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Effects of Play Therapy on the Anxiety Level of Children in the Hospital

A Descriptive Literature Review

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<p>Hospitalization often proved to be frightening and unpleasant for children, causing anxiety. Thus, it was crucial to integrate play therapy into the care planning process. The purpose of this study was to describe the effects of play therapy on the level of anxiety of children and its importance in hospital care. Accordingly, the aim was to produce new insights into the impacts of play therapy on children's anxiety levels in the context of hospital care which would greatly benefit nurses and child's well-being.</p> <p>This study was a descriptive literature review. The relevant articles were obtained from two reliable academic databases CINAHL (Cumulative Index of Nursing and Allied Health Literature) and PubMed (Medline). Ten (10) articles available in full text, published in English, and within the ten-year allocated period were chosen for this literature review. The principles of inductive content analysis were utilized in analyzing the data to produce categorical representations of the findings.</p> <p>The result of this study indicated that integrating play therapy as a means of aiding hospitalized children yielded a multitude of positive effects on their anxiety levels. The integration led to a reduction of fear, worry, negative thoughts, and anxiety, enabling children to better understand their hospitalization and perceive it with less apprehension. Subsequently, it addressed the psychological, emotional-behavioral and physiological effects of play therapy as well as underscored its significance in nursing care and overall child's well-being thereby promoting the development of trust, cooperation and compliance.</p> <p>Based on the findings of this study, play therapy effectively reduced anxiety and negative emotions among hospitalized children. The findings highlighted the importance of integrating play therapy into standard care in pediatric patients. Thus, integrating play therapy programs across all hospitals is recommended. This approach fosters a nurturing, child-centered environment and improves the overall hospital experience for young patients by alleviating anxiety and fear associated with medical procedures. In addition, it is proposed that hospitals allocate resources to enlist the services of child play therapists when budgetary considerations allow. Further studies are encouraged using other variables to enhance this study.</p>	
Keywords	play therapy, therapeutic play, anxiety, children, hospital

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1 Introduction

Anxiety is a natural human response to an uncertain situation. It is a feeling that follows terrifying stimuli and can occasionally be difficult to identify. Numerous factors, such as personality, age, gender, financial situation, and parental role can affect the level of anxiety. (Rajeswari et al. 2019: 420.) When children are anxious, they have the tendency to refuse medical procedures and treatments, and if not managed immediately, it could lead to an increase in the length of hospital stay and worsen their condition (Bawaeda, Wanda and Aprillia 2023: 316).

Regardless of age, hospitalization is one of the conditions that have a negative impact on a child's life. Usually, it requires children to stay in the hospital for planned or emergency reasons, therapies, treatments, and medical procedures until they are well enough to go home or recuperate. According to data acquired in 2020, the number of children admitted to hospitals increased by 3.24 percent compared to 2019. All children who are hospitalized have a risk of developing anxiety from being exposed to individuals, places, and events that they are unfamiliar with. (Rajeswari et al. 2019: 420.)

Being one of the main healthcare professionals in the hospital, nurses possess an essential role in providing patients and their families comfort while they are in the hospital. To address concerns about fear and anxiety in hospitalized children, nurses may adopt play as a care strategy. In enhancing the sense of comfort of the children, any innovation in the form of independent nursing interventions such as therapeutic play, is necessary. Play has several advantages while children are hospitalized, thus, nurses must be aware of these benefits and use them when caring for children. Alleviation of anxiety is an important goal of therapy. Therapeutic play can therefore be a way to help children feel less anxious during procedures and treatments at the hospital. Hence, playing is a powerful coping strategy for lowering anxiety in the hospital. (Iañez et al. 2020: 2–3.)

The nurse-child relationship can be strengthened using play activities by healthcare providers, which will increase the child's trust and confidence during their hospital stay (Iañez et al. 2020: 2). Since play therapy has a significant impact on hospitalized children's anxiety levels, it is important to know the effects of play therapy

on the level of anxiety of children in the hospital which this paper aims to describe and synthesize.

2 Hospitalization and play in pediatric nursing

Play is a complicated behaviour that looks deceptively simple however, requires a great deal of understanding of every aspect from the definition to its purpose. An overview of what *play* is about is provided in the succeeding pages to aid in understanding the reason for the play's existence.

The key terms used in this thesis were: children, hospital, pediatrics, play therapy, therapeutic play, and anxiety. For purposes of the research, the following terms were operationally defined:

- Play therapy - also referred to in this study as Therapeutic play.
- Children - ages 1-12 years old, who were hospitalized, regardless of sex, race and ethnicity.
- Level of anxiety - there were four levels of anxiety: mild, moderate, severe, and panic. In each of these stages, the person demonstrates changes in behavior, cognitive ability, and emotional responses as he or she attempts to deal with the anxiety. (Videbeck 2022: 263.)
- Hospitalization - hospitalization for children entails abandoning their homes, caregivers, and siblings, as well as a disruption in their regular activities and routines (Delvecchio, Salcuni, Lis, Germani, and Di Riso 2019: 1).

2.1 Role of play in child's development

The International Play Association, (IPA) an international non-governmental organization, proposed and recommended that rest, recreational activities, leisure time and play are all rights of children. All these must be taken into consideration and its value acknowledged (Rico and Janot 2019: 2). Play has long been recognized as an essential component of children's natural growth and development (Li, Chung, Ho and Kwok 2016: 1). Play therapy began to take shape in the early 20th century when theorists recognized the value of play as a means of gaining insight into a child's inner emotional world. Different theorists have used play to comprehend the child's behavioral complexity which has led to the creation of various therapeutic approaches such as Filial Therapy, Release Therapy and Non-Directive Play Therapy or Child-Centered Therapy. It was not until 1982 that the Association of Play Therapy (APT) was founded

which resulted in the establishment of professional standards on the practice of play as part of the treatment modality to ensure its beneficial effects on the wide variety of psychological and emotional issues of a child. (Gupta et al. 2023: 1.) It also serves as a fundamental core of childhood and the safe approach to externalizing concerns, fears, and feelings (Silva et al. 2017: 1245). Through play, children can express themselves freely and effortlessly in their own unique ways when it is difficult for them to convey their views, inquiries and wishes. Moreover, often for children to try communicating with their surroundings through play as their method to discover and learn the holistic view of their environment. Consequently, children tend to learn self-direction and autonomy leading to the development of a more positive sense of self. (Lerwick 2013: 131.)

One excellent play strategy approach followed the concept of the developmental stages of a child. It was observed that play provided according to age groups of children tend to promote more cooperation throughout the hospital procedure. (Silva et al. 2017: 145.) Some examples of this play therapy were normalizing play, preparation play distraction, and expressive arts play that fostered healthcare-specific demands of children (Boles 2018: 3). Developmental Stages of Play are shown (see table 1).

Developmental Stages of Play				
Age	Piaget	Erikson	Play Interests/Needs	Examples
Infant (0 to 1 years)	Sensorimotor	Trust versus Mistrust	<ul style="list-style-type: none"> Practice play Tactile, visual, auditory, kinetic stimulation Exploratory 	<ul style="list-style-type: none"> Peek-a-boo Rattles Teethers Music toys Mobiles
Toddler (1 to 3 years)	Sensorimotor/ Preoperational (Preconceptual)	Autonomy versus Shame and Doubt	<ul style="list-style-type: none"> Pretend, parallel, symbolic play Manipulating and assimilating objects 	<ul style="list-style-type: none"> Shape sorters Stacking blocks Large cars Musical toys Light up toys Pop-ups
Preschool (3 to 6) Years	Preoperational	Initiative versus Guilt	<ul style="list-style-type: none"> Make-believe Fantasy Social play 	<ul style="list-style-type: none"> Doctors' kits Dishes/food Coloring Little people figurines Cars Mega blocks
School-age (6 to 12 years)	Concrete Operations	Industry versus Inferiority	<ul style="list-style-type: none"> Independent activities Exposure to safe activities Complementary play Mastery in play 	<ul style="list-style-type: none"> Board games Bingo Crafts Action figures Movies Books Card games Tic tac toe
Adolescence (12 to 18 years)	Formal Operations	Identity versus Role Confusion	<ul style="list-style-type: none"> Voluntary Spontaneous Instinctive Integral part of normalization 	<ul style="list-style-type: none"> Adult coloring pages UNO Music Board games Books

Table 1. Developmental Stages of Play (Boles 2018: 2).

2.2 Children in the hospital and anxiety

Hospitalization is commonly a terrifying and unpleasant experience for children due to their insufficient coping and stress management abilities (Coskuntürk and Gözen 2018: 781). When children are hospitalized, they often experience significant anxiety and distress which can last long even after they are discharged (Lulgjuraj and Maneval 2021: 1). During hospitalization, children's regular routines are disrupted due to their separation from their families, toys, objects, and pets. Furthermore, it takes them away from their daily familiar environment and leaves them in an unknown area filled with fear, pain, physical limitation, inactivity and lack of concrete understanding of their surroundings. (Caleffi et al. 2016: 2.) Additionally, children's anxiety may further be triggered by unexpected sights and noises and an increase in unknown strangers (Yayan, Zengin, Düken, and Dag, 2020: 33). Normally for children, anxiety is usually manifested through negative behaviors such as seeking attention, crying frequently, aggressiveness, destroying toys, distrust of people and other manifestations of fear (Silva et al. 2017: 1245).

