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Healthcare Provider and Parent Behavior and Children's Coping and Distress at Anesthesia Induction

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Abstract

Background—To date, no study has evaluated the impact of specific healthcare provider and parent behaviors on children's distress during anesthesia induction.

Method—Extensive digital video data were collected on 293, 2 to 10 year old children undergoing anesthesia induction with a parent present. Anesthesiologist, nurse, and parent behavior and children's distress and coping were coded using the Revised Preoperative Child-Adult Medical Procedure Interaction Scale administered using specialized coding software.

Results—Anesthesiologists and parents engaged in higher rates of most behaviors than nurses. Overall, adult emotion-focused behavior such as Empathy and Reassurance was significantly positively related to children's distress and negatively related to children's coping behaviors. Adult distracting behavior such as humor and distracting talk showed the opposite pattern. Medical reinterpretation by anesthesiologists was significantly positively related to children's coping behaviors, but the same behavior by parents was significantly positively related to children's distress.

Conclusions—The data presented here provide evidence for a relation between adult behaviors and children's distress and coping at anesthesia induction. These behaviors are trainable and hence it is possible to test if modifying physician behavior can influence child behavior in future studies.

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Introduction

Up to 50% of children display various manifestations of distress behavior at anesthesia induction.[1–3] One area of intervention for children's distress that has received relatively little attention is the direct impact of adult behavior. In a parallel body of literature on children's procedural pain, the influence of adult behaviors on children's distress has been studied. Specific behaviors such as talk about nonmedical topics (e.g., school, hobbies) and using humor have been found to be related to more coping in children undergoing painful medical procedures, whereas behaviors such as reassurance and empathy have been found to be related to more distress.[4–6] In addition to these observational studies, there is also experimental evidence for the impact of adult behaviors on children's acute pain.[7–9] Beyond the association between adults and children's behaviors during medical procedures, a high degree of association between healthcare professionals' and parents' behaviors has been reported.[5] This suggests that healthcare professionals and parents seemed to take their cues from each other as to how to interact with the child during children's medical treatments.

To date, little attention has been paid to adult influences on children's perioperative distress. At the broadest level, studies examining parental presence at anesthesia induction[10–12] or in postoperative recovery[13] have examined adult influences simply by evaluating the presence versus absence of parents. These studies do not provide information on the impact of specific behaviors of parents or other adults who are present. One study assessed the occurrence of adult behaviors that were hypothesized to "sabotage" efforts to promote hypnosis (e.g., communication containing negative words), but this study was criticized for not examining the relation between these anesthesiologist behaviors and children's distress.[14]

A second study demonstrated a relation between anesthesiologist "distress promoting" behaviors and children's distress, but no inverse relation between "coping promoting" behaviors and distress. Unfortunately, the grouping of multiple discrete behaviors within categories limits conclusions about the impact of specific behaviors; it is possible that not all behaviors in the "distress promoting" category were related to children's distress.[15] Further, this study did not examine adults who interact with children at anesthesia induction separately (e.g., nurses), had relatively low inter-rater reliability values, and did not control for variations in child developmental level.

The purpose of the current investigation is to examine behaviors of anesthesiologists, nurses, and parents during the induction of anesthesia in children. Relations among adults behaviors will be examined as will relations between adults' behaviors and children's distress and coping while controlling for child age. Based on previous literature in the area of procedural pain it is expected that emotion focused behaviors such as empathy, reassurance, and empathic touch would be related to more child distress at anesthesia induction while distracting behaviors such as nonprocedural talk, humor, and medical play (i.e., reinterpreting medical equipment as less threatening and fun "let's play the astronaut game") would be related to less distress. Further, it is hypothesized that adults will take their cues from one another during induction.

Materials and Methods

Participants

Participants in the current study were children with American Society of Anesthesiology physical status I or II who were a part of the National Institute of Health funded Behavioral Interactions-Perioperative Study (BIPS). The BIPS is a large-scale multi-year project assessing main effects and moderators of adult behaviors on children's perioperative distress. Preliminary results of children's behavior in the BIPS are reported elsewhere.[16] Children recruited for the BIPS were aged 2–10 undergoing outpatient surgery with general anesthesia.

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Exclusion criteria included children with chronic illness, children with developmental delay, and children with parents who did not speak English.

