



OUR LADY OF THE LAKE CHILDREN'S HEALTH

Pediatric Development & Therapy Center Psychology Service

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March 6, 2020

Christopher Janney
75 Kendall Road
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Phone: 781-541-0899
Email: info@janneysound.com

RE: Harmonic Grove Survey Results

Dear Mr. Janney,

Thank you for the opportunity to design and implement a survey regarding patients' perceptions of the hospital environment as a result of the Harmonic Grove at Our Lady of the Lake Children's Hospital.

Data collection was completed in January 2020, and the data were analyzed in February 2020. A comprehensive summary of results is enclosed.

If you have any questions or concerns, please do not hesitate to contact me at (225) 765-8482.

Sincerely,

Traci W. Olivier, PsyD | Pediatric Neuropsychologist

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CC: Steven Felix, MD, Medical Director, OLOLCH Development & Therapy Center
Shaun Kemmerly, MD, OLOLCH Chief Medical Officer

The Harmonic Grove

Measuring Patients' Perceptions of the Hospital Environment

Introduction

The Harmonic Grove at Our Lady of the Lake Children's Hospital is an architectural first in Baton Rouge. World renowned artist, musician and architect, Christopher Janney, of Boston, Massachusetts, was invited to design a unique entranceway for the new Our Lady of the Lake Children's Hospital. Thanks to generous awards from private and commercial contributors, the Harmonic Grove is now a reality.

The Psychology Service of the Development & Therapy Department at Our Lady of the Lake Children's Health was recruited to survey visitors and gauge their emotional perceptions of the Harmonic Grove. Survey design, consultation with the Institutional Review Board (IRB), and preparation was conducted in the months leading up to data collection. Data collection was completed in January 2020, and survey data were analyzed in February 2020.

Impetus/Purpose of the Study

Research in the fields of psychology, neuroscience, and architecture has demonstrated that environmental design can significantly impact individuals' psychological experiences. More recently,

this body of literature has been considered with regard to hospital design. Pediatric psychologists have demonstrated that children and families often experience negative psychological effects as a result of hospitalization, as children often undergo undesirable (and often painful) procedures and treatments while hospitalized. Further, the need for hospitalization necessitates removal from one's typical environment (e.g., home, school) and peer group, which can be unsettling for pediatric patients. Many children's hospitals, therefore, have adopted bright colors, play spaces, and interactive environments to promote psychological adjustment and wellbeing for their patients and families.

Our Lady of the Lake Children's Hospital is the only freestanding children's hospital in Baton Rouge, Louisiana's capital city. The Harmonic Grove, designed by artist and composer Christopher Janney, is the unique entrance to the hospital, composed of an 88-panel colored glass canopy. The columns that support the canopy are interactive, such that children will be able to touch "hand patterns" to trigger a dance of sound and light. The colors and sounds have been carefully chosen to reflect our unique Louisiana culture.

The Harmonic Grove was designed to emphasize the importance of human touch in the healing process. Further, it welcomes children and families to engage in creative play, within an environment that can otherwise be quite anxiety provoking. Therefore, we proposed a study that would examine the effects of the Harmonic Grove upon the emotional experiences of children and families. We hypothesized that the incorporation of interactive sensory experiences, such as sound and light, will promote greater adjustment to the hospital environment for children and their families.

Methods and Results

The Office of Research at Our Lady of the Lake was initially consulted, and the current project was submitted for feasibility review. Given the nature of this survey-based design, Institutional Review Board (IRB) approval was not required.

Surveys were designed and administered under the supervision of neuropsychologist, Dr. Traci Olivier; study staff included psychometrist, Scott Johnson, M.Ed., and School Psychology doctoral students from Louisiana State University (Jacob DeBoer, MS, NCSP; Sarah Holmes, BS; and Erica Lozy, MA, BCBA, LBA). Additional support was provided by certified medical assistant, Jalisa Blount, CCMA.