Anxiety is described as a kind of stress that causes minimal physiological and psychological symptoms that may or may not be tolerable and manageable depending on the adequacy of assistance that a child may receive from an adult caregiver or a medical professional. In addition, frequent hospitalization and chronic medical illnesses that require continuous medical intervention might predispose a child to toxic anxiety which may influence the length of hospital stay and exacerbate their health condition. Major consequences may arise such as the inability to attain developmental milestones caused by unnecessary psychological discomfort could affect children's well-being. (Al-Yateem and Rossiter 2017: 1–2.) Furthermore, when anxiety is not properly addressed, this may lead to regression, apathy, and sleep disturbances that can persist into adulthood. (Caleffi et al. 2016: 2.) According to Lazarus and Folkman's stress and coping theory, stress is a relationship between a person and their environment that they find difficult or surpassing their resources. Coping, on the other hand, is a dynamic cognitive and behavioral endeavor to deal with stressful conditions. Children are more prone to experience tension and anxiety if they believe they have little control over medical treatment. (Li et al. 2016: 2.)

Children who are hospitalized should be treated as active subjects that must be continuously involved in the hospitalization process. In addition to physical demands, the care provided should address emotional and social needs, as well as tactics for communication and bonding, such as the use of play. (Caleffi et al. 2016: 2.)

2.3 Play therapy in the hospital

Play in a hospital environment allows the child to positively cope with stress and negative emotions, comprehend new knowledge and promote adaptability and well-being (Maia et al. 2022: 3). Playing by oneself or with others is different from playing with a therapist's guidance. In the Healthcare context, play helps children by identifying and implementing relative coping techniques to overcome their fear and anxiety and by re-directing their attention to reduce toxic stress. (Boles 2018: 1.) Play also serves as a tool to accomplish a purpose through encouragement, understanding and finding ways to alleviate triggering factors during hospitalization. Therefore, in health care, playing as a therapeutic activity lessens children's emotional distress and helps them deal with unknown and unexpected clinical situations. Additionally, it may also be incorporated into everyday care routines. (Delfini, Pereira, Melo and Garcia 2021: 2.)

Furthermore, therapeutic play is described as a systematic and structured play performed by trained experts to relieve tensions and anxieties caused by experiences of unfamiliar and unexpected situations (Silva et al. 2017: 1245). It takes a minimum of 30 minutes each day to conduct play activities that can make a hospitalized child's life easier (Li, Chung, Ho and Kwok 2016: 8). Moreover, therapeutic play also helps children to develop emotion-focused coping capabilities by allowing them to express their worry about pain and unpleasant events that may help them understand and cope with everyday life experiences (Mechtel and Stoeckle 2017: 94).

2.4 The therapeutic value of play in pediatric nursing care

Pediatric nursing care emphasizes more on the holistic approach of care (Lulgjuraj and Maneval 2021: 44). The child's general well-being is a core of concentration wherein health care professionals, especially nurses, must show unconditional love and warmth; make use of play and humor, and stay compassionate. The goal is to enhance and promote health by creating a trusting relationship with the child and his companion. (Paula et al. 2019: 2.)

Integrating play as part of medical intervention can be adapted to mitigate the negative effects of stress and satisfy the special healthcare demands of children suffering from a range of medical conditions (Boles 2018: 3). Different play activities conducted by health professionals can strengthen the nurse-child relationships during the hospital care. Therefore, it is critical to understand that it is a must to ensure children's hospitalization stay have a pleasant and playful atmosphere. (Iañez et al. 2020: 3.) On top of

this, the assistance and cooperation of other healthcare providers including nurses and child life specialists serve as a vital element to guarantee the optimum outcome of play therapy (Boles 2018: 1). Furthermore, it is vital in providing a better hospital intervention and approaching a child with a sense of ease, accomplishment and control (Yayan et al. 2020: 33).

According to Kolcaba's theory of comfort, to promote effective intervention, nursing services are intended to provide a sense of comfort to clients by changing any stressful situations towards health services. Kolcaba further stated that the comfort of patients and their families during hospitalization is a major responsibility of nurses, and it may be used in nursing care for children to calm them down and reduce anxiety. Thus, any new independent nurse interventions, like therapeutic play, must ensure that they promote a sense of comfort, particularly among children. (Bawaeda, Wanda and Aprillia 2023: 318.)

The advantages of play care have already long been established (Rico and Janot 2019: 2). There are several studies that have pointed out the promising value of play therapy in pediatric care. Lowering levels of anxiety is the most illustrated positive effect of playful intervention in the hospital, in addition to favorable impacts on the child's behavioral and psychosocial development. (Rodriguez et al. 2021: 16.) Regardless of the acknowledgment of play's value on health and overall well-being of a child, there is still a need to substantiate the presence of play in their cognitive, physical, and social development (Rico and Janot 2019: 2). Especially during hospitalization where it elicits severe emotional distress and discomfort (Rodriguez et al. 2021: 1). This has led to continuous assessment and understanding of the effects and importance of play therapy particularly on the care of hospitalized children.

3 Purpose, aims and research questions

The purpose of this study was to describe the effects of play therapy on the level of anxiety of children and its importance in hospital care. Accordingly, it aimed to produce new knowledge on the effects of play therapy on the level of anxiety of children and its importance in hospital care which would greatly benefit nurses and child's well-being. It is essential for nurses particularly nurses in pediatric nursing to understand the significant value of play in children's care and to acknowledge the advantages of adapting play as a substantial component of care strategic approach for hospitalized children.

In this study, we addressed the following research questions:

1. What were the effects of play therapy on the anxiety level of children in the hospital?
2. What was the importance of play therapy in the care of children in the hospital?

4 Methodology and methods

A descriptive literature review was conducted for this study to gather the most relevant and updated scientific evidence on the effect of play therapy on the anxiety level of children in the hospital. A descriptive review aims to describe a phenomenon that is content-driven and understanding-based by nature (Kangasniemi et al. 2013: 292). It also enables researchers to take into consideration many different types of works of literature. The purpose of a literature review is to evaluate, interpret, and convey the most recent information while highlighting connections between different aspects of the subject and providing an innovative perspective on the topic of interest. (Coughlan, Ryan and Cronin 2013: 14.) In this study, a thorough search of the existing research studies on therapeutic play interventions in the context of pediatric nursing and hospitalized children from two different electronic databases was done, gathered, and utilized.

4.1 Data collection method

In this study, literature article screening was performed by three researchers. The two academic databases, CINAHL and PubMed, were utilized to gather primary studies. Inductive content analysis was used to analyze and synthesize data or information from cited relevant articles. Additionally, academically reviewed articles about the use of play interventions in pediatric nursing were screened to address the research questions. Boolean search phrases were used and the subsequent keywords for relevant search articles were utilized for each database. The researchers also obtained the assistance of the university's informatician to conduct an accurate search.

Limiters were placed only on articles published in English as the main language, the age inclusion as 1 to 12 years old, and the year was set from 2013 to 2023. Inclusion and exclusion criteria were set to get the most relevant article that met the study topic. All literature included was classified and analyzed based on the basic literature information (title and year of publication) and general information about the population (children's age) and the intervention (study design). The initial search was performed by exploring the titles and abstracts to screen duplicate literature and identifying literature that did not meet the criteria. Finally, all the academic articles relevant to the study

were read in full text and selected as inclusion in the study. The search strategic method is presented in a PRISMA flow chart (see figure 1).

4.2 Data search and selection

In this study, the PICO (Participants, Interventions, Comparison, Outcomes) framework was used to create a literature search strategy to ensure comprehensive and unbiased searches. The PICO framework served as a method for organizing clinical research questions and as a search strategy tool that enhances the effectiveness of literature searches (Eriksen and Frandsen 2018: 421). Therefore, utilizing this strategy made the database information retrieval process more efficient. In the search for relevant articles in the databases, the key term structures were utilized. The key terms used were “children in the hospital”, “pediatrics”, “play therapy”, “therapeutic play”, and “anxiety”. Additionally, Boolean operators such as “AND” and “OR” and brackets were used to make the search easier. The PICO framework in this study was shown (see table 2).

Population		Intervention		Comparison		Outcome
Children in the Hospital OR Pediatrics	AND	Play therapy OR Therapeutic play	AND	None	AND	Effects on anxiety level

Table 2. PICO (Population, Intervention, Comparison, Outcome) Framework.

With the aim of performing an accurate search, the authors sought the help of the University’s Informatician. The search was performed in two academic databases: CINAHL (Cumulative Index of Nursing and Allied Health Literature) and PubMed (Medline). These two databases were found in Metropolia University of Applied Sciences libguides. These were considered the primary databases due to their wide range of nursing and health-related articles. These academic databases were completely examined for both primary and peer-reviewed research. The search was limited to studies in the English language and published between 2013 to 2023. Also, academic databases with full-text literature publications were thoroughly searched in this study. Additionally, related articles about the effects of play therapy on the anxiety level of children in the hospital were scanned and screened before finalizing the search.

In identifying the relevant studies in electronic databases, the following keywords were used in CINAHL database: (“play therapy” OR “therapeutic play” OR “TP”) AND anxiety

AND (“children in the hospital OR pediatric”) and in PubMed database: (“play therapy” OR “therapeutic play”) AND anxiety (“pediatric OR “children”) AND (“hospital OR nursing”) these search terms were used to find articles based on the title, abstract, and full text. Since each database has its own search capabilities, the precise search terms and search limiters vary from database to database. For the initial searches, broad search phrases were used to ensure that all potential studies that met the inclusion criteria were identified.

The initial search from each database was conducted over a detailed review of titles and abstracts and all irrelevant items based on the selection criteria were removed. Independent authors examined the full texts of possible relevant articles. Additionally, aged one (1) to twelve (12) years were included in the searches and articles written only in the English language were selected in both databases. The two academic database searches showed a total of eighty-eight (88) academic articles related to the study topic. There were seventy-four (74) articles excluded after reading the title, abstract, full-text and study design based on inclusion and exclusion criteria. All obtained articles were recorded, and duplicates were automatically removed. To enhance the accuracy of data collection, the authors used a publication forum named Julkaisufoorumi or JUFO in Finnish which assessed the quality of research output. The Finnish scientific community developed this classification of publication channels to aid in the assessment of academic research quality. It featured a four-level classification system, ranging from zero (0) (the lowest level) to three (3) (the highest level), for both local and foreign publication channels. (Publication Forum 2022.) After the classification level of publications was verified, four (4) full-text articles were excluded with zero (0) publication channels, wherein they did not meet the criteria for level one (1). The quality assessment of research journals was presented in Appendix 2.