Coding System

Description of Coding System: Revised Perioperative Child-Adult Medical Procedure Interaction Scale (R-PCAMPIS)—The R-PCAMPIS is an observational behavioral coding system designed to capture children's and adults' behaviors in the perioperative setting. Based on the originally validated PCAMPIS,[17] the R-PCAMPIS includes 44 operationally defined verbal and nonverbal behavioral codes. Modifications to the original PCAMPIS were made to facilitate the interface between the coding system and a behavioral collection computer system, Observer XT (Noldus Inc, Wageningen, The Netherlands). Specifically, the original PCAMIS was modified to differentiate between state codes (i.e., codes representing behaviors with meaningful durations-such as touch) and event codes (i.e., codes representing behaviors with meaningful frequencies-such as reassuring comments).

Because of the extremely large amount of data, six theoretically and practically relevant hypothesis driven adult verbal and nonverbal codes are examined in this report: 1. Medical reinterpretation (reinterpreting medical equipment and procedures as non-threatening, or medical play; for example: "Are you ready to play the astronaut game?" referring to the mask), 2. Nonprocedural talk (distracting talk about topics outside the surgery center; for example: "What grade are you in?"), 3. Humor (Jokes, laughing with intent of engaging the child and improving their mood), 4. Reassurance (Comments with the intent of comforting the child about his/her condition or the course of the procedure; for example "It's ok, you're fine"), 5. Empathy (Statements that express understanding of or identification with children's emotions; for example "I know you're scared"), and 6. Empathic touch (touch with the purpose of comforting the child; for example holding the child's hand, rubbing the child's back or head).

The R-PCAMPIS also contains codes for children's behavior which are combined to yield profiles of children's behavior during induction (i.e., from the time the child left the holding area until the time anesthesia was induced). Operationally defined child codes of nonverbal resistance and cry are included in the "Acute Distress" Subscale. Codes of verbal resistance (e.g., "Get me out of here"), requesting support (e.g., "Mommy!"), and negative verbal emotion (e.g., "I'm scared") are included in the "Anticipatory Distress" subscale. An additional profile of "Early Regulating Behaviors" including nonprocedural talk (e.g., talking about school), medical play (e.g., pointing at "mountains" on the monitor), and information seeking (e.g., asking questions about the procedure) is also compiled using codes from the R-PCAMPIS and is representative of children's coping. Data on validity and reliability of these behavior profiles are reported elsewhere.[16] Specifically, controlling for age, "Acute Distress" and "Anticipatory Distress" profiles were significantly positively related to a validated measure of children's anxiety, the Yale Perioperative Anxiety Scale. The "Early Regulating Behavior" profile was significantly negatively related to Yale Perioperative Anxiety Scale scores.

All behaviors that are short verbalizations (e.g., reassurance, negative verbal emotion) are represented by event codes. Nonverbal or prolonged vocal behaviors (empathic touch, cry, nonverbal resistance) are represented by state codes. Scoring of event codes is accomplished by dividing frequency of each event code by the total number of minutes in the observation period yielding a metric of rate of code per minute. Scoring of state codes is accomplished by dividing the total duration of each state code by the total length of the observation period yielding a metric of proportion of observation. These procedures correct for varying durations of anesthesia induction.

Training of Raters—One researcher with a master's degree and two researchers with bachelors' degrees completed the behavioral coding. All coders underwent a three month training protocol under the direction of the first author (JMC). This training process included two phases. First, coders were familiarized with the technological coding interface, Observer XT, via administration of a simplified set of behavioral codes. Second, coding of study-independent training videos was accomplished. Multiple raters coded each training video and met, at length, with the first author to discuss reliability statistics and disagreements. Raters were considered "trained" when they met a kappa criterion of .80 agreement with the first author on training tapes.

Coding Process—Administration of the R-PCAMPIS was facilitated by using Observer® XT, a behavior-analysis software package with the capabilities to code behaviors of one individual, or the interactions of many. This system allows for the linking of particular behaviors (e.g., reassurance) to the subject who initiated the behavior (e.g., parent, nurse, anesthesiologist). Data coding was accomplished in passes, with each behavior coded in a separate pass. Real-time second to second data coding was used with timed onsets of each event code recorded and the onset and offset of each state code recorded. Although this methodology is time consuming, it ensures maximum reliability and validity of coding. Coding required approximately 4 hours per participant, representing a total of over 1500 hours of coding.

