15 in the control group and 15 in the experimental group. The control group will receive standard medical preparation from nurses and/or doctors that includes basic information of the procedure but no medical play intervention. The experimental group will receive standard medical preparation from nurses and doctors in combination with direct one-on-one medical preparation play intervention with a Child Life Specialist lasting one hour the day before the procedure.

The intervention involving medical preparation play therapy is the independent variable. The medical preparation play therapy will use dolls and medical equipment to allow the child to role-play as the doctor and use the doll as the patient. This will allow the child to become familiar with various medical equipment and procedures that will be used on them.

Measures/Materials

The dependent variable in this study is the children's preoperative anxiety levels. Anxiety levels will be measured using the State-Trait Anxiety Inventory for Children (STAI-CH) questionnaire. This questionnaire will be given to both groups three different times throughout the study: the day of hospital admittance, after either standard preparation or standard preparation and medical play intervention, and the day of the procedure. The STAI-CH consists of two 20-item scales that measure state and trait anxiety in children. The state-scale measures short-term state anxiety and the trait-scale measures long-term trait anxiety that is addressed

towards the general feelings of the child. Both scales prompt the child to rate 20 statements from "hardly ever true" or "often true".

Procedure

Permission to conduct the study will be obtained from the ethical committee of the chosen hospital. Signed parental/guardian permission and child assent will be obtained from children who are eligible for the study. Once enough children are selected, they will be randomly assigned to either the control or the experimental group.

If the child is in the control group, they will receive standard preparation from a nurse and/or doctor in their room the day of admittance. If the child is in the experimental group, they will receive standard preparation from a nurse and/or doctor in their room in combination with the medical play intervention. The intervention will take place in a common area like a playroom, with direct interaction between child and Child Life Specialist. The intervention will last approximately one hour, the day of admittance which will be a day before the procedure.

For both the control and the experimental group, the STAI-CH questionnaire will be conducted with the Child Life Specialist in the patient's room. The Child Life Specialist will verbally administer the questionnaire to the child each time. The questionnaire will be completed the day of hospital admittance, after either type of preparation, and the morning of the procedure.

Strengths and Limitations

Strengths of this study include the use of a randomized control study with random assignment of children into either the control or experimental group. In addition to this, the inclusion of criteria such as children undergoing the same minor elective surgery, never having had surgery or hospital experience before, and having parents or guardians present will eliminate some potential confounding variables and increase internal validity. Potential limitations of this

study would be threats to external validity and the use of only children self-reports. Since the sample size is so small and the study will take place in one hospital, it will be hard to generalize the results to the larger population. The use of self-report questionnaires only could result in response or participant bias.

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