

The Effects of Soothing Music on the Behavioral Responses  
of Selected Neonates in De La Salle University  
Medical Center

An Undergraduate Thesis  
Presented to the Faculty of  
the Behavioral Sciences Department  
De La Salle University Dasmariñas  
Dasmariñas, Cavite

In partial fulfillment of the requirements for the Degree  
Bachelor of Arts in Psychology

By  
De Leon, Gian Kelly L.  
Fajardo, Leslie B.  
Saulog, Roberto M. Jr.

March 2007

## ABSTRACT

**Name of Institution:** De La Salle University- Dasmariñas

**Address:** Dasmariñas, Cavite

**Title:** The Effects of Soothing Music on the Behavioral Responses of selected Neonates in De La Salle University Medical Center

**Proponents:** de Leon Gian Kelly L.

Fajardo, Leslie B.

Saulog, Roberto Jr. M.

**Funding Source:** Parents

**Cost:** P8, 000.00

**Date Started:** August 2006

**Date Submitted:** March 2007

**Objective of the study:**

### A. General

This study is aimed at determining the effects of soothing music on the states of arousal of the neonates.

### B. Specific

1. What are the mean scores of the subjects' state liabilities during each phase of the experiment?

2. Is there a significant difference between the mean scores of the subjects' state labilities with and without exposure to soothing music?

### **Scope and Limitations**

This research aims to determine the effects of soothing music on the behavioral responses of neonates in De La Salle University Medical Center admitted from December 18, 2006 to January 15, 2007. The neonates must have acquired a score of 7-10 in the Apgar scale and must have had a gestational age of not less than 37 weeks and a postnatal age of not more than 48 hours.

However, this study excludes prenatal and perinatal conditions of the neonates, the gender differences and the cultural differences. Each subject is observed in a 1-hour period, thus, any state lability that occurred before and after the observation period is not covered in the study.

### **Methodology**

This study made use of a within subjects research design, specifically that of an ABAB Paradigm, where A served as the baseline condition and B served as the treatment condition. Through Quota Sampling, 24 neonates were selected and underwent the experiment. Prior to the experiment, informed consent were asked and signed by the parents. The experiment lasted for one hour, which had four phases, namely A1 (baseline condition), B1 (treatment condition), A2 (withdrawal of

treatment) and B2 (the reintroduction of treatment). The treatment used in this study was Brahms' Lullaby. Results were computed using t-test for dependent samples.

## Results

1. The calculated mean scores of state labilities were: A1 - 9.958; B1 - 7.625; A2 - 9.5; B2 - 7.25. Comparing the mean scores of the four phases of the experiment, it showed that phases with treatment (B1 and B2) obtained relatively lower figures than the phases without treatment (A1 and A2).
2. The  $t_{obs}$ , having a value of 4.520 is greater than the  $t_{crit}$ , which has a value of 1.4035. This means that the null hypothesis ( $H_0$ ), which states that there is no significant difference between the two conditions, is rejected.

## Conclusions

1. State labilities noted from B1 and B2 (treatment phases) were lower than state labilities noted from A1 and A2 (non-treatment phases). With this, it may be concluded that soothing music affected the behavioral responses of the neonates.
2. Exposure to soothing music seems to have a relaxing effect on the behavioral responses of neonates. With the value of  $t_{crit}$  (1.4035) being lower than the value of  $t_{obs}$  (4.520), the null hypothesis is rejected, supporting item number 1 of the Conclusions, there is a significant difference between the labilities of neonates with and without exposure to treatment.

## Recommendations

1. Utilizing the results of the study, hospital institutions could play soothing music in nursery rooms to help facilitate the neonates in adapting to their new environment.
2. Care-giving professionals (e.g. nurses, care-givers, etc.) could use soothing music in establishing healthy relationship with the baby by providing them familiar, motherly environment.
3. Nursing mothers and family members may make use of soothing music, such as lullabies to help them establish a stress-free relationship with babies and help the latter adjust to their new environment.
4. Developmental Psychologists may explore further the relationship between music and neonates through using other variables such as cognition which may help in the holistic development of the child
5. Future researchers may delve more on the topic by trying to utilize or change other variables such as having longer observation periods. This way, changes in the neonates' behaviors would be given sufficient monitoring time. Another, environment could be more controlled (e.g. experiment could be done only in private rooms) so that extraneous variables are better managed thereby giving more concrete results.

## TABLE OF CONTENTS

ACKNOWLEDGMENT	1
CHAPTER 1 BACKGROUND OF THE STUDY	
Introduction	2
Statement of the Problem	4
Conceptual Framework	5
Hypothesis	6
Scope and Limitation	6
Significance of the Study	7
Definition of Terms	8
CHAPTER 2 REVIEW OF RELATED LITERATURE	
Auditory Stimuli and Auditory Acuity Of Neonates	9
States of Arousal	10
Music and the Neonates	12
Music and the Autonomic System	14
Integration of Motor and Auditory Responses	14
Synthesis	15
CHAPTER 3 METHODOLOGY	
Research Design	17
Research Subjects	18
Research Procedure	18
Research Instrument	19
Statistical Analysis	19
CHAPTER 4 PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA	
Problem 1	21
Problem 2	22
CHAPTER 5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	
Summary of Findings	26
Conclusions	26
Recommendations	27
APPENDIX A	31
APPENDIX B	38
APPENDIX C	38
LETTER OF REQUEST	48
CURRICULUM VITAE	49