Reliability Assessment—Inter-rater reliability of individual behavioral codes was assessed by having two research assistants overlap on 10% of participants. Timed-event kappa coefficients were in the excellent range[18] for all codes (Child Acute Distress composite=0.79, Child Anticipatory Distress = .88, Child Early Regulating Behaviors composite= 0.92, Reinterpretation = 0.91 Humor = 0.94, Empathy = 0.96, Reassurance = 0.92, Nonprocedural Talk = 0.93, Empathic Touch = 0.83). Reliability assessment and discussion was a process repeated weekly throughout coding. One reliability subject was coded per week; once kappa values were calculated, coders met with the first author to discuss disagreements. Decisions on valid coding of behaviors were incorporated into the final version of the observational records.

Data Collection Procedure

All procedures were approved by the Yale Human Investigation Committee (New Haven, Connecticut). All attending pediatric anesthesiologists and operating room nurses practicing in the surgery centered provided informed consent for participation in this study. Healthcare providers were informed the purpose of this study in vague terms in order to decrease the impact of demand characteristics on their behavior (i.e., "to look at interactions among healthcare providers, children, and families in the preoperative period"). Child and parent participants were recruited by phone between one week and one day before surgery or on the morning of surgery. Parents provided written informed consent and children provided written assent as age-appropriate (children 7 years old and older). Following informed consent, parents completed a demographic questionnaire and measures relevant to the larger BIP study. All children were accompanied to the operating room by one parent and no child received any sedative premedication.

A trained research assistant using a handheld digital video camera (Sony Handycam DCR-HC21, Sony Electronics Inc, San Diego, CA) videotaped all children from the time the child left the holding area until anesthesia was induced. Digital video files were converted to .mpg files and imported into Observer XT software for coding, compiling and analysis.

Statistical analysis

Power Analyses and Sample Size—In previous studies using the CAMPIS in pediatric settings, small to large effect sizes have been found for the relation between specific adult behaviors and child distress (e.g., r values ranging from approximately .2 to .6 in observational studies and Cohen's d values of .35 to .45 in intervention studies). Effect sizes in the middle of this range would be statistically significant at the alpha = 0.05 level with power of .80 in regression analysis with a sample size of 85–100 participants. These effect sizes are based on direct, univariate associations between observed parent behaviors and child distress using the CAMPIS. In the case of the current study, controlling for age using hierarchical regression requires an increase in sample size. Assuming age accounts for 5% of variability in children's distress, a sample size of n=264 is needed to detect an additional ΔR^2 of at least .025 attributed to adult behaviors using an F-Test with an alpha level of 0.05. Based on these computations, a sample size of approximately 300 will provide sufficient power to address the primary aims of this study.

Statistical analyses—Data were analyzed in a series of steps. First, rates of specific behaviors were compared across adults. Given that rates were not normally distributed and transformations were not successful in reaching normal distribution, nonparametric statistics were used. Friedman analyses of variance were used to compare rates across adults and follow-up pairwise comparisons were conducted using Wilcoxin Signed Ranks Tests. Bonferroni corrected p-values were used to control for family wise error. Next, Spearman rank order correlations were used to examine relations among adults' rates of behaviors and among rates of behaviors combined across adults. Results of these analyses lead to empirically driven combinations of codes which were then examined for their relations with children's coded distress and regulating behaviors using Spearman correlation and logistic regression.

Results

Sample Characteristics and Preliminary Analyses

To account for attrition 338 children and their parents were enrolled in the BIPS project. Of these participants, 45 child-parent dyads were excluded for the following reasons: 25 were excluded because only very partial video data was available, 11 were excluded because the child was given sedative premedication as a rescue intervention, 3 participants dropped after providing consent without explanation, 1 child was admitted to hospital, 2 children had anesthesia induced using intravenous access rather than mask, 2 parent spoke languages other than English to their child during induction, and 1 child had their surgery canceled. Thus, the final sample of participants who were included in this report, is 293 children and their accompanying parent. Forty-eight percent of these children were female, and most were non-Hispanic white (85.7%). Thirty-five percent of children had previous experience with surgery. The most common surgical procedures the participants underwent included tonsillectomy and/or adenoidectomy (n=96), followed by pressure equalizing tube placement (n=47), endoscopy (n=40), urological procedures (n=28), hernia repairs (n=21), and dermatological procedures (n=14). The majority of children were accompanied to the operating room by their mother (n=241) and the remainder were accompanied by their father (n=41).