Therefore, ten (10) articles in total were obtained and used in this study with full-text searches and met level one (1) and two (2) criteria of publication channels. The detailed results from the data searches were presented (see table 3) and the data selection process was shown (see figure 1).

Database / Date / Limits	Search phrase	Total number of hits/ citations	Papers/ records included based on title*	Papers/ records included based on abstract*	Papers/ records included based on full text*
CINAHL Complete 2013-2023 Limits: English language	("Play therapy" OR "therapeutic play" OR "TP") AND anxiety AND ("children in the hospital" OR "pediatric")	27	25	25	24
PubMed 2013-2023 Limits: English language	("Play therapy" OR "therapeutic play") AND anxiety AND ("pediatric" OR "children") AND ("hospital" OR "nursing")	61	59	20	12
Records in total	-	88	84	45	36
Records removed based on duplicates	-	-	-	4	-
Records removed after reading the full text based on inclusion and exclusion criteria	-	-	-	-	22
Records removed after verifying the classification level of publications in Julkaisuforum					4
Total number of articles included in the study	-	-	-	-	10

Table 3. Results from Database Searches.

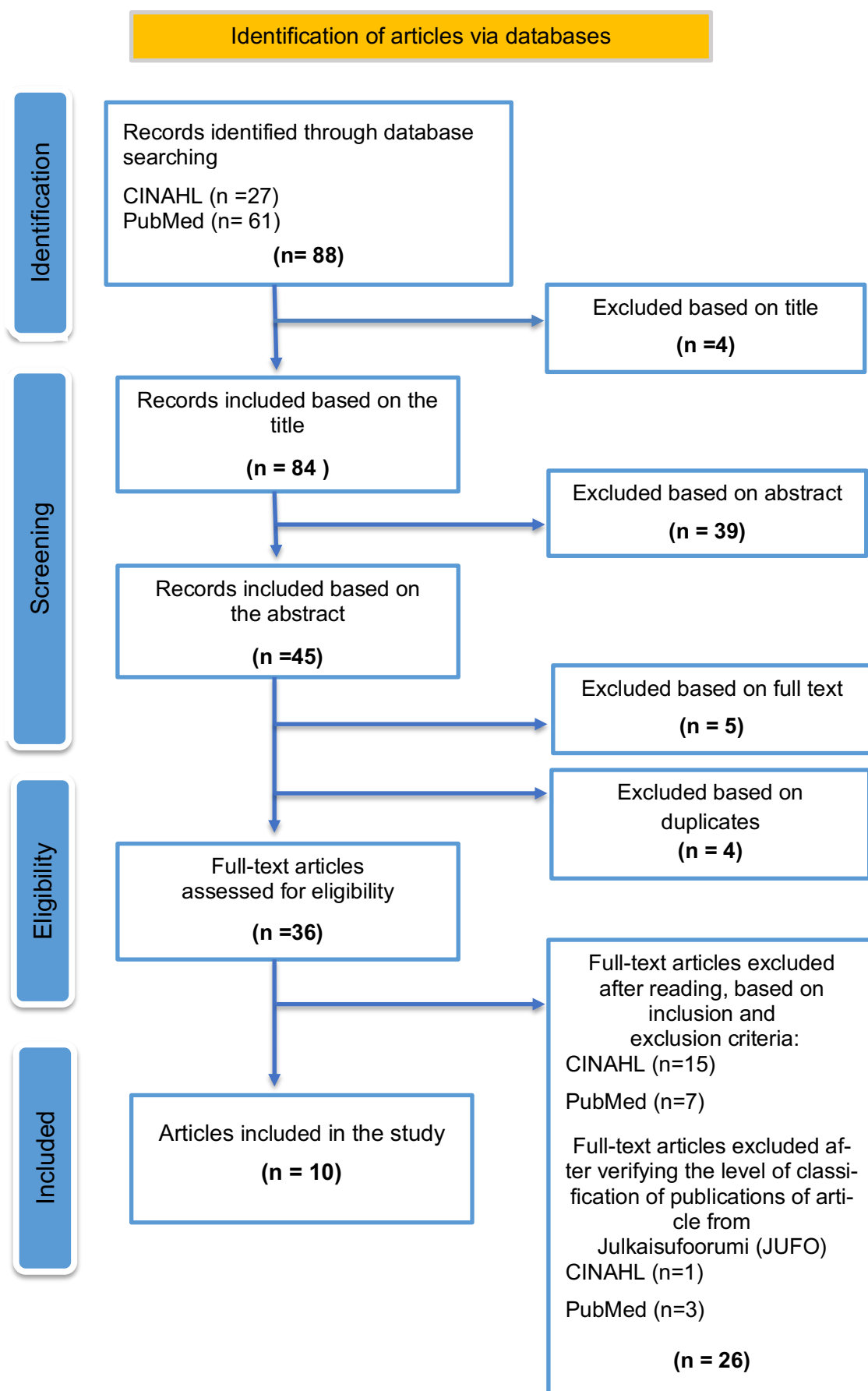


Figure 1. Prisma Flowchart on the data selection process.

The selected articles were based on the inclusion and exclusion criteria. The articles had to meet the following criteria stated below to be included in the study. The objective was to find updated existing nursing or health-related research articles in the context of “play therapy” or “therapeutic play” in pediatric nursing intervention. The inclusion and exclusion criteria of the studies were as follows (see table 4).

Inclusion	Exclusion
Studies published between 2013-2023.	Studies older than 10 years.
Study population: hospitalized children between the ages of 1 to 12 from all ethnic groups.	Study population: outside hospital and more than 12 years old.
Studies published in English.	Studies published in other languages than in English.
Peer reviewed and primary studies.	Secondary studies, not primary studies, editorials, expert articles and articles with no access to their full texts.
Quality assessment and classification of publications with Level 1 to 3.	Quality assessment and classification of publications with Level ≤ 0 .

Table 4. Inclusion and Exclusion Criteria.

After the final selection, all studies were analyzed from the search through the contents of articles with evidence that identified the effects of play therapy on the anxiety level of children in the hospital.

4.3 Data analysis method

In this study, the data obtained and collected was synthesized and analyzed for the inclusion of relevant content about the effects and importance of therapeutic play interventions. The authors utilized qualitative inductive content analysis for the ten selected articles as a research method to answer the two study questions: “What were the effects of play therapy on the level of anxiety of children in the hospital? And What was the importance of play therapy in the care of children in the hospital?”. The summary of the table (see appendix 1) illustrated that this literature review covered articles containing quantitative study designs. In this method of analysis, the authors created a hypothesis by combining new information and previously collected data to derive conclusions from data that had been gathered (Bengtsson 2016: 10). It employed the abstraction

process to simplify group data so that the research topic may be addressed more flexibly by means of the use of concepts (Maia et al. 2022: 4).

Before commencing the process of selecting and labelling data units, the authors thoroughly examined the contents of the articles to find relevant information that addresses the research questions. The data were presented in words and themes, allowing for a particular interpretation of the findings (Bengtsson 2016: 9-10). Extraction of the units of meaning began with the identification of pieces of texts, sentences or paragraphs that contained significant connection to the research questions. As demonstrated in table 5, the meaning units included more than one phrase and numerous meanings. The articles were reviewed by two investigators independently to come up with a deeper level of analysis of the meaning units, and a third investigator reread the articles to ensure the analysis' accuracy and reliability and strengthen its validity. The entire and selected meaning units with the aspects that were related to one another through content and context were then discussed to come to a consensus on the findings. (Bengtsson 2016: 11-12.)

Meaning units (Original expression)	Coding
"I was not going to worry about venepuncture after the hospital play intervention. The play specialist explained the procedure to me during the interventions. I don't get scared of syringes anymore". (Li et al. 2016: 6.)	Less stress level on children Anxiety Relief Less negative reactions to procedure Improved understanding
"I am not afraid to see doctors now. I am able to express my feelings and ask questions. I wasn't stressed this time because they (the play specialist) have been helping me to cope with the pain caused by medical procedure". (Li et al. 2016: 7.)	Improve coping with pain Child is less frightened Child is more confident
"I've never seen my son so brave when facing medical procedure. I would like to thank the play specialist for her hospital play intervention." (Li et al. 2016: 7.)	Child is at ease with the procedure Parent is confident with play specialist Child appear to be more relaxed

Table 5. The meaning units and coding.

The authors then proceeded to organize the texts on the selected articles using “open coding process” to extract the meaning units, which were then scrutinized to identify differences and similarities before arranging it into possible manifest categories (Bengtsson 2016: 12). The categories and sub-headings were identified during the categorizing process as shown (see table 6).

Generic Category: Psychosocial Effect	Generic Category: Child's Well-Being
<p>Subcategory 1: Reduced stress, anxiety and fear related to hospital experience</p> <p>Subcategory 2: Improved nurse-child interaction</p> <p>Subcategory 3: Enhanced positive emotions towards healthcare workers and medical intervention</p> <p>Subcategory 4: Provide emotional support and promote child friendly environment</p> <p>Subcategory 5: Strengthen trust and cooperation</p> <p>Subcategory 6: Enhanced self-care skills</p> <p>Subcategory 7: Reduced pain perception</p>	<p>Subcategory 1: Improve coping strategies</p> <p>Subcategory 2: Reduce Anxiety</p> <p>Subcategory 3: Reduce feeling of pain</p> <p>Subcategory 4: Reduce negative emotional manifestation</p> <p>Subcategory 5: Improve treatment compliance</p> <p>Subcategory 6: Reinforce normal growth and development</p> <p>Subcategory 7: Promote self-esteem and independence</p> <p>Subcategory 8: Improved child's socialization</p> <p>Subcategory 9 : Establish trust</p>

Table 6. The generic categories and sub-categories.

