

Hospital Based Obstetrical Music Therapy: A Pilot Program

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Background

The purpose of this pilot program was to provide Music Therapy services to expectant mothers and their families as part of the region's comprehensive approach to prenatal care. The program was funded through the support of The Canadian Music Therapy Trust Fund and the Eastern Kings Memorial Health Foundation. In the initial phase of the program, the intent was to provide this service to women experiencing prenatal complications, or who were designated as high risk by the obstetrical team. This included women with Pregnancy Induced Hypertension (PIH), Hyper Emeses, Gestational Diabetes, and women who were at risk for miscarriage or fetal demise.

The program was launched in May of 2001, and within three months, the service was being requested by women who were not experiencing any complications. Expectant mothers were actively seeking complementary means of childbirth preparation, pain management, and stress and anxiety reduction. Consumer demand quickly led to the decision to offer this program to all expectant mothers in the region.

Due to funding restrictions, the program was not able to continue after the grant funding expired; however, the positive effects of Music Therapy interventions were acknowledged by patients, management, physicians, and nursing staff.

Literature Review

Throughout the last two decades, there has been an increasing demand for non-pharmacological alternatives in pain and anxiety management during pregnancy, labour, and delivery. Music therapy has been used in the treatment of psychological variables during pregnancy, and to facilitate the birthing process (McKinney, 1990). Pregnancy is a time of intensive and inter-related physical and psychological change (Kitzinger, 1980). Throughout this time of change, anxiety may arise surrounding issues such as the child's well being, the mother's own safety and comfort during labour and delivery, and the implications for the impact of the baby on the current family construct (Kitzinger, 1980).

In providing comprehensive prenatal care, many inter-related physical, psychological, social, and emotional factors must be considered. Even if there are no obstetrical complications, a mother's sense of support and security can impact the birthing process (Melender & Lauri, 2002). Three important factors have been found to be linked to the creation of such a feeling of security in pregnant women. These are social support, prenatal health care experiences, and partner support (Melender & Lauri, 2002). The facilitation and establishment of personal control has also been found to increase significantly a woman's satisfaction with the birthing process. Prenatal interventions that can establish a sense of personal control should be offered to expectant mothers (Goodman, Mackey, & Tavakoli, 2004).

The literature in this field suggests that high levels of anxiety could have a negative impact on the progress of labour and the incidence of obstetrical complications

(McKinney, 1990). When a woman is hospitalized due to high-risk complications, these feelings of anxiety become intensified (Winslow, 1986).

The induction of relaxation has come to be regarded as a positive element in the relief of pain, stress, and anxiety (Bernstein & Borkovec, 1973 as cited in Hanser, Larson, & O'Connell, 1983). Music coupled with relaxation techniques, such as progressive muscle relaxation, imagery, deep breathing, and suggestion, has been effective in facilitating relaxation and reducing perceived pain (Standley, 1986). The existing literature base supports the potential of obstetrical music therapy to make a significant contribution to maternal and neo-natal health (McKinney, 1990).

In a study conducted by Browning (2000), the planned use of music by mothers and care givers enhanced prenatal preparation for birth, and was found to be an important adjunct to pain and anxiety management during labour and delivery. Codding (1982) observed less perceived pain while Winocur (1984) noted greater relaxation, shorter labour, and the use of less pain medication with women for whom music was provided. In another study, subjects who employed music therapy during labour and delivery reported a significantly more positive perception of the childbirth experience than those who did not use music (Clark, McCorkell, & Williams, 1981). Researchers in another study compared the number of overt pain responses in subjects during ten contractions with music intervention alternating with five contractions with no music. One hundred percent of the subjects displayed fewer pain responses during the music condition than during the no music condition (Hanser, Larson, & O'Connell, 1983). Further reports by the same mothers indicated that the music aided relaxation and assisted concentration. In each of these studies, music therapy was tailored to support already existing prepared childbirth methods, such as Lamaze.

Music therapy has also been used to treat anxiety in expectant mothers during pregnancy. Leibman (1989) observed significantly reduced state anxiety in adolescents who received music-assisted relaxation training during the third trimester. In addition, music assisted imagery, deep breathing, and muscle relaxation were used to treat anxiety and increase compliance with treatment in hospitalized high-risk mothers (Winslow, 1986). This non-pharmacological intervention was designed and implemented to reduce anxiety and to provide alternative coping strategies for high-risk mothers. Music-assisted relaxation sessions provided an opportunity to develop rapport between therapist and client, which allowed for expression and reduction of anxiety through achieving a state of relaxation, catharsis, and receiving validation and support from the therapist (Clark, 1986 & Winslow, 1986). In addition, this method often resulted in the patient feeling a greater sense of control over their physical and psychological circumstances.