All attending pediatric anesthesiologists (n=14) and operating room nurses who practiced in the study surgery center were included in this study. Results of a hierarchical model with codes for anesthesiologist identity entered as a covariate indicated that, when adjusted for phase and anesthesiologist behavior, there were no statistically significant differences among anesthesiologists ($p > 0.8$ for all). In the hierarchical models, this indicates very little variability among anesthesiologists, thus rendering hierarchical models inappropriate. Thus, non-nested models will be presented here. Unfortunately, identity of operating room nurses was not available for analyses; thus nurse behavior could not be tested in a hierarchical nested model.

Descriptive analyses of adult behaviors

Rates of the six behaviors of interest for anesthesiologists, parents, and nurses are shown in Table 1. It is notable that the distributions of most behaviors were positively skewed thus median and inter-quartile range are reported. Friedman analyses of variance indicated significant differences across adults on all behaviors (Table 1). Nurses engaged in the lowest rates of all behaviors. Anesthesiologists and parents engaged in similar rates of reassurance, empathy and humor. Anesthesiologists used the highest rate of medical reinterpretation and parents used the highest proportion of empathic touch.

Relations among adult behaviors during anesthesia induction

Spearman rank order correlations were used to examine relations among rates behaviors among adults during anesthesia induction (See Table 2). There were significant positive correlations between parent-anesthesiologist and parent-nurse rates of reassurance, humor, and nonprocedural talk. Nurse and anesthesiologist rates of humor were significantly positively related; otherwise no correlations were significant.

Adult behaviors and children's distress and coping

Additional analyses were conducted to examine relations among adult behaviors (across nurse, anesthesiologist, and parent). Significant spearman correlations were evidenced among reassurance, empathy, and empathic touch ($p<.01$) and between nonprocedural talk and humor ($p <.01$). Rate of reinterpretation was not significantly correlated with rate of any other behavior. Based on these results, behaviors were empirically grouped to reduce factors in further analyses. Nonprocedural talk and humor were significantly correlated thus were grouped into a factor termed "Distracting behavior." Empathy, Empathic touch, and Reassurance were also significantly related to one another and thus were grouped into a factor termed "Emotion-focused behavior." Medical reinterpretation was not significantly related to any other behavior and rates of reinterpretation were not related across adults; thus, reinterpretation was examined individually for each adult. Relations among adult codes and children's distress and regulating (i.e., coping) behaviors are shown in Table 3. Emotion-focused behavior was significantly positively related to children's distress and negatively related to children's regulatory behaviors. Distracting behavior showed the opposite pattern. Medical reinterpretation by anesthesiologists was significantly positively related to children's regulatory behaviors, but the same behavior by parents was significantly positively related to children's distress.

Logistic regression was used to examine the predictive ability of adult behaviors found to be significant in correlational analyses while accounting for child age (Table 4). The first logistic regression used binary coded child distress (present/absent) as an outcome. Child age was entered in the first block and adult emotion-focused behaviors, distracting behaviors, and parent reinterpretation were entered in the second block. The overall model was significant, χ^2 (4) = 134.4, $p <.001$ and accounted for 50.1 % of the variance in child distress status (Nagelkerke R^2). Adult behaviors accounted for significant variance above and beyond child age, χ^2 (3) Block =104.6, $p <.001$; although emotion-focused behaviors were the only adult behavior with a significant beta weight. A second logistic regression was conducted with child regulating behaviors (present/absent) as an outcome and child age (step 1) and adult behaviors (emotion-focused, distracting, anesthesiologist reinterpretation; step 2) as predictors. The overall model was significant, χ^2 (4) = 42.6, $p <.001$ and accounted for 30.4 % of the variance in child distress status (Nagelkerke R^2). Similar to the model for child distress, adult behaviors accounted for significant variance above and beyond child age, χ^2 Block (3) =22.1 $p <.001$. In addition to child age, adult emotion-focused behaviors and anesthesiologist reinterpretation had significant beta weights in this model.

Discussion

The current study examined adult behaviors during induction of anesthesia in children when parents are present. To our knowledge, this was the first study to examine multiple individuals who interact with children during induction of anesthesia and evaluate the relation between discrete, trainable, behaviors and children's distress and coping.