Subsequently, the researchers assessed whether sub-headings had relations to an already identified category or fit into different categories. Several categories were repeatedly created at first which must be anchored in the texts where they were derived; nevertheless, the number of categories was brought down after the data compilation. The meaning units were moved back and forth within the categories to effectively understand the texts without becoming repetitious and to provide relevant category outcomes (Bengtsson 2016: 12). The main categories were then created to summarize the inherent interpretation of the texts as shown in table 7.

Main Category	Generic Category
Effects of Play therapy in child's hospital anxiety	Psychosocial Effect Emotional - Behavioural Effect Physiological Effect
Importance of play therapy in nursing care	Child's Well-being Nursing Care Advantages

Table 7. The main categories and generic categories.

The inductive content analysis main processing steps are shown in figure 2. After following these steps, the relevant extracted units were reviewed systematically and were ready for reporting with the inclusion of main categories, generic categories and sub-categories which were used in this data analysis process as shown (see table 8). In total, the authors extracted – Sixty-eight original expressions (n= 68), thirty-eight subcategories (n=38), five generic categories (n=5) and two main categories (n=2).

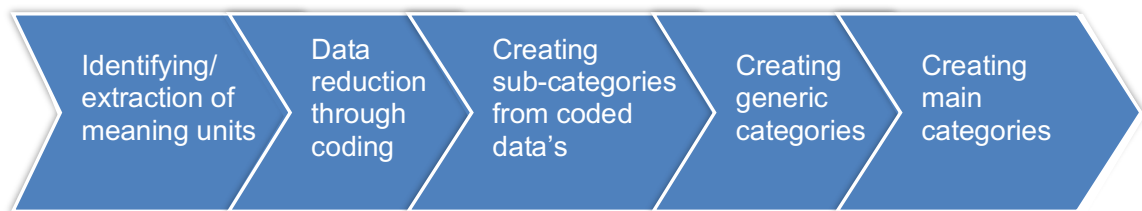


Figure 2. Inductive content analysis procedure.

Table 8. Units of analysis based on the lists of selected articles.

Main Category: (Themes)	Effects of play therapy on child's hospital anxiety			Importance of play therapy in hospital care	
Generic Category:	Psychosocial Effect	Emotional-Behavioural Effect	Physiological Effect	Child's Well-Being	Nursing Care Advantages
Sub- Categories:	<ul style="list-style-type: none"> • Reduced stress, anxiety and fear related to hospital experience • Improved nurse-child interaction • Enhanced positive emotions towards healthcare workers and medical intervention • Provide emotional support and promote child friendly environment • Strengthen trust and cooperation • Enhanced self-care skills • Reduced pain perception 	<ul style="list-style-type: none"> • Reduced hospital fear and misconceptions • Improve child's mood • Improve child's affective functioning through the expression of emotions • Encourage child's creativity, imagination and playfulness • Promote participation and adaptation to hospitalization • Improve coping with invasive or stressful medical treatments • Low resistance of parental separation • Promotes effective child relaxation 	<ul style="list-style-type: none"> • Low levels of cortisol indicating less stress and inflammation • Improved sleep quality and length • Normalizes vital signs • Improved appetite • Lower heart rate 	<ul style="list-style-type: none"> • Improve coping strategies • Reduce Anxiety • Reduce the feeling of pain • Reduce negative emotional manifestation • Improve treatment compliance • Reinforce normal growth and development • Promote self-esteem and independence • Improved child's socialization • Build trust 	<ul style="list-style-type: none"> • Encourage cooperation and compliance with health care team • Encourage nurse- child interaction and child diversion • Provide education and support • Encourage a healthy and trusting relationship • Provide valuable information about child's feelings, thoughts and fears • Improve understanding of child needs • Improve nursing care plans • Improve quality of care and outcomes • Enhance parental engagement in child care
Units of Analysis (Selected Articles)	2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	2, 3, 7, 9	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 4, 5, 6, 7, 8, 9, 10

5 Results

After a comprehensive database search and selection, ten (10) articles were obtained for the purpose of this study. Quantitative research designs were utilized in the data collection and analysis. The articles included in the study were published in different countries. Four (4) of the research articles were conducted in Turkey, two (2) in Hong Kong and one (1) each in Australia, Brazil, United Arab Emirates and China. Children from all ethnic groups between the ages of one (1) to twelve (12) represented the study's population. The chosen articles were displayed in detail in the table below (see table 9).

This study aimed to produce new knowledge on the effects of play therapy on the level of anxiety of children and its importance in hospital care. Inductive content analysis was utilized for classifying categories and subheadings which yielded two (2) main categories: the effects of play therapy on a child's hospital anxiety and the importance of play therapy in hospital care. It was further divided into five (5) generic categories which were first; psychosocial effects, emotional-behavioral effects, and physiological effects, and secondly, the importance in the child's well-being and the nursing care advantage.

Country	Year	Author (s)	Methods and Methodology	Participants
Turkey	2020	Ünver, Güray and Aral	Quantitative Study A parallel- group randomized controlled trial (RCT)	7-12 years old N= 94 children
Turkey	2018	Coskuntürk and Gözen	Quantitative Study A randomized controlled experimental trial	6-12 years old N= 43 children
Turkey	2017	Orhan and Yildiz	Quantitative Study Experimental	8-12 years old N= 34 children
Turkey	2021	Zengin, Yayan and Düken	Quantitative Study Quasi experimental study with pretest-post test design	6-12 years old N= 65 children
Hong Kong	2016	Li et al.	Quantitative Study Quasi-Experimental; Non- equivalent control group pre-test and post-test design	3-12 years old N= 304 children
Hong Kong	2018	Wong et al.	Quantitative Study Two arm parallel randomized controlled trial	3-12 years old N= 208 children
Australia	2015	Hayland et al.	Quantitative Study A randomized Control Trial	0-3 years old N= 100 children
Brazil	2014	Paladino, Carvalho and Almeida	Quantitative Study Descriptive and Exploratory Research	3-5 years old N= 30 children
United Arab Emirates	2016	Al-Yateem and Rossiter	Quantitative Study Nonequivalent group pretest posttest design (two phase design)	4-7 years old N= 165 children
China	2021	Tan et al.	Quantitative Study Two arm parallel randomised controlled trial	6-12 years old N= 65 children

Table 9. List of selected articles.

5.1 Effects of play therapy on child's hospital anxiety

Play is a primary form of self-expression in children and its relative impacts can be distinguished on their motor, psychological, cognitive and social development. Anxiety and fear during hospitalization sets off a chain reaction of severe emotional discomfort in children which may lead to regression, apathy, sleep disturbance, and separation anxiety. (Caleffi et al. 2016: 2.) Play therapy displayed various effects when it was incorporated during the child's hospitalization process. Various studies have discussed the positive impacts of play when it comes to the level of anxiety in children. It was significantly demonstrated in the children's psychosocial aspect (Coskuntürk and Gözen 2018, Hayland et al. 2015, Li et al. 2016, Al-Yateem and Rossiter 2016, Orhan and Yildiz 2017, Paladino, Carvalho and Almeida 2014, Zengin, Yayan and Düken 2021, Wong et al. 2018, Tan et al. 2021), emotional-behavioral aspect (Ünver, Güray and Aral 2020, Coskuntürk and Gözen 2018, Hayland et al. 2015, Li et al. 2016, Al-Yateem and Rossiter 2016, Orhan and Yildiz 2017, Paladino, Carvalho and Almeida 2014, Zengin, Yayan and Düken 2021, Wong et al. 2018, Tan et al. 2021) and physiological aspect (Coskuntürk and Gözen 2018, Hayland et al. 2015, Paladino, Carvalho and Almeida 2014, Wong et al. 2018).

5.1.1 Psychosocial effects

Play therapy was widely utilized as a part of non-pharmacological intervention mainly to alleviate stress, fear and anxiety among children. According to the experimental study of Conkuntürk and Gözen (2018) carried out in Turkey, therapeutic play education program like short trips to the operating room, when used as a nursing educational intervention helped children better able to comprehend the medical treatment and promote a pleasant hospital experience (Coskuntürk and Gözen 2018: 786). It also enabled the child to feel less discomfort (Hyland et al. 2015: 1648). With such awareness and understanding during the nurse-child play interaction, the child was likely to experience less pre-procedural tension and anxiety, and this made the child feel more at ease, relaxed and courageous about undergoing medical treatments. Additionally, parents further mentioned that their impression of the hospital being considerate about their children's psychological and emotional aspects promoted positive commendations towards hospital intervention and the health care team. (Li et al. 2016: 6.)

An experimental study done by Orhan and Yildiz (2017) about pre-intervention training using a "chemo duck toy" was conducted in Turkey, emphasizing the importance of educating and preparing children for uncomfortable treatments to reduce adverse

reactions while undergoing invasive operations like catheterization. (Orhan and Yildiz 2017: 1539.) On the other hand, the utilization of interactive therapeutic play like dramatization such as the use of dolls, demonstrated children's interest in participating in the play. The studies conducted in Brazil and Hong Kong cited that greater cooperation had been observed with reduced resistance when their mother left them during the play intervention as evidenced by less crying and screaming. (Paladino, Carvalho and Almeida 2014: 426; Wong et al. 2017: 6.)

