Demographic Predictors of Adult Behaviors in the Pediatric Postoperative Environment

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Abstract
Over 85% of children experience postoperative pain. If poorly treated, pediatric postoperative pain may lead to various negative health outcomes. Adult behaviors may be associated with child experiences in the postoperative environment. For example, adult behaviors such as distraction, humor, and coping advice divert a child’s attention away from their pain and thus, may significantly reduce child postoperative distress. In contrast, adult behaviors such as empathy, reassurance, and apology direct a child’s attention towards their pain which may increase a child’s overall postoperative distress. Moreover, patient demographic factors, like child ethnicity, may significantly alter the frequency of use of these adult behaviors. Therefore, this study aimed to determine which participant demographic factors are associated with the use of certain adult behaviors in response to child postoperative distress. This study included children ages 2 to 10 years old (N=112) undergoing elective surgery at the Children’s Hospital of Orange County. Participant demographics including ethnicity and race were collected prior to surgery. Nurse, parent, and child postoperative behavioral interactions were video recorded in the Post Anesthesia Care Unit (PACU). From these video recordings, adult behaviors were coded for their frequency of use. Multiple regressions analyses showed that adults were more likely to use humor with Non-Hispanic White children compared to Hispanic children (b = 0.393, p = 0.049). Moreover, fathers were marginally more likely to use empathy, reassurance, and apology with Hispanic children compared to Non-Hispanic White children (b = 0.249, p = 0.05). These results suggest that Hispanic and Non-Hispanic White children may receive different behavioral treatment in response to their postoperative distress. Implications for these findings suggest that child ethnicity may be predictive of different adult PACU behaviors which may illustrate how cultural differences can influence the child postoperative experience.

Keywords
post-operative, children, psychology, behaviors, pediatric

Disciplines
Child Psychology | Health Psychology | Other Psychiatry and Psychology | Pediatrics | Surgery | Surgical Procedures, Operative

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Demographic Predictors of Adult Behaviors in the Pediatric Postoperative Environment

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Introduction

- Over 85% of children experience pain in the post anesthesia care unit (PACU) (Fortier et al., 2011).
- Poorly treated pediatric postoperative pain leads to various negative consequences such as increased anxiety, increased analgesic consumption, maladaptive behavioral changes, and overall worse pain processing (Fortier et al., 2011).
- Adult behaviors can influence child postoperative pain in the PACU (McMurtry et al., 2005).

Desired Adult Behaviors:

- Distraction and humor divert a child’s attention away from their pain (Johnson et al., 2005).
- Coping advice directs a child to engage in behaviors that decrease their pain (Chorney et al., 2012).

Undesired Adult Behaviors:

- Empathy, reassurance and apology direct a child’s attention towards their pain (Chorney, 2012).
- An increase in desired adult behaviors and a decrease in undesired adult behaviors has been associated with decreased pain (Jenkins et al., 2019).
- Several demographic characteristics of both children and parents have been shown to be associated with general pediatric postoperative care.
- For example, higher occurrences of previous child surgery has been associated with lower reports of parental anxiety (Lutman et al., 1996).
- Additionally, patient ethnicity predicts postoperative pain treatment such that Hispanic children receive worse pain treatment as compared to Non-Hispanic White children (Green et al., 2003).

Primary Question

Which child demographic factors predict adult behaviors after surgery?

Methods

- Participants: 112 children (ages 2-10) undergoing elective surgery at the Children’s Hospital of Orange County (CHOC).
- Previous Surgery: Yes (39%) & No (61%)
- Ethnicity: Hispanic (69%), Non-Hispanic White (20%), & Other (11%)
- Procedure:
  - Desired behaviors were recorded and included adult use of verbal distraction (e.g. talking about the TV show), nonverbal distraction (e.g. watching TV), humor (e.g. making child laugh), and coping advice (e.g. “If you take your medicine, you’ll feel better”).
  - Undesired behaviors were recorded and included adult use of empathy (e.g. “I know it’s hard”), reassurance (e.g. “It’s going to be okay”) & apology (e.g. “I’m sorry”).
- Measures:
  - Behavior: Nurse, parent, and child PACU interactions were videotaped; all behaviors were later coded to reflect frequencies of each behavior.
  - Demographics: Child race, ethnicity, and number of previous surgeries were collected prior to surgery.

Findings

- Moms of children who had at least one previous surgery were more likely to use humor (b = 0.15, p = 0.048, 95% CI [0.001, 0.30]).
- Adults were more likely to use humor with Non-Hispanic White children compared to Hispanic children, (b = 0.39, p = 0.049, 95% CI [0.001, 0.78]).
- Dads were marginally more likely to use undesired behaviors with Hispanic children compared to Non-Hispanic White children (b = 0.249, p = 0.05, 95% CI [0.00, 0.50]).

Discussion

- Moms of children who have had a previous surgery may be more comfortable in the PACU.
- Moms may be more likely to use desired behaviors, like humor, to effectively help their child cope with their pain.
- Child ethnicity is predictive of different adult PACU behaviors. Potentially, cultural differences may influence this difference (Green et al., 2003).
- Hispanic culture may be associated with increased stoicism; patients may be more reluctant to complain of their pain (Brown, 2016; Duggleby, 2003).
- Stoicism may contribute to decreased expression of pain in Hispanic children (Brown, 2016).
- Thus, adults may engage more frequently in desired behaviors such as humor with children who are more expressive of their pain.

References