Six hypothesis-driven adult behaviors were examined based on previous literature in pediatric procedural pain. Overall, nurses engaged in the lowest rates of all behaviors when compared to anesthesiologists and parents. Parents and anesthesiologists displayed relatively comparable rates of most behaviors. In terms of differences, anesthesiologists used more medical reinterpretation than parents and parents used more empathic touch than anesthesiologists. Correlations indicated that anesthesiologists' and parents' rates of most behaviors were correlated as were rates of nurses' and parents' behaviors. Taken together, these findings highlight the interactive nature of anesthesia induction with parents present. It is likely that parents take their cues from anesthesiologists and nurses on how to behave during the induction; when anesthesiologists use more nonprocedural talk and humor, so do parents. It is also possible that children drive these relations; adults may behave similarly because they are responding to the same behaviors from the child. These findings could have important implications for intervention. Training each parent who will be present at anesthesia induction is a time consuming process. Results presented here suggest that healthcare personnel may be able to directly affect parents' behavior by engaging in higher rates of desirable behaviors themselves.

The current study also examined relations among adults' behaviors and children's distress and coping during anesthesia induction. Two commonly co-occuring distracting behaviors, nonprocedural talk and humor were significantly positively related to children's coping and negatively related to children's distress. Both nonprocedural talk and humor may reduce children's distress through extinction (i.e., by ignoring the behavior thus removing any positive consequences such as attention) and have the added benefit distracting children by directing attention away from the potentially distressing medical procedure.

One of the most striking findings of the current report is the strong positive relation between adults' emotion-focused behaviors (reassurance, empathy, empathic touch) and children's distress. This finding is likely to incite discussion as it is both counter intuitive and contradictory to typical training of physicians in communication skills.[18] This finding is consistent, however, with at least four randomized controlled trials of emotion-focused type behavior on children's acute distress.[7,8,9,19] Each of these studies was conducted by a different research group, used a different methodology, and three of the four included a different pain stimulus thereby supporting the generalizability of these results. In terms of an explanation of this effect, authors have hypothesized that reassurance may cue children to be distressed by communicating to the child that the situation should be of concern or may serve to direct attention toward the unpleasantness of the situation, thereby increasing distress.[20]

This study also examined the behavior of medical reinterpretation which is defined as attempts to provide information on the induction procedure while reframing the procedure as less threatening (perhaps even fun). Not surprisingly, this behavior was more commonly engaged in by anesthesiologists than parents or nurses. Interestingly, this behavior showed little concordance across adults: parents were not necessarily more likely to use reinterpretation when anesthesiologists were (or vice versa). In terms of outcomes, anesthesiologists' use of reinterpretation was related to children's regulating behaviors; children displayed a higher rate of regulating behaviors when anesthesiologists used more reinterpretation. The somewhat contradictory results of reinterpretation being used by parents rather than anesthesiologists were surprising. There was a positive association between parent rate of reinterpretation and children's distress. The explanation for this finding is unclear. It is possible that parents are unfamiliar with equipment in the operating room and therefore are less successful in interpreting it as non-threatening. Alternatively, it is possible that parents become more involved in reinterpretation when the child is more distressed. To our knowledge, this is the first time that medical reinterpretation has been described in the literature and thus more research on this behavior and its impact on children's distress is needed.

Several methodological issues with the current study should be noted. First, although measures were taken to reduce reactivity (e.g.., participants were informed only of the general nature of the study, length of study), it may be that participants' behavior changed as a result of being observed. Second, this study was carried out in one pediatric surgery center and thus results may not be widely generalizable outside such a center or to centers with different standards of practice. For example, although nurses showed significantly lower rates of the coded behaviors in this study, we are aware of other surgery centers in which nurses play the most prominent role in the induction. Third, this study did not take into account adult behaviors in the waiting area or at other times prior to surgery. There is little question that the behaviors of adults in these time periods influence children's distress and we do not intend to minimize these effects here. However, given the relatively large effect sizes found in this study, we assert that interactions during the induction can affect children's experiences with this procedure. Fourth, this study was conducted with children who did not receive sedative premedication. Although it is our impression that the efficacy of specific anesthesiologist and nurse behaviors would generalize to children who were premedicated, further studies should be conducted to examine interactions with children who have received this intervention. Finally, it is also important to note that given the correlational nature of the current data, it is impossible to conclude that it is adults who are affecting children, as opposed to the children affecting adults. Future work in this area should consider sequential analysis to gather support for causation.[21] Experimental intervention studies will be needed to confirm these hypotheses. Despite these limitations, this study has methodological strengths which support the validity of the findings. Specifically, this is the largest scale study collecting observational data of healthcare providers, parents, and children during acute medical procedures. Further, the examination of discrete behaviors strengthens the clinical utility of the findings.

