

Decreasing Stress and Anxiety for School-aged Children Under-going MRI Using Photo-Diary: Preliminary Report on Parent Satisfaction

Diamond Haynes, Jane H. Hartman MSN, RN, CPNP

Cleveland Clinic



OFFICE OF CIVIC EDUCATION INITIATIVES

Background

Children undergoing Magnetic Resonance Imaging (MRI) are often frightened and anxious prior to and during the procedure. The MRI procedure can be very intimidating for children. The need for the child to lie completely still combined with the fear and anxiety that the child is feeling makes it very difficult for the child to fully cooperate.¹

Literature assessing coping behaviors of pediatric patients is primarily aimed at children coping with painful procedures. There is little information related to children who are having radiological exams such as MRI.



This photo shows a child under-going MRI at Cleveland Clinic from the photo-diary used in the study.

Purpose

To assess whether pre-procedural education decreases pre-procedural stress and anxiety for school-aged children (7-12 years) undergoing MRI, and **parent satisfaction**.

This poster presents the preliminary results of data analyzed to answer research questions pertaining to parent satisfaction.

Research Questions

Parent Satisfaction with pre-procedure care was measured by the following research questions:

What are the parent's feelings about their child's:

- Pre-procedural MRI readiness;
- Anxiety before MRI testing?

What is the parent's:

- Level of anxiety before MRI testing;
- Satisfaction with pre-procedural education?

Methodology

- Participants included parent's of children 7-12 years of age undergoing MRI.
- In this study, parent was defined as biological or legal guardian of the child.
- Parents completed one data collection tool:

Parent Questionnaire: consists of a short (4 item) questionnaire to assess perception of their child's readiness for the MRI test, their own anxiety level, child's anxiety, and their **satisfaction** with pre-procedure care offered in MRI.

- Questionnaire data were entered into SPSS database for analysis.

OUTCOME MEASURE

Parent Satisfaction: Developed by the Principal Investigator, this 4-item questionnaire uses a visual analog scale. Data were collected at one time when the child completes the second survey.

Data Analysis

- Data were collected during February 2006 thru July, 2007.

- Descriptive statistics were used to describe sample using data obtained from the "All About You" questionnaire, and analyze data from the Parent Satisfaction Questionnaire.

Results

- Sample consisted of 28 parents of children age 7-12 years undergoing MRI at Cleveland Clinic. All but two participants were from Ohio. The most frequently reported reason for MRI was headaches.

	Control Group (n = 16)	Intervention Group (n = 12)
MEASURE	Mean (SD)	Mean (SD)
Parent Satisfaction VAS scale 0 – 10cm		
Item 1: My child asked me questions about what to expect today after arriving at L-10. anchors: none to many	4.6 (3.3)	4.9 (3.2)
Item 2: While waiting for MRI testing, my anxiety level became... anchors: more anxious to less anxious	5.2 (3.3)	6.0 (2.8)*
Item 3: While waiting for MRI testing, I think my child's anxiety level became... anchors: more anxious to less anxious	4.8 (3.2)	3.8 (2.5)*
Item 4: My satisfaction with the education my child received today. anchors: very satisfied to not satisfied at all	1.6 (2.2)	1.0 (1.4)*

* Satisfaction higher in intervention group.



Conclusions

- On one item (item 1- readiness) of parent satisfaction questionnaire, groups were comparable. Yet on 3/4 items (items 2-4), small improvement was observed in the intervention group compared to control.
- Based on these preliminary results, a trend toward higher satisfaction in the intervention group was observed.
- These findings are based on small sample size and are not considered conclusive.

Recommendations

- Continue to collect data to obtain sample size needed to analyze data for statistical significance between groups as planned.

Reference

¹ Pressdee, D., May, E., & Grier, D. (1997). The use of play therapy in the preparation of children undergoing MR imaging. *Clinical Radiology*, 52, 945-947.