

# The Effect of Directed Medical Play on Young Children's Pain and Distress During Burn Wound Care

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## ABSTRACT

Directed medical play is used to reduce children's pain and distress during medical treatment. In this pilot study, young children who attended the burn clinic received either directed medical play provided by a child life specialist or standard preparation from the burn clinic nurse to prepare for their first dressing change. Data were collected using validated instruments. Children who participated in medical play

experienced less distress during their dressing change ( $M = 0.5$ ,  $n = 12$ ) than did those receiving standard preparation ( $M = 2.0$ ,  $n = 9$ ). Children who received standard care reported a 2-point increase in pain during the procedure, whereas children who participated in medical play reported a 1-point increase. Change in parental anxiety was similar for both groups. Parent satisfaction was higher for caregivers who observed medical play than standard preparation. Although all findings were in the hypothesized direction, none was statically significant, most likely because of the small sample size. *J Pediatr Health Care.* (2015) 29, 265-273.

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## KEY WORDS

Medical play, procedural distress, young children, pediatrics

Children with burn injuries are likely to face multiple painful procedures throughout the course of medical treatment. Children may display outward negative reactions to medical procedures (Burnstein & Meichenbaum, 1979; Lumley, Melamed, & Abeles, 1993). The discomfort and distress associated with painful medical procedures has demonstrated long-term negative effects for patients and their caregivers, including eating and sleeping disturbances, decreased cooperative behavior, increased fears, and posttraumatic stress (De Young, Hendrikz, Kenardy, Cobham, & Kimble, 2014; LaMontagne, Wells, Hepworth, Johnson, & Manes, 1999; Lynch, 1994; Roberts, Wurtele, Boone, Ginther, & Elkins, 1981; Tiedeman, 1997). Therefore, strategies designed to reduce the pain and distress associated with burn wound care procedures should be considered as a means of improving the overall experience for children and their caregivers.

When investigating a child's distress during burn wound care procedures, the caregiver's emotional state is important to consider. For example, parents/guardians of pediatric patients with burns have been shown to exhibit significantly higher levels of anxiety and depression than the general population (Phillips & Rumsey, 2008), with as many as 69% showing levels of anxiety outside of normal boundaries. A body of research provides evidence to support the idea that a caregiver can affect the distress and pain responses of a child (Blount et al., 1989; Bush, Melamed, Sheras, & Greenbaum, 1986; George & Hancock, 1993; Koller, 2008; Spagrud et al., 2008; Wolfer & Visintainer, 1975). Therefore, understanding the role of medical play as potentially mitigating parental distress is an important consideration. The positive impact of medical play on the pediatric patient could directly affect parental anxiety and satisfaction with the care received, as well as facilitate greater understanding of the specifics of the procedure. Information of this kind could foster greater parental self-confidence in support of their child during the wound care procedure, decrease anxiety, and promote a more positive experience. Based on the evidence, it is plausible that lowering parental anxiety could then lower child distress and anxiety (Chambers, Craig, & Bennett, 2002).

A large body of research on the construct of psychological preparation has shown that some form of information provided to children and teens prior to a medical experience can reduce the child or teen's anxiety and distress. Three components of psychological preparation that have been identified as essential to effective interventions include (a) providing developmentally appropriate information, (b) providing opportunities for emotional expression, and (c) establishing trust with the pediatric health care team (Felder-Puig et al., 2003; Hatava, Olsson, & Lagerkranser, 2000; Thompson, 2009; Wolfer & Visintainer, 1975).

Directed medical play incorporates many of the basic elements of preparation and further provides the opportunity to examine and manipulate medical equipment, process procedural information, and gain mastery, all in a playful, nonthreatening environment

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(Gaynard et al., 1998; Webb, 1995). To be clear, the construct of medical play is described utilizing terms such as therapeutic play, role play with medical equipment, health care play, and even a literal description of play with medical themes and/or equipment in the literature. For the purpose of this study, the term "directed medical play" refers to a play activity with children involving the use of actual or toy medical equipment in playful, pretend, exploratory, and educational ways with the presence of a supportive, knowledgeable adult.

Child life specialists use expertise in child development to assess the needs of children in health care settings and provide interventions to prevent and decrease the negative impact of the novel and/or stressful health care events on a child's development (Koller, 2008). In fact, as child life practice is more thoroughly examined in the literature, the therapeutic presence of child life specialists has been demonstrated to be valuable (Smith, Murray, & McBride, 2011). Using play as a primary tool, child life specialists practice with the following three major goals:

1. To build therapeutic, supportive relationships with children and their families
2. To provide consistent play opportunities to normalize the environment
3. To provide education about the health care environment through the use of developmentally appropriate language and preparation tools

Thus, this study focused on directed medical play delivered by child life specialists.

## LITERATURE REVIEW

### Search Strategy

A detailed search was performed using the following databases: CINAHL (EBSCOhost), PubMed (NCBI, U.S. National Library of Medicine), and Medline (OvidSP, Wolters Kluwer). The search strategy used the combination of two search terms: (1) "play and playthings," "play therapy," "medical play," "therapeutic play," "play," "pain," "anxiety," "child," "pre-school," and (2) "child life," "play specialist" and "burns."

To obtain all relevant studies, no date limitations were set in any of the searches. Included studies were full-text articles that were published in English and peer reviewed.

### Study Selection Process

The combination of terms from Groups 1 and 2 yielded 19 studies. These studies were specifically reviewed in relation to the use of medical play or therapeutic play to reduce anxiety, distress or pain in children during medical procedures. Eight articles were removed because they were case studies, qualitative in nature, or literature reviews, and an additional seven were removed

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