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RESEARCH ARTICLE

ANALYSIS OF VISUAL RECOGNITION MEMORY CHANGES RESULTING FROM PRE AND POST NATAL MUSIC PRACTICE

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ABSTRACT

The purpose of this study was to determine the "Analysis of Visual Recognition Memory of infant Changes Resulting from Pre and Postnatal Music Practice". To achieve this purpose the investigator met the people, from hospitals and clinics in and around of Chidambaram randomly selected thirty Pregnant women in third trimester subjects. And their age between 20 to 35 years. The selected subjects were assigned into 2 groups: prenatal music group (n=15) and control group (n=15). The criterion variable selected in this study was Visual Recognition Memory which was measured by visual preference test. The pre and Postnatal music stimulation training group underwent third trimester of training. Visual Recognition Memory was measured on the infant home. The data was analysed using Analysis of co-variance (ANCOVA). The result of the study showed post test (F=1.75) and adjusted post test mean (F=55.32) showed significant ($p < 0.05$) difference among repeated – prenatal music training group and control group on Visual Recognition Memory of infant. It is concluded that pre and Postnatal stimulation training for third trimester is more effective in increasing Visual Recognition Memory of infant.

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INTRODUCTION

Music has always had an effect on people of all cultures all over the world. Tribes have always used different forms of natural music instruments to display their sadness or their joy. Tradition, based on mere assumptions, is contrasted with modern science, based on studies that reveal truths previously hidden and/or unexamined. These truths include "reason to believe that you can make a connection to your baby before he is born: this 'communication' can have important consequences for the baby's development and personality". Expectant parents are informed of the impact that their nurturance can have on the nature of the expected child and encouraged to begin connecting and communicating with the "baby." The book advises: "Feel free to talk to your unborn baby, play music for her, read her stories, and massage her" (Hotchner 2001).

MATERIALS AND METHODS

Subjects

To accomplish the purpose of the study thirty pregnant women in third trimester were selected and after delivery they are infant also selected from from hospitals and clinics in and

around of Chidambaram, Tamilnadu. The selected subjects were assigned into 2 groups: prenatal music training group (n=15) and control group (n=15). The selected subjects mean age between 20 to 35. The criterion variable selected in this study was Visual Recognition Memory which was measured by visual preference test.

Training

With the right mix of sounds and repetition, Mother and Baby may enjoy a mix variety of music. Asking women to use the technique for 15 minutes at least twice daily for their time in the study (for four weeks, or until she had her baby, whichever came first). Participants were asked to undertake their music in a quiet environment, with the study CD and headphones, while resting with their legs elevated, either lying on their side, or reclining in a chair. They could use music without the CD if they chose.

Statistical technique

The experimental design used for the present investigation was Analysis of Covariance (ANCOVA). The level of confidence was fixed at 0.05 to test the significance. The data was analysed in computer system by using statistical package for social science (SPSS) version 17.

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RESULTS

Table 1. Visual Recognition Memory Preferences

	Control Group	Experimental Group	Source of Variance	Sum of Squares	Df	Mean Square	'F' ratio
Pre- test Mean	27.45	27.47	Between	0.003	1	0.003	0.0001
S.D.	1.99	2.05	Within	921.35	28	32.91	
Post-test Mean	27.45	30.02	Between	49.41	1	49.41	1.75
S.D.	2.12	1.56	Within	789.69	28	28.2	
Adjusted Post-test Mean	27.46	30.01	Between	48.71	1	48.71	55.32*
			Within	23.81	27	0.88	

* Significant at .05 level of confidence. (The table values required for significance at .05 level of confidence with df 1 and 28 and 1 and 27 were 4.20 and 4.21 respectively).

Table - I indicated that the pre-test mean of Visual

Recognition Memory between experimental group and control group were 27.45 ± 1.99 and 27.47 ± 2.83 respectively. The obtained 'F' ratio of 0.07 indicated that the pre-test means was not significant at 0.05 level of confidence. The post-test mean of pulse rate between the experimental group and control group was 27.45 ± 2.12 and 30.02 ± 1.56 respectively. The 'F' ratio of 0.66 indicated that the post-test means was not significant at 0.05 level of confidence. The adjusted post-test means of Visual Recognition Memory between experimental group and control group were 27.46 and 30.01 respectively. The obtained 'F' ratio was 55.32 and it was greater than the tabulated 'F' ratio for degree of freedom 1 and 27 was 7.25. It was concluded that there was a significant improvement after the experimental group.

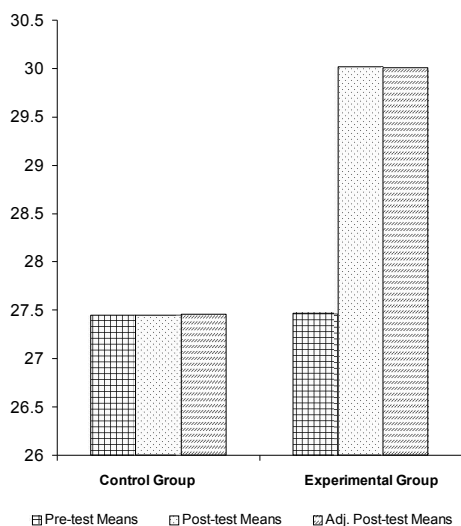


Figure 1. The mean values of experimental group and control group on Visual Recognition Memory

DISCUSSION

In the present study pre and Postnatal music training protocols elicited improvements in Visual Recognition Memory. In this regard, recent studies using pre and Postnatal music training have reported significant increases in both Fetal Learning and Memory in related speed and attention. Relation between infant visual recognition memory Rose *et al.* (2003), visual preference for that face. The present results support the conclusions of Chamberlain, et al. (1999) that pre and Postnatal music training might be a time-efficient training strategy in enhancing Visual Recognition Memory in Infant.

Conclusion

It is concluded that pre and Postnatal music training programs might be appropriate to optimize the development of Visual Recognition Memory in Infant. In terms of practicability, it seems that pre and Postnatal music training might be a time efficient training strategy in enhancing Visual Recognition Memory in Infant.

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