It was highlighted in the study of Wong et al. (2017), that children who were prepared psychologically before the procedure felt more in control in an unfamiliar environment which also lessened their negative experiences of the treatment (Wong et al. 2017: 9). Even the basic, low-cost intervention like the use of dolls can be utilized to assist and divert a child from discomfort (Al-Yateem and Rossiter 2016: 5). Additionally, a quasi-experimental research by Zengin, Yayan and Düken (2021) in Turkey, found that structured therapeutic play with age-appropriate toys were very effective in reducing children's anxiety, worry, and negative thoughts (Zengin, Yayan and Düken, 2021: 81). On the quantitative study performed in China by Tan, Yin, Meng and Guo (2021), the use of sand play therapy significantly lowered the children's social disengagement level. It further assisted them in expressing their feelings, talking about experiences, and building secure connections. It also provided them with a safe environment to convey their needs and expectations which will then improve the child's self-care abilities. (Tan et al. 2021: 3101.)

5.1.2 Emotional - behavioral effects

Stressful experiences created during hospitalization predisposed children to feel anxious and terrified. Negative emotional and behavioral manifestations were the most typical demonstration of anxiety in children. In a parallel group randomized controlled study by Ünver, Güray and Aral (2020) performed in Turkey, using "Jengga" as a group game intervention showed that children who engaged in fun activities in the recreation room had lower levels of anxiety. (Ünver, Güray and Aral 2020: 408.) In addition, Coskuntürk and Gözen (2018) stated that children who underwent interactive therapeutic play exhibited more pleasant hospitalizations which lessened the likelihood of displaying negative behaviors such as aggressiveness (Coskuntürk and Gözen 2018: 785). Following the intervention performed on hospitalized children in China by Li et al. (2016) with the use of age-appropriate toys, both the children and parents were said to have a positive impression of the hospital especially of healthcare professionals as their fear and misconceptions were substantially reduced (Li et al. 2016: 4).

After the interactive therapeutic play intervention performed on children scheduled for surgery in Brazil by Paladino, Carvalho and Almeida (2014), the children remained quiet, calm and showed cooperation and collaboration with the healthcare professionals during the procedure. It was then found out that those positive behaviors were due to their active participation during the play which allowed them to communicate and express their feelings. Furthermore, children felt more relaxed after recognizing the healthcare professionals who previously played with them. (Paladino, Carvalho and Almeida 2014: 426.) On the other hand, the findings of the study in China by Tan et al. (2021), also revealed that play intervention helped promote a child's language expression through social participation in the activity. It was further emphasized that play improved the child's affective functioning through the expression of their inner world. (Tan et al. 2021: 3101.)

In a Turkish study by Zengin, Yayan and Düken (2021), the use of age-appropriate toys as a therapeutic nonpharmacological intervention helped children to reduce their fear and anxiety towards medical procedures primarily children who need to endure several medical and invasive treatments (Zengin, Yayan and Düken 2021: 81). It was also supported by a study done in Hong Kong by Wong et al. (2018), stipulated that suitable and age-appropriate diversion allowed children's focus to be drawn away from the anxiety-inducing procedures to a playful and enjoyable interaction (Wong et al. 2018: 8). The need for a continuous diversion throughout the medical intervention should be considered as highly relevant based from the Australian study by Hayland et al. (2015), as it would consequently lessen the discomfort and painful experience of the child (Hayland et al. 2015: 1648). It was further supported by the study conducted by Al-Yateem and Rossiter (2016) in the United Arab Emirates that said, it was necessary to employ activities designed to divert children from pain and unfamiliar hospital environments to assist them in better coping with invasive and stressful medical treatments (Al-Yateem and Rossiter 2016: 5). Therefore, reducing their anxiety and promoting positive adaptation to hospitalization (Orhan and Yildiz 2017: 1539).

5.1.3 Physiological effects

Substantial changes in children's heart rates and blood pressures were often used as reliable and concluding markers for the evaluation of the degree of anxiety. According to the findings of the study conducted in Hong Kong by Wong et al. (2018), lowered heart rate and arterial blood pressure of children who underwent cast removal procedures were reported as significant objective indicators of low anxiety levels after the performed play intervention. Moreover, children further exhibited fewer signs of

negative emotional manifestations when they were aware of the unfamiliar medical intervention in an unknown environment. (Wong et al. 2018: 6.) The study carried out by Paladino, Carvalho and Almeida (2014) in Brazil also emphasized that playful activities in children promoted a calming power which was extremely beneficial during hospitalization and recovery as it reduced stress and normalized vital signs (Paladino, Carvalho and Almeida 2014: 427).

On the other hand, an Australian study conducted by Hayland et al. (2015) on the use of distraction technique with acute burns, highlighted the importance of proper management of procedural pain and anxiety particularly during burn dressing changes, as it may exacerbate distress and anxiousness in children. It stated the correlation of the stress hormone cortisol on the pathophysiological response to pain and anxiety which might possibly affect wound healing and if poorly managed may lead to potential psychological harm. Consequently, they emphasized the significant value of distraction intervention in lessening the perception of pain and anxiety by diverting a child's attention from painful and uncomfortable procedures to a more pleasurable experience. (Hyland et al. 2015: 1647.) According to the research of Coskuntürk and Gözen (2018), short trips to the operating room had a significant impact on reducing children's anxiety levels in the moments following the procedure of surgery on the preoperative play education program for children who underwent heart surgery in Turkey (Coskuntürk and Gözen 2018: 781). Positive effects of play therapy were also described in the Australian study as manifested through improved appetite and quality of sleep (Hayland et al. 2015: 1648).

5.2 Importance of play therapy in hospital care

Children's basic right to play has long been seen as a vital component in a child's normal growth and development according to the UN Declaration of the Rights of the Child. It was additionally supported by the Federal Nursing Council of 2017 recommendation regarding the regulation governing the utilization of playful care using therapeutic toys in the medical setting during hospitalization as highly important as well as the need for compulsory installation of toy libraries in those facilities. (Paula et al. 2019:1-2.) There were numerous studies done which cited the importance of play therapy in children's well-being (Ünver, Güray and Aral 2020, Coskuntürk and Gözen 2018, Hayland et al. 2015, Li et al. 2016, Al-Yateem and Rossiter 2016, Orhan and Yildiz 2017, Paladino, Carvalho and Almeida 2014, Zengin, Yayan and Düken 2021, Wong et al. 2018, Tan et al. 2021) and the relative significance of the utilization in pediatric nursing care (Ünver, Güray and Aral 2020, Li et al. 2016, Al-Yateem and Rossiter 2016, Orhan

and Yildiz 2017, Paladino, Carvalho and Almeida 2014, Zengin, Yayan and Düken 2021, Wong et al. 2018, Tan et al. 2021).

5.2.1 Child's well-being

Hospitalization-related events were said to be a fascinating process that would be remembered even in later stages of life (Coskuntürk and Gözen 2018: 786). According to the research conducted in Australia and the United Arab Emirates, integrating play therapy into hospitalization or medical intervention procedures significantly reduced the amount of discomfort, fear, and anxiety that children experienced (Hayland et.al 2015: 1648; Al-Yateem and Rossiter 2016: 5). On the other hand, the experimental group trial study performed in Turkey provided additional evidence that playing games like “Jengga” can help young children feel less anxious before the operations. Children who took part in the said gaming intervention while waiting before being transported to the clinic showed significantly reduced levels of anxiety in comparison to children in the untreated group. (Ünver, Güray and Aral 2020: 407.)

Orhan and Yildiz (2017) asserted that play therapy used before intervention had similar effects on the children's post-procedural anxiety levels during catheterization (Orhan and Yildiz 2017: 1539). Similar observations were made in research by Li et al. (2016) that was carried out in Hong Kong, which claimed that play therapy sessions helped children feel less anxious and stressed since they were familiar with the medical process after the play activities (Li et al. 2016: 6). Additionally, it was shown in the study of Paladino, Carvalho and Almeida (2014), that children expressed their desire to carry some of the hospital toys used after their play to the surgical room which assisted them through the difficult situation and further reduced their anxiety, demonstrating the therapeutic benefits of play in children. Many of the children who also took part in the study showed evidence of calmness, cooperation, and the ability to sleep easily when under anesthesia. They likewise demonstrated initiative and were less likely to display untoward reactions like crying when they were removed from their mother's comfort. Thus, playing was always a creative and interesting activity for children. (Paladino, Carvalho and Almeida 2014: 425-426.)

After several play sessions, the children further developed their trust in the medical staff, which significantly enhanced their cooperation throughout the entire course of treatment. The studies from Hong Kong performed by Wong et al. (2018) and Li et al. (2017) highlighted that therapeutic play encouraged a positive coping mechanism of children in an unfamiliar environment such as hospitalization and surgical intervention.

Through play, children tend to learn and understand more about the situation that they are currently facing in such a way that they can better manage the circumstances. The enhanced coping abilities of children may result in reducing negative hospital repercussions and maladaptive emotional manifestations. (Wong et al. 2018: 8; Li et al. 2016: 7.) Moreover, Li et al. (2016) study further observed that children became more settled and braver in facing the procedure which promotes their self-esteem and independence (Li et al. 2016: 7).

Some parents claimed that the hospital play interventions allowed their children an opportunity to interact with the other children on the ward, which helped them establish friends during their hospital stay and feel less isolated (Li et al. 2016: 7). On the other hand, a study conducted in China for instance, showed that sand play therapy had a positive effect on the children's language development, social interaction and creativity. Furthermore, children felt that they no longer felt bored and lonely as the play interventions provided them with a fun and exciting experience, hence this can reinforce their normal growth and development. (Tan et al. 2021: 3101.)