In sum, the current study examined adults' behaviors during anesthesia induction. Behaviors were identified that were related to increased and decreased distress and coping in children. These behaviors were relatively straightforward and should be easy to teach and incorporate in practice. These results should be considered preliminary, however and should be confirmed via sequential analyses and randomized controlled trials. Further, future work should consider potential moderators of effects (e.g., child temperament, previous surgical experience). Once confirmed, these behaviors could be easily incorporated into standard practice and effectively influence children's distress prior to and during anesthesia induction.

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Table 1

Rates of Adult Behaviors during Anesthesia Induction

		Anesthesiologists	Nurses	Parents	Friedman Statistic
Reasurance	Mean (SD)	0.74 (0.73) a	0.14 (0.34) b	0.81 (1.27) a	195.8 **
	Median (IQR)	0.55 (0.76)	0.00 (0.13)	0.30 (1.03)	
Empathy	Mean (SD)	0.04 (0.18) a	0.01 (0.05) b	0.02 (0.16) a,b	15.41**
	Median (IQR)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	
Nonprocedural Talk	Mean (SD)	0.67 (0.93) a	0.07 (0.22) c	0.35 (0.63) b	156.6**
	Median (IQR)	0.33 (0.94)	0.00 (0.00)	0.00 (0.48)	
Humor	Mean (SD)	0.75 (0.72) a	0.23 (0.46) b	0.67 (0.77) a	161.8**
	Median (IQR)	0.57 (0.84)	0.00 (0.27)	0.44 (0.98)	
Reinterpretation	Mean (SD)	2.74 (2.05) a	0.39 (0.57) c	0.98 (1.17) b	284.3**
	Median (IQR)	2.36 (2.30)	0.24 (0.53)	0.63 (1.52)	
Empathic Touch	Mean (SD)	0.11 (0.16) b	0.04 (0.10) c	0.52 (0.31) a	322.5**
	Median (IQR)	0.03 (.015)	0.00 (0.02)	0.56 (0.48)	

IQR = Interquartile Range, SD = Standard Deviation

** p <.001

Note. Different superscripts denoted differences between adults at p <.001 (e.g., values in a row with superscript a are not siginificantly different, but are significantly higher that those with superscript b)

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Table 2

Correlations among Adult Behaviors during Anesthesia Induction

	Anesthesiologist-Parent	Nurse-Parent	Anesthesiologist-Nurse
Reasurance	0.358**	.216**	0.13
Empathy	0.126	0.072	0.026
Nonprocedural Talk	0.432**	0.194**	0.056
Humor	0.327**	0.199**	0.200**
Reinterpretation	0.133	0.079	−0.083
Empathic Touch	−0.064	0.042	0.039

Note: Spearman rank order correlations

** p < 001

Table 3

Relations between Adults Behavior and Children's Distress and Regulating Behaviors

	Child Distress Behavior	Child Regulating Behavior
Emotion-focused behavior (All Adults)	0.575**	−0.269**
Distracting behavior (All Adults)	−0.210**	0.286**
Reinterpretation		
Anesthesiologist	−0.077	0.370**
Parent	0.202**	0.042
Nurse	−0.020	0.023

Note:Emotion-focused behavior includes Reassurance, Empathy, and Empathic touch; Distracting behavior includes Nonprocedural talk and Humor; Spearman Rank Order correlations reported

** $p < .001$

Table 4

Logistic Regressions Predicting Child Distress and Regulatory Behaviors from Adult Behaviors

a. Prediction of Child Distress (Present-Absent)				
Model 1	**B**	**St Error**	**Wald**	
Child Age	−0.28	0.06	26.61**	Model Chi-Square = 29.80 ** Model R-square = 0.132
Model 2				
Child Age	−0.26	0.07	13.84**	
Emotion-focused	1.20	0.17	48.47**	Block Chi-Square = 104.57 **
Distraction	−0.08	0.08	1.16	Model Chi-Square = 134.37 **
Parent Reinterpretation	0.06	0.13	0.18	Model R-square = 0.501
b. Prediction of Child Regulating Behaviors (Present-Absent)				
Model 1	B	St Error	Wald	
Child Age	0.50	0.13	13.99	Model Chi-Square = 20.51 ** Model R-square = 0.152
Model 2				
Child Age	0.38	0.13	8.87**	
Emotion-focused	−0.19	0.09	4.11*	Block Chi-Square = 22.06 **
Distraction	0.28	0.17	2.59	Model Chi-Square = 42.57 **
Anes Reinterpretation	0.48	0.18	7.54**	Model R-square = 0.304

** p <.001