# Case study on effect of music therapy in motherinfant bonding

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**Abstract** — Babies who are less than a month old respond to their mother's singing or reciting that later did during the 8th to 9th month of pregnancy. Infants being breast fed the first time, respond by sucking comfortably. Infants not responding to feeding, resume to suck once the mother's familiar singing or reciting commence. Mothers on the other hand respond positively and their lactation improves in this process. This recognition and feeling of familiarity are instant and the infant will be more at ease.

Index Terms— Music Therapy, Suguna, Varadarajan, mother, infant, bonding, improved intake of infants, infant feeding, lactation

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### 1 DETAILS

It was a Monday morning, and I went to the Hospital ward I was allotted. My role was to observe and provide therapeutic support to my patient. "Well, I am qualified, I am musically trained, & have hands on experience in a hospital in music therapy. I stepped in confidently, Alas! My patient does not talk, does not understand my language, he has just arrived a few days back & he is unwell".

I observe the whole day. I rush back the next morning to find him in the same place with more lights around him! I put myself in his place; I cannot think of lying down, in a new place with flood lights, various gadgets and new sounds around me!! Oh! I must do something for this visitor in the ward. I must make him feel comfortable to start with. But what can I do?

I find one of his known voices visiting him once in a while. But visitors cannot stay long in the ICU. I record whatever that visitor spoke during those few minutes they spend together. I tried re-playing it to my patient when he was restless the next time. Eureka!! My patient responded; Is he surprised? Familiar? Comfortable listening? I don't know, but it is definitely one of them. I rush back with the video recording of his expressions to analyze if there is something, I can do for him. I felt we can improve his intake through that visitor, but medi-

cal ethics do not let you experiment with patients. So, I run behind the visitor and request her to recall whatever she sang (or recited) to my patient in the last 6 weeks & repeat the same while feeding him now. The first visitor-volunteer came back a few hours later, with a happy face saying my patient's is responding and his intake has improved considerably. I capture her feedback in the Likert scale. But.... Is there something we can prove more objectively? How can we make this finding a repeatable process? With the help of the staff nurse, I measure the intake and the output i.e. measure cups and average intake in ml incase of direct breast feed and urine output by weighing the nappies used. I request 3 such visitors who are quite familiar to their respective new comers to continue the process for the next 24 hours. The same staff nurse then collects data as follows:

#### 2 DATA

#### **CASE I:**

Baby of XXX / 6 Days old / Male / Prime

Day 1 - Total intake 234 ml / Total output 140 ml

Day 2 – Total intake 30 ml through measure cups and 9 times feed through DBF with total output 420 ml.

Similar improved intake were recorded for the other two patients also.

Yes, my patient is from Neonate Intensive Care Unit (NICU) and step-down wards and the visitors are none other than their Mothers.

Three such new-born babies who are less than a month old responded to their mother's singing or reciting that they did during the 8th to 9th month of pregnancy. Infants being breast fed the first time, responded by sucking comfortably. Infants not responding to feeding, resumed to suck once the mother's familiar singing or reciting commenced. Mothers on the other hand responded positively and their lactation improved in the process. This recognition and feeling of familiarity were instant and the infant appeared to be more at ease.

## 4 Conclusion

These observations are in sync with the finding that babies less than 3 days old alter their sucking patterns with listening to the voices of their mother. Full term infants from 36 to 80 hours increase their sucking behavior when they listened to their mother's voice. New-born responds and recognize the fundamental frequency of the voice of their mothers. This is one of the important types of memory contributing to the maternal bond between infant and mother. This form of memory is important for a type of development known as 'attachment'. This kind of fetal memory is critical to the survival of the fetus both prenatally (in the womb) and after birth as an infant. It is more likely that memory begins prenatally and the period of birth merely marks a transition from memory functioning inutero to memory functioning ex-utero.