5.2.2 Nursing care advantages

Therapeutic play was widely utilized in hospital settings particularly in pediatric nursing care due to its reliable advantages in promoting faster recovery in hospitalized children. According to the study of Al-Yateem and Rossiter (2016) done in the United Arab Emirates, a simple play intervention can produce beneficial effects especially when utilized as an active measure of pediatric care modifications addressing the psychological needs of a child. (Al-Yateem and Rossiter 2016: 6.) Continuous education on the benefits and innovation of therapeutic play during hospital intervention must be given the highest priority (Orhan and Yildiz 2017: 1534). Furthermore, another Turkish study conducted by Zengin, Yayan and Düken (2021) emphasized that healthcare professionals should consider applying therapeutic play in practice as a suitable and useful strategy to avert serious detrimental impact on children's recovery as well as improving the nursing care plans (Zengin, Yayan and Düken 2021: 84).

The potential benefits of incorporating therapeutic play into nursing care management became evident through enhanced interactions between nurses and children, increased cooperation, and better compliance with the healthcare team. During the dramatization with the use of dolls, a spontaneously positive collaboration with healthcare professionals was observed according to Brazilian research. Children would also watch attentively the entire performance and would actively ask questions about

the procedures being performed. (Paladino, Carvalho and Almeida 2014: 424.) Likewise, the study of Tan et al. (2021) about sand play therapy further stated that the interactive relationship between a child and the health care professional was strengthened as the children can have the freedom to express their feelings using sand, water and miniature objects to externalize their traumas (Tan et al. 2021: 3107).

Play therapies are currently utilized as a strategic approach to provide education and support to children. Wong et al. (2018) highlighted that children were able to comprehend the procedure quite well after the play session performed by the play specialist before the cast removal surgery thereby reducing the anxiety level of children. (Wong et al. 2018: 9.) Managing children who were less anxious was observed to be easier and simpler in clinical settings. Based on a Brazilian study, therapeutic play helped children understand what is happening, allowing them to perceive hospitalization as less hostile and scary than they thought and increasing their willingness to cooperate with procedures. (Paladino, Carvalho and Almeida 2014: 427.)

Strengthening parental engagement in childcare was part of the primary goal of family-centered care play. According to Ünver, Güray and Aral (2020) in a Turkish study, the participation of parents and healthcare professionals during therapeutic play promoted comprehensive and high-quality preoperative treatment. Active participation of parents during the play session can enhance the positive impacts of the play. (Ünver, Güray and Aral 2020: 409.) Additionally, Wong et al. (2018) of Hong Kong study suggested that exercising play helped enhance patient treatment satisfaction and positive experience of children and family during hospitalization procedures (Wong et al. 2018: 9). Likewise, Paladino, Carvalho and Almeida (2014) cited that the family appeared to have more trust on the healthcare team (Paladino, Carvalho and Almeida 2014: 427).

Reducing a child's psychological burden and promoting positive hospital outcomes through the incorporation of play therapy was emphasized in a Hong Kong study by Wong et al. (2018) as its primary objective. Integrating play as part of the intervention may ensure a comprehensive and high standard of care given to hospitalized children. (Wong et al. 2018: 1.) For instance, a Turkish study conducted by Orhan and Yildiz (2017) discussed how pre-intervention therapeutic play during invasive procedures like catheterization helped lessen the children's state of anxiety and negative reactions (Orhan and Yildiz 2017: 1534). Similarly, Tan et al. (2021) mentioned that the safe and compassionate environment that the play therapist created during the sand play session helped the children to be less resistant to medical professionals and gave children the opportunity to express their emotions verbally wherein may successfully lessen

children's social and behavioral issues (Tan et al. 2021: 3106). Furthermore, the study by Paladino, Carvalho and Almeida (2014) in Brazil mentioned that during play therapy, healthcare professionals noticed a significant improvement in children's both mental and clinical conditions as well as a more positive response from the child toward the procedure and to the entire team (Paladino, Carvalho and Almeida 2014: 427).

6 Discussion

This descriptive literature review sought to answer two specific research questions: "What were the effects of play therapy on the level of anxiety of children in the hospital?" Also, "What was the importance of play therapy in the care of children in the hospital?". Several studies have shown that incorporating play therapy in supporting children when they are hospitalized, has a positive effect on the level of anxiety experienced by reducing their fear, worry, negative thoughts, and anxiety by letting children understand what is happening and enabling them to perceive hospitalization as less hostile. It was significantly demonstrated in the children's psychosocial, emotional-behavioral, and physiological aspects. Furthermore, play therapy when incorporated into the plan of care also decreased the level of anxiety and increased the trust of parents to the nurses, as well as amplified the positive outcome of play. The results also showed that incorporating play had numerous impacts on the child's well-being, with the nurses greatly benefiting from it because it enhanced cooperation and compliance with the healthcare team.

This study was undertaken to describe the effects of play therapy on the anxiety level of hospitalized children and its importance in hospital care. The analysis revealed psychosocial, emotional-behavioral, and physiological effects, and then there were its importance and advantages for a child's well-being and nursing care. The discussion focused on some of these outcomes.

Hospitalization can be a distressing and daunting ordeal for children due to their unfamiliarity with the hospital environment and medical procedures, as well as their lack of understanding regarding the reasons for their hospital stay. Consequently, children may experience emotions like anger, uncertainty, anxiety, and helplessness. Out of these negative responses, Anxiety was the most mentioned, and heightened levels of anxiety can negatively impact both the physical and psychological health of children. Intense anxiety impaired a child's capacity to deal with medical procedures efficiently, resulting in heightened non-compliant behavior and negative feelings towards healthcare providers. (Li et al. 2016: 1.)

This study was anchored on three (3) theories, Lazarus and Folkman's stress and coping theory, Kolcaba's theory of comfort, and Developmental stages of play after Jean Piaget's theory of development. Lazarus and Folkman emphasized that stress is a relationship between a person and their environment that they find difficult or surpassing their resources. Coping, on the other hand, is a dynamic cognitive and behavioral endeavor to deal with stressful conditions. Children are more prone to experience tension and anxiety if they believe they have little control over medical treatment. (Li et al. 2016: 2.) According to Kolcaba's theory of comfort, to promote effective intervention, nursing services are intended to provide a sense of comfort to clients through changing any stressful situations towards health services. Also, it stated that the comfort of parents and their families during hospitalization is a major responsibility of nurses, and it may be used in nursing care for children to calm them down and reduce anxiety, thus, any new independent nurse interventions, like therapeutic play, must ensure that they promote a sense of comfort, particularly anxiety in children. (Bawaeda, Wanda and Aprillia 2023: 318.) On the other hand, Developmental Stages of play postulated that play should be provided according to age groups of children's level to promote more cooperation throughout the hospital procedure (Silva et al. 2017: 145).

The findings of this research indicated that Play therapy/ Therapeutic play is widely utilized as part of a non-pharmacological intervention mainly to alleviate anxiety among children. In a study conducted by Wong et al. (2016), it was noted that engaging in therapeutic play effectively reduces anxiety and emotional distress in children who went through cast-removal procedures. These findings underscored the significance of incorporating therapeutic play as a standard component of routine care. Additionally, the initial injuries, combined with the unfamiliar environment and procedure-related equipment, can potentially induce anxiety and fear regardless of the child's age, thus impeding the efficiency of procedures. The study lists two coping strategies for dealing with stress: problem-focused and emotion-focused coping. Therapeutic play aided children in preparing for the procedure, enabling them to regain a sense of control in facing stressful situations. In general, children who underwent this intervention displayed fewer adverse emotional responses than those who did not. Furthermore, the study noted that the average increase in heart rates before and during the procedure was lower compared to that of the control group, supporting the positive outcomes. The study emphasized that such interventions ensured comprehensive and high-quality care, alleviating the psychological burden on patients. Furthermore, they play a role in improving patient care, satisfaction, and the overall experience for both children and their families.

On the other hand, Tan et al. (2016) highlighted in their research that customizing the healthcare environment to meet children's needs, along with healthcare teams adept at recognizing and addressing anxiety and distress with expertise and empathy, can significantly reduce children's anxiety levels. Involving children in play and creative activities during their hospital stay helps them better handle the experience and consequently reduces their anxiety. This study utilized sand play therapy, a form of play therapy, emphasizing the significance of integrating psychological interventions into clinical nursing care. They also emphasized the increasing prominence of international organizations advocating for the best treatment outcomes in a secure and supportive environment. Creating a healthcare setting that includes both room and opportunities to play and creative activities was essential for helping children cope with their illness, medical procedures, and anxiety that comes with them. The research also confirmed that pediatric nurses, in their roles as assessors of children's issues, implementers of nursing interventions, partners with others in the healthcare team, and educators of both the children and their families, play a vital role in shaping the mental wellbeing of children with chronic illnesses.

A study undertaken in Brazil by Paladino Carvalho and Almeida (2014) discovered that many children who engaged in Instructional Session Therapeutic Play (ITP) willingly entered the surgical room without resisting separation from their mothers, cooperated during the induction of anesthesia, and woke up from the anesthesia calmly. This indicated that the use of ITP helped children comprehend the surgical process, ultimately reducing its traumatic impact. This reinforced the conclusions of other studies asserting that play is a pivotal aspect of a child's life. Play possesses a calming potential, particularly valuable during hospitalization and recovery, as it diminishes stress, anxiety, and pain while stabilizing vital signs. Allowing a child, the opportunity to play is a strategy that can alleviate the negative effects of hospitalization. Furthermore, this process fosters a sense of trust between the child and the healthcare team, as it facilitates communication and provides entertainment, among other advantages.