There is also evidence to suggest that the use of music and relaxation postoperatively can reduce overt pain reactions and the amount of pain medication required. Locsin (1981) used music with postoperative obstetric and gynecological patients and observed a decrease in overt pain reactions during the first 48 hours following surgery. In addition, they found that those patients who used music required less postoperative pain medication than those who did not. Another study cited in Standley (1986) reported reduced stress hormone levels in patients who used music as

a postoperative anxiolytic (Kamada, Matzuki, Kudo, & Oyama, 1985 as cited in Standly, 1986).

Music Selection

When music is chosen for a clinical setting, such as labour and delivery, there are many factors that must be considered. Most of the studies cited above used music that was selected based on patient preference. However, this is not the only selection criterion that should be employed. In general, researchers have found that slow, quiet, non-vocal music tends to lower physiological responses associated with stress and anxiety (Standley, 1986). Edwards, Eagle, Pennebaker, & Tunks (1990) examined physiological responses to more specific musical elements. They found that heart rate decreased in response to open string textures, conjunct melodic movement, consonant harmonies, and cadential progressions. Essentially, these authors found that music that induces relaxation and reduces anxiety can be described as having no extremes in rhythm, melody, or dynamics. This suggests that patient preference may not always be the only appropriate criteria for music selection in a clinical setting (McKinney, 1990). What this does suggest is that more than one criterion should be considered. Browning (2000) suggested that all recordings must be selected by the mother, should consist largely of instrumental music, must be of high recording quality, and must be easy to use.

Many expectant mothers/couples know that they would like to use music during labour and delivery. However, they generally feel they do not have the knowledge or the resources to choose music that can be used as an effective pain and anxiety management tool. For these mothers/couples, the music therapist becomes that resource. The therapist helps the couple to choose and to program music, and provides relaxation and pain management training to maximize the effectiveness of the music as a tool (Clark, 1986). Through this process, the mother/couple develops effective pain and anxiety management strategies that will enhance their sense of control and security during the prenatal period, and during labour and delivery.

Program Delivery

The music Therapist in this program was based in the Antenatal Clinic at a small regional hospital in Nova Scotia. Although the initial focus was women experiencing high risk pregnancies, the program was quickly offered to all pregnant women who were planning to deliver in that hospital. Referrals came from a number of sources including obstetricians and family physicians, the antenatal clinic nurse, public health nurses and prenatal classes, maternity care nurses, and current and previous clients. The music therapist met with each mother or couple for an initial assessment. Following this consult, an individualized music therapy program was designed to meet the individual needs of each client or couple.

During the assessment, music preference was established and specific selections were chosen for programming and recording by the therapist. Information was also gathered regarding the client's wishes and concerns for pregnancy, Labour, and delivery. Relaxation and pain management techniques were discussed, and further sessions were scheduled. If the mother was considered high risk, additional medical information was obtained from the medical chart and the perinatal nurse. In general, a minimum of four sessions were conducted, however, this varied according to the

individual needs of each client. For those who were experiencing persistent anxiety due to prenatal complications, concerns about the health of the baby, previous infant loss, or significant anxiety about the delivery, weekly or bi-weekly sessions were often scheduled for the duration of the pregnancy.

Music Therapy sessions included the use of music assisted progressive muscle relaxation, deep diaphragmatic breathing, imagery, and focused listening. Each mother or couple was strongly encouraged to listen to the music at home to enhance familiarity and to practice the relaxation techniques used in each session. Due to the nature of this program, it was generally not possible for the therapist to be present during labour and delivery. There were times when the client was referred after labour had already begun, and music relaxation was facilitated in the birthing room. However, this did not happen frequently. The parents, as well as the labour and delivery staff, were also encouraged to play quiet music or lullabies during the immediate post partum period.

Program evaluation

The effectiveness of this program was evaluated in two phases. Immediately after delivery, the nurses were required to fill out a sheet that contained specifics about the delivery. This included two questions about music therapy. 1) Was music therapy used? and 2) Was it effective? After the program had been in place for six months, a questionnaire was developed and mailed out to all clients who had received music therapy services (see Appendix A). Each survey was mailed out with a stamped, self addressed envelope to encourage mothers to complete and return it. This survey was not designed for research purposes, but rather for program evaluation and improvement purposes