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Pediatric Postoperative Pain Medication: Child Sex and Ethnicity Interact to Predict Parent Medication Attitudes

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INTRODUCTION

- Over 85% of children experience significant pain after surgery. Despite this presence of pain, a quarter of these children receive very little or even no pain medication at home (Fortier, MacLaren, Martin, Perret-Karimi, & Kain, 2009).
- Such poor pain management in children can have harmful long-term consequences, both physically and psychologically. For example, past research concluded that undertreated pain in infants may permanently decrease pain tolerance and increase pain responses later in life (Hatfield, Meyers, & Messing, 2013).
- Once children are home from surgery, parents are now in charge of administering the pain medication, functioning as gatekeepers for their child's pain management. However, parents often administer less than the prescribed dosage or even administer a less potent medication than prescribed to their postoperative children (Zisk-Rony, Fortier, Chorney, Perret, & Kain, 2010).
- Previous research indicates that the amount of pain medication administered to children in the home may be significantly impacted by the beliefs and attitudes parents have regarding analgesics (Rosales, Fortier, Campos, & Kain, 2016).
- These parent analgesic attitudes commonly include the beliefs that analgesics are addictive and that children should take as little as possible.
- Considering all this, the purpose of the present study is to identify which parent and child demographic factors are associated with parent analgesic attitudes.

METHOD

Participants: 112 patients undergoing surgery at the Children's Hospital of Orange County between the ages of 2 and 13 ($M_{age} = 5.79$, $SD_{age} = 2.738$). 59% male and 41% female. 47% Hispanic, 25% non-Hispanic White, and 28% other.

Procedures: Before surgery, parents completed online surveys through Qualtrics survey software in the hospital, where they reported medication attitudes and demographics.

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MEASURES

Parent Medication Attitudes

Measured using the Medication Attitudes Questionnaire (MAQ; Forward et al., 1996)

Measures parents' attitudes and beliefs about analgesic use to treat children's pain

Split into 3 subscales:

Fear of Side Effects (5 items)

- "Pain medication has many side effects."
- "Side effects are something to worry about when giving children pain medication."

Avoidance (7 items)

- "Pain medication works best when it is given as little as possible."
- "Children will become addicted to pain medication if they take it for pain."

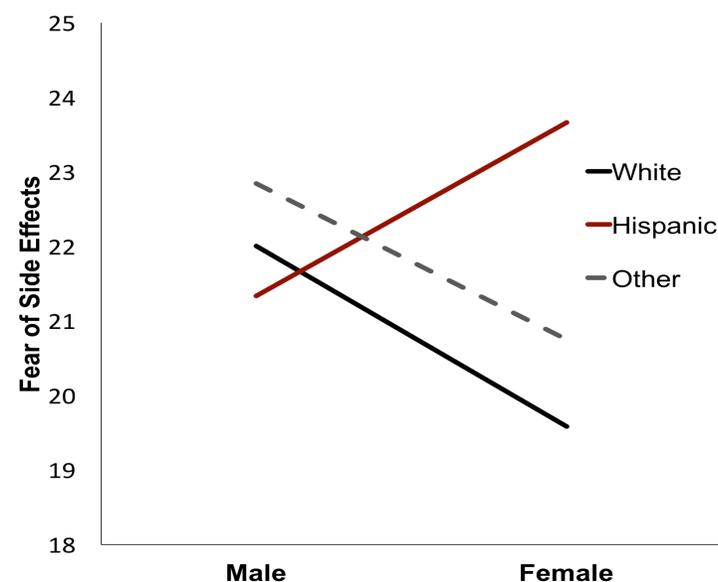
Appropriate Use Attitude (4 items)

- "Giving children pain medication for pain teaches proper use of drugs."
- "There is little risk of addiction when pain medication is given for pain."

(1 = Strongly Disagree, 7 = Strongly Agree)

RESULTS

Interaction of Child Sex and Ethnicity on Parents' Score for Fear of Side Effects



RESULTS

- Ethnicity interacted with child sex to predict parents' fear of side effects, $b = -4.750$, $p = 0.043$. For Hispanic households, parents of daughters expressed a greater fear of side effects from analgesics compared to parents of sons. The opposite trend is seen in non-Hispanic White households, where parents of sons expressed a greater fear of side effects compared to parents of daughters.
- There was no main effect of child sex on parent medication attitudes, $ps > 0.05$.
- The interaction of child sex and ethnicity did not predict the remaining two subscales of parent medication attitudes: avoidance or appropriate use attitude, $ps > .05$.

CONCLUSION

- There was a significant interaction between ethnicity and child sex, such that Hispanic parents of male children expressed significantly lower fear of side effects compared to Hispanic parents of daughters while the opposite was true for non-Hispanic White parents.
- This sex difference in Hispanic families may have occurred due to the cultural phenomenon *machismo*, a term characterized by the hypermasculine idealization of men.
- Specifically, Hispanic parents may express a significantly lower fear of side effects for their male children because they are encouraging their sons to be more stoic and "tough."
- Furthermore, the sons—particularly those of adolescent age—may be internalizing these hypermasculine principles themselves. In other words, these sons may feel that they should be more "macho" and, therefore, express pain and discomfort from the side effects less frequently.
- Contrary to our initial hypothesis, the hypermasculinity principles behind *machismo* may not significantly transcend across other ethnic groups, as showcased by the opposite trend observed in non-Hispanic White and parents of other race and ethnicity groups and the lack of a main effect of child sex on parent medication attitudes. Future studies could explore why non-Hispanic White parents tend to have a greater fear of side effects for their sons than their daughters.
- With our findings, we can develop interventions that specifically target and educate parents who are likely to have misconceptions concerning analgesic use while still respecting the family's culture, values, and practices. This is crucial because there is immense variability in the content, amount, and clarity of information currently provided to parents about managing their child's postoperative pain (Tait, Voepel-Lewis, Snyder, & Malviya, 2008).