On a different note, Ünver and Güray (2020) performed a research investigation that demonstrated children in the experimental cohort engaging in a game intervention while awaiting the move to the operating theater felt a substantial decrease in the levels of their anxiety in contrast to the children in the control group. This indicated the effectiveness of group games during preoperative preparation in lowering anxiety levels, not only for children but also for their mothers. The study also stressed the pivotal role that nurses play in alleviating anxiety for both children and their parents. The researchers gave emphasis to the critical importance of assessing patients

holistically and providing comprehensive care. Especially in the pediatric wards. Mitigating children's fear and anxiety constituted the initial step in holistic care, given the elevated levels of anxiety experienced by hospitalized children. Addressing this situation was crucial as it significantly impedes the recovery process for many children. Hence, the study suggested adopting structured therapeutic play/play therapy as a non-pharmacologic strategy to alleviate children's anxiety about medical procedures. This technique was considered appropriate and efficient for pediatric nurses to integrate into their professional practice.

In the study of Conkuntürk and Gözen (2018) it claimed that occurrences like hospitalization, illness, treatment, and surgery led to anxiety in school-age children. They also stated that inadequate preoperative education can lead to issues like insomnia and loss of appetite, along with heightened anxiety and stress in the postoperative phase. Furthermore, experiences related to hospitalization were noted to be impactful, often leaving lasting impressions in later stages of life. It showed the powerful effect of ITPEP- a form of therapeutic play that helps a child comprehend the surgical process, reducing their high levels of anxiety and enabling them to have a positive experience. The study also tackled the subject of how educating mothers about the hospital environment led to a decrease in their anxiety levels. These findings aligned with the conclusions drawn from previous studies about play therapy and its effects on the anxiety levels of children.

A study carried out in Turkey by Al-Yateem and Rossiter (2016) discovered that reducing anxiety levels in children did not necessarily require a high cost. The study utilized uncomplicated and economical play techniques, including drawing, storytelling, working with dough, utilizing balloons, and bubble-blowing. Nurses who implemented the said activities noticed notable and meaningful reductions in the anxiety levels of children in the hospital. The researchers suggested that the positive outcomes of this intervention could prompt adjustments in care practices within pediatric healthcare settings that had not yet incorporated proactive measures to tend to the emotional and social requirements of children.

Similarly, Zengin, Yayan and Düken (2016) conducted a study that demonstrated how the psychological well-being of individuals directly impacts the success of post-transplantation's long-term treatment. In these situations, therapeutic play can offer both physical and emotional solace, aiding in the child's recovery process. The research findings indicated that implementing a therapeutic play/play therapy program led to a statistically noteworthy reduction in the children's levels of anxiety and

apprehension regarding liver transplantation. Play, which has been proven to have a high therapeutic value for children during hospitalization, can be used both as therapeutic play and play therapy. The study recommended that pediatric nurses use the therapeutic play/ play therapy program to reduce children's anxiety and fears about medical procedures.

The study by Orhan and Yildiz (2017) underscored the significant benefits of therapeutic play in reducing anxiety levels in pediatric oncology patients. This approach not only helps to alleviate pain and suffering but also highlights the importance of preparing and informing children before undergoing any painful procedures. The study also emphasized the crucial role that nurses play in the implementation of therapeutic play. Their experience in the hospital setting allowed them to effectively reduce children's anxiety and stress, preparing them for upcoming treatment procedures. However, the researchers reiterated that because each child may have unique concerns and fears, therapeutic play should be individualized. Overall, this study contributed to the growing body of research highlighting the positive impact of therapeutic play on the psychosocial well-being of pediatric oncology patients.

Hayland et al. (2015) undertook a randomized controlled trial that demonstrated the significant impact of the presence of child life therapists (formerly known as play therapists) in reducing pain during pediatric burn dressings. This finding supported the idea that distraction and engagement activities facilitated by a child life therapist can lead to a notable reduction in pain experienced by the child. The study took notice of an important psychological aspect- the role of self-control in influencing pain perception. It suggests that children who can focus away from pain may experience lower levels of pain, emphasizing the potential for positive coping strategies to enhance psychological well-being. The research provided valuable insights into the benefits of incorporating child life therapists in pediatric care settings, especially during potentially painful procedures like burn dressings. It underscored the importance of a holistic approach to pediatric healthcare that considers both physical and psychological well-being.

Lastly, the study conducted by Li et al. (2016) in Hong Kong was consistent with earlier findings, this research emphasized the link between elevated anxiety levels and unfavorable emotional reactions of children. This association highlighted how anxiety can affect a child's capacity to handle hospitalization and medical procedures, as well as their overall emotions and attitudes toward healthcare. The study's results offered additional proof of the potential advantages of implementing hospital play intervention to reduce anxiety levels and negative emotions in children. Engaging in play activities

can be a powerful tool to improve children's ability to cope, and alleviate stress, ultimately leading to improved psychosocial adjustment, not only to their sickness but also to the experience of being hospitalized. This research also underscored the importance of incorporating play-based interventions and psychological support in pediatric healthcare settings to address the emotional and psychological well-being of young patients, helping them navigate the challenges of hospitalization and medical procedures more effectively.

The findings of this study were consistent with the findings of related literatures and other studies conducted that described the impact and effects of play therapy on the level of anxiety of children in the hospital and the importance of nurses in the delivery of play therapy in the care of children in the hospital.

7 Ethics and validity

In the conduct of this study, the researchers prioritized trustworthiness and maintained a deep commitment to thoroughly investigate other research that was included in the study to ensure its credibility. The academic articles used in this study were obtained from scientific databases that were considered reliable and recommended by the library of Metropolia University of Applied Sciences and the search process was discussed accordingly and in detail. Utilization of research publications was properly acknowledged by providing rightful credits and recognition of the researcher's efforts and accomplishments. Hence, all the paraphrased citations in this study were appropriately cited on the list of references. To avoid biases and manipulations, the researchers also maintained truthfulness and objectivity to ensure the accuracy of the findings and that all sources were meticulously reviewed. The objective interpretation prevents biases when it comes to data processing, data analysis and other elements of research. (Resnik 2020.)

Therefore, to guarantee that proper ethical standards were followed, the researchers made use of the basic principle of research integrity according to the European Code of Conduct for Research Integrity which comprised four primary aspects: reliability, honesty, respect and accountability (Keiski et al. 2023: 11). Additionally, the researchers exhibited academic integrity by being truthful, genuine and responsible in this research activity (Resnik 2020). The researchers also adhered to intellectual property rights, thereby ensuring no unpublished data were used without permission, to prevent plagiarism in any form. For potential conflicts of interest or prior activities, the researchers transparently reported to an ethics approval committee to provide solutions on how to

handle conflicts of interest. (Fleming 2018: 211.) Moreover, this study was further submitted to Turnitin for a plagiarism evaluation to guarantee the reliability and authenticity of the work.

8 Strengths and limitations

The study's objectives and purpose were clarified through the collection of pertinent information. Articles were chosen based on specific criteria, including publication within the past ten (10) years, encompassing all ethnic groups of children between the ages of one (1) and twelve (12), and possessing a quality assessment rating of one (1) or higher. The selected articles yielded substantial findings during data analysis, effectively addressing the research questions. These findings were then synthesized to shed light on the impact of play therapy on children's anxiety levels and its significance in hospital care (see Table 8 and Appendix 1).

The ten (10) articles utilized in this study were published only in Asia-Pacific countries which might be a potential challenge to conduct a thorough comparative analysis with the other nations, particularly the Western countries. Clearly, it was not feasible, however, the authors would have hoped to incorporate more local studies specifically publications from Scandinavian countries which might be able to comprehensively differentiate the impacts of therapeutic plays on children from various cultures and upbringings. Moreover, though the authors acknowledged the population inclusion in the study which solely focused on the care of children in the hospital, it might also be interesting to research the significant correlations and effects of adding play therapies as part of the holistic approach in hospital intervention on the children's primary caregivers.

Another limitation of the study was the article's year of publication. Since conducting and publishing a review takes time, it was possible that the most recent review might not include the most recent findings. As such, it might not accurately represent the most recent advancements in the field. It's essential to perform a thorough, methodical evaluation, carefully select and evaluate the studies, and recognize any potential biases and limits of the included research to lessen these limitations. Transparently disclosing the review's methodology and standards may benefit our readers in understanding the depth and reliability of our results.

9 Conclusions and recommendations

We believe that it is important as it is necessary to incorporate play therapy in the plan of care for hospitalized children. Incorporating play into nursing care is not only important for the well-being of the child but also for improving the overall quality of care in pediatric healthcare settings. It fosters a nurturing, child-centered atmosphere that reduces anxiety and enhances the overall hospital experience for young patients. It helps create a more child-friendly, compassionate, and effective environment making the hospitalization experience of children less intimidating and more positive.

Hospitalization and medical procedures can be frightening for children. Engaging in play therapy helps reduce anxiety and fear associated with their healthcare experiences as well as equips children with valuable coping skills. When considering the Stress and Coping theory of Lazarus and Folkman, the findings of this research pointed out the effectiveness of play therapy. Not only does play therapy help in the psychological aspect of a child, but it also provides stimulating and creative experiences that promote the release of serotonin or endorphins, which improve mood, dampen pain, and regulate sleep, addressing the physiological effects of stress in children.

Nurses hold a pivotal role in the care of a hospitalized child, forming bonds of trust and harmony. This constitutes an essential and foundational aspect of clinical nursing. The relationship between nurse and patient is close and heavily reliant. Patients need care providers to give them a sense of safety and attend to their needs. Importantly, this foundation of trust bolsters collaboration between the nurse and patient, ultimately leading to more effective outcomes. Therefore, following this study, the succeeding recommendations appear to be beneficial particularly in pediatric nursing care;

- Nurses should incorporate play therapy in their plan of care when they take care of pediatric patients.
- Child play specialists may need to be employed to help reduce the anxiety levels of children in the hospital and to ensure a better child-centered approach when providing therapeutic play intervention knowing that nurses play a plethora of roles in the hospital setting.
- Play therapy should be utilized in every single hospital that still does not have a play therapy program, and if there is an existing one, must be continued and enhanced to be even more effective.
- Lastly, future studies can be done along with other variables to enhance this study.