The final draft of the 12-question survey is presented in Appendix A. Over a period of approximately three weeks (five days onsite) in January 2020, study staff collected 52 surveys from parents/guardians of patients in the hospital. Participants were invited to answer questions regarding their interactions with The Harmonic Grove. The surveys were conducted during the day, were administered via paper/pencil format, and took, on average, approximately 10 to 15 minutes to complete. No protected health information (PHI) was collected/recorded.

Survey Participants

- Of the total number ($n = 52$) of surveys collected, $n = 49$ were included in data analysis; $n = 3$ were excluded due to incompleteness.
- As noted above, parents/guardians of patients completed the surveys. The average age of patients was 8.1 years old; approximately 55% of the patients were male.

Familiarity with the Harmonic Grove

- 9% of participants ($n = 4$) indicated that they had “heard of” the Harmonic Grove before visiting the Hospital.

Interactions with the Harmonic Grove

- The most common time to interact with the Harmonic Grove was upon arrival to the Hospital (~55%). Smaller percentages reported that they interacted with the Harmonic Grove during their stay (~16%) and upon leaving (~27%) the Hospital.
- Interactions with handprints occurred at a rate of about 37% across all patients (boys and girls 17 of 46).
- Participants reported interacting with the Harmonic Grove primarily during the daytime (47%), though interactions during the afternoon (27%) and night (12%) were also reported.
- Adults interacted at a similar rate ~ 36% (16 of 46).
- Boys were slightly more likely to touch the handprints versus girls, 10 of 24 (42%) vs. 7 of 19 (37%).
- Additional observational data was collected beyond the survey. Overall, interactions occurred about 15% percent of the times that families or individuals were observed entering or exiting the building. Slightly more interactions occurred during entry 18% vs. during exit 13%.

Patients' and Families' Perceptions

- The sounds that were noted most often while walking through the Harmonic Grove were bird sounds. The sounds reminded most participants of the jungle or forest.
- Participants (i.e., individuals completing the survey) reported that their children primarily liked the colored glass, overwhelmingly (76%), though listening to the sounds (37%) and touching the handprints (31%) were also described as enjoyable.
- Participants reported similar numbers for what they themselves liked about the Harmonic Grove: colored glass, (82%), listening to the sounds (41%), and touching the handprints (33%).
- When asked how they felt after seeing the Harmonic Grove participants said their patient felt better 69% of the time. However, when asked how it made *them* feel, 89% reported feeling better. No parents reported that the Harmonic Grove made them, or their child feel worse. Additionally, 14% said it had no effect on their child and 10% stated it had no effect on them.
- Participants were also asked to describe The Harmonic Grove. They were given a word choice list and allowed to choose as many as were appropriate. The word choices ($n = 16$) included both positive ($n = 9$) and negative or potentially negative ($n = 7$) words. There was a high degree of positive endorsements versus negative endorsements, 97% vs. 3%.
- Participants chose the *Happy* descriptor over all others at a very high rate (74%), though *Pretty*, *Creative*, and *Enjoyable* were all chosen by 50%+ of participants. *Cool* and *Fun* were close thirds, 42% and 41%, respectively. There were three endorsements of *Loud* and two of *Confusing* and *Noisy*. The word *Bright* was chosen by almost 50% of participants.

Discussion

It is very difficult to sum the impact of any survey in a few words or over specific questions. Overall, however, results indicated that participants responded positively to the Harmonic Grove on all accounts. There were no indications via survey data that there was a negative component to the interactions families have while entering the Hospital through the Harmonic Grove.

It should be noted, however, that several participants endorsed that the Harmonic Grove was *Bright*. While some participants are likely to view this as a positive descriptor, for others, primarily those with special needs (e.g., Autism), this may be considered a negative.

The discrepancy between interactions that were observed by the study team and those that were reported via the survey is interesting. Observational data collected by the study team indicated that only about 10-13% of those entering or exiting the building interacted with the Harmonic Grove in some way or form. This differs from the survey data collected, which indicated that interactions were occurring at a rate of approximately 35-40%. This discrepancy could reflect overestimation on the part of the survey participants or simply variability of the data. It is hypothesized that a plaque or sign would likely promote higher rates of interactions with the Harmonic Grove.