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Appendix 1. Summary of included articles

Author (s), Year of Publication, Country	Topic/ Title	Methodology and Methods	Participants	Main Outcomes	Limitations
1 Ünver, Güray and Aral 2020 Turkey	Effectiveness of a group game intervention in reducing pre-operative anxiety levels of children and parents: a randomized controlled trial	Quantitative Study A parallel- group randomized controlled trial (RCT)	7-12 years old N= 94 children Odd protocol number in experimental and even protocol number in control group Eastern Thrace, Turkey	Children participated in group play (Jengga) display decrease mean anxiety score before and after the intervention. Distraction by group game decreases preoperative anxiety in young children.	Results may be potentially affected by the participation of research team member in the group game activity. Lack of blinding to group assignment during the pre-intervention and post-intervention test. No continuous observation of the control groups activities that may potentially affect the result.
2 Coskuntürk and Gözen 2018 Turkey	The effect of interactive therapeutic play education program on anxiety levels of children undergoing cardiac surgery and their mothers - RCT	Quantitative Study A randomized controlled experimental trial	6-12 years old N= 43 children 23 in experimental and 20 in the control group Istanbul, Turkey	Play education program (ITPEP) such as short trips to Operating Room has a powerful effect in reducing anxiety level of children in postoperative period.	Lack of blinding to group assignment during the pre-intervention and post-intervention test. Control group maybe potentially influenced by other distraction.
3 Hayland et al. 2015 Australia	An assessment of early child life therapy pain and anxiety management: a prospective randomized control trial	Quantitative Study A randomized Control Trial	0-3 years old N= 100 children 50 in experimental and 50 in control group Sydney, Australia	CLTP and the use of distraction technique during medical procedures such as music, toys, electronic devices and bubbles had a significant impact on the reduction of pain and anxiety experienced with acute burns.	No validation of potential benefits of continuity of care due to limitation on the initial dressing experience in the Burn Unit.

<p>4</p> <p>Li et al.</p> <p>2016</p> <p>Hongkong</p>	<p>Play intervention to reduce anxiety and negative emotions in hospitalized children</p>	<p>Quantitative Study</p> <p>Quasi Experimental</p> <p>Non- equivalent control group pre-test and post-test design</p>	<p>3-12 years old</p> <p>N= 304 children</p> <p>154 in the intervention and 150 in the control group</p> <p>Hongkong (1 hospital to be the control group and another 1 is the experimental group)</p>	<p>Children exhibit less negative emotional behavior during hospitalization and experience significantly lower levels of anxiety when they participate in age-appropriate play.</p>	<p>No randomization of individual patients in the pediatric unit.</p> <p>Limited generalization of result due to Only one hospital received convenience sampling and play intervention.</p> <p>Short hospitalization (1-2 days).</p>
<p>5</p> <p>Al-Yateem and Ros-siter</p> <p>2016</p> <p>United Arab Emirates</p>	<p>Unstructured play for anxiety in pediatric in-patient care</p>	<p>Quantitative Study</p> <p>Nonequivalent group pretest post-test design (two phase design)</p>	<p>4-7 years old</p> <p>N= 165 children</p> <p>81 in intervention and 84 in control group</p> <p>United Arab Emirates</p>	<p>There is a significant reduction in anxiety level of children even with the use of simple low-cost intervention. Such as age-appropriate toys.</p>	<p>Anxiety questionnaire completed by the parents</p> <p>Small percentage of potential participants excluded maybe due to not yet developed child report version of Short-STAI-C.</p> <p>Study conducted in one geographic region of UAE with homogenous sample of children made the findings limited for generalizability.</p>

6 Orhan and Yildiz 2017 Turkey	The effects of Pre-inter- vention training pro- vided through thera- peutic play on the anxi- ety of pediatric oncol- ogy patients during pe- ripheral catheterization	Quantitative Study Experimental	8-12 years old N= 34 children 17 in control group and 17 in experimental group Istanbul, Turkey	The use of training booklet and “chemo- duck” toy as therapeutic play before the procedure reduce the anxiety level of the children caused by venous cathe- terization.	Long hour of the pre-inter- vention training procedure, filling information and STAI. Case collection was ex- tended Results depends on STAI
7 Paladino, Carvalho and Almeida 2014 Brazil	Therapeutic Play in preparing for surgery: behaviour of preschool children during the peri- operative period	Quantitative Study Descriptive and Ex- ploratory Research	3-5 years old N= 30 children Elective minor surgery Brazil	Therapeutic play such as the use of dolls make the surgical procedure be- came less traumatic and children showed calmness after surgery.	Small Sample Size Limited comparison of the use of ITP in the preparation of children in different situa- tions.
8 Zengin, Yayan and Düken 2021 Turkey	The effects of thera- peutic play/ play ther- apy program on the fear and anxiety of hos- pitalized children after liver transplantation	Quantitative Study Quasi experimental study with pretest- post test design	6-12 years old N= 65 children who had already under- gone liver transplant Turkey	The application of TP/PT program such as use of age-appropriate toys (younger: baby dolls and animal fig- ures; older: singing, puzzles, computer games and watching videos resulted in significant decrease in the children's anxiety levels and fears about the medi- cal procedures.	Fear and anxiety due to cul- tural anxiety.

<p>9 Wong et al. 2018 Hongkong</p>	<p>Effects of Therapeutic Play on children undergoing cast-removal procedures: a randomised controlled trial</p>	<p>Quantitative Study Two arm parallel randomized controlled trial</p>	<p>3-12 years old N= 208 children with accompanying parents 103 in intervention and 105 in control group Hong Kong</p>	<p>Children undergoing Cast Removal procedure exhibited fewer negative emotional manifestations and decreased anxiety level after the play intervention (use of doll to explain the procedure).</p>	<p>Limited generalizability due to recruitment from one clinical setting. Lack of blinding of patients nor assessor. Other factors such as children coping style, parent's anxiety level and symptomatology.</p>
<p>10 Tan et al. 2021 China</p>	<p>Effects of Sandplay therapy in reducing emotional and behavioural problems in school age children with chronic diseases : Randomized control Trial</p>	<p>Quantitative Study Two arm parallel randomised controlled trial</p>	<p>6-13 years old N= 60 children with caregivers; 30 each group (intervention group : 15 boys and 15 girls; 16 boys and 14 girls in control group) China.</p>	<p>Children who received sand play therapy exhibited significantly fewer emotional- behavioral problems and reduced anxiety level.</p>	<p>Children and caregiver were recruited from one hospital hence limited generalizability No blinding. Other undetected factor may affect the results such as reading style and coping strategy of the children.</p>

Appendix 2. Research journal quality assessment

Author (s), Year of Publication, Country	Name of Journal	Publisher	Score	Database
1 Ünver, Güray and Aral 2020 Turkey	Effectiveness of a Group Game Intervention in Reducing Preoperative Anxiety Levels of Children and Parents: A Randomized Controlled Trial	AORN Journal	Level 1	Cinahl
2 Coskuntürk and Gözen 2018 Turkey	The Effect of Interactive Therapeutic Play Education Program on Anxiety Levels of Children Undergoing Cardiac Surgery and Their Mothers	Journal of Peri-Anesthesia Nursing	Level 1	Cinahl
3 Hayland et al. 2015 Australia	An assessment of early child life therapy pain and anxiety management: a prospective randomized control trial	Elsevier Scientific	Level 2	Cinahl
4 Li et al. 2016 Hongkong Turkey	Play intervention to reduce anxiety and negative emotions in hospitalized children	Biomed Central	Level 1	Cinahl
5 Al-Yateem and Rossiter 2016 United Arab Emirates	Unstructured play for anxiety in pediatric inpatient care	Journal for specialists in Pediatric Nursing	Level 1	Cinahl

6 Orhan and Yildiz 2017 Turkey	The effects of Pre-intervention training provided through therapeutic play on the anxiety of pediatric oncology patients during peripheral catheterization	International Journal of Caring Sciences	Level 1	Cinahl
7 Paladino, Carvalho and Almeida 2014 Brazil	Therapeutic Play in preparing for surgery: behaviour of preschool children during the perioperative period	Revista da escola de enfermagem da usp	Level 1	Cinahl
8 Zengin, Yayan and Düken 2021 Turkey	The effects of therapeutic play/ play therapy program on the fear and anxiety of hospitalized children after liver transplantation	Journal of PeriAnesthesia Nursing	Level 1	PubMed
9 Wong et al. 2018 Hongkong	Effects of Therapeutic Play on children undergoing cast-removal procedures: a randomised controlled trial	BMJ Open	Level 1	Pubmed
10 Tan et al. 2021 China	Effects of Sandplay therapy in reducing emotional and behavioural problems in school age children with chronic diseases: Randomized control Trial	Nursing Open	Level 1	Pubmed

11 Silva et al. 2017 Brazil	Influence of Therapeutic play on the anxiety of hospitalized school-age children: Clinical trial	Revista Brasileira de Enfermagem	Level 0	Cinahl
12 Manav and Ockaci 2016 Iran	Play Model for “evaluation of self-concept of children with cancer”	Iranian Journal of Nursing and Midwifery Research	Level 0	Pubmed
13 Bawaeda, Wanda and Aprillia 2023 Indonesia	Effectiveness of Pop-it Therapeutic Play on Children’s Anxiety during inhalation therapy In Children’s Ward	La Pediatria Medica e Chirurgica - Medical and Surgical Pediatrics	Unsearched	Pubmed
14 Caleffi et al. 2016 Mexico	Contribution of Structured Therapeutic Play in a nursing care model for hospitalized children	Revista Gaucha de Enfermagem	Unsearched	Pubmed