In conclusion, the Harmonic Grove was rated as overwhelmingly positive by visitors to Our Lady of the Lake Children's Hospital.

APPENDIX A

Survey

The entrance of the Children's Hospital is made up of colored glass, nature sounds,
and white columns with handprints.

Please fill out this survey about the entrance.

Date: _____

Child's age (patient): _____

Is your child a (circle one):

Girl Boy

I am this child's... (circle one): Mother Father Grandmother Grandfather Other

1. Did your child touch the handprints on the white columns in the entrance (circle one)? Yes
No

2. Did you touch the handprints on the white columns in the entrance (circle one)? Yes No

3. Which parts of the entrance did your child like (check those that apply)?

- € Looking at the lights or colored glass
- € Listening to the sounds
- € Touching the handprints

4. Which parts of the entrance did you like (check those that apply)?

- € Looking at the lights or colored glass
- € Listening to the sounds
- € Touching the handprints

5. How did the entrance make your child feel (check those that apply)?

- € Made my child feel better
- € Made my child feel worse
- € Did not change how my child felt

6. How did the entrance make you feel (check those that apply)?

- € Made me feel better
- € Made me feel worse
- € Did not change how I felt

7. Did you hear about the entrance (the “Harmonic Grove”) before coming to the hospital (circle one)? Yes No

8. Did you see others interacting with the entrance (circle one)? Yes No

9. When did you/your child interact with the entrance (check those that apply)?

€ When we arrived

€ During our stay

€ As we left the hospital

10. What times of day did your child interact with the Harmonic Grove? Choose all that apply.

€ Morning

€ Afternoon

€ Night

11. Please circle the words that best describe the entrance:

Happy

Boring

Playful

Distracting

Loud

Enjoyable

Confusing

Cool

Bright

Scary

Pretty

Fun

Creative

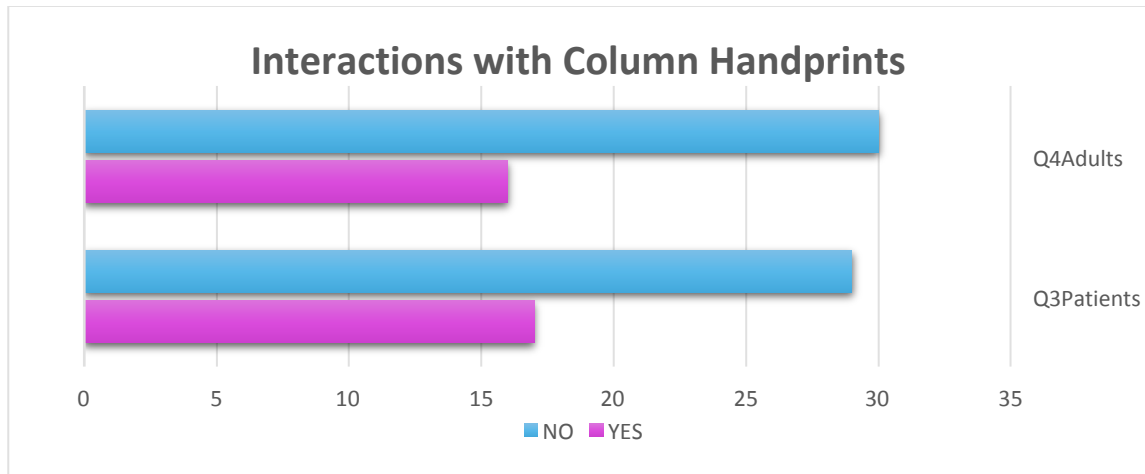
Calming

Soothing

Noisy

APPENDIX B

Tables/Graphs



% of Descriptors Endorsed		
	N	%
Happy	36	26.9
Loud	3	2.24
Bright	24	17.9
Creative	31	23.1
Boring	0	0
Enjoyable	26	19.4
Scary	0	0
Calming	20	14.9
Playful	18	13.4
Confusing	2	1.49
Pretty	26	19.4
Soothing	18	13.4
Distracting	1	0.75
Cool	20	14.9
Fun	20	14.9
Noisy	2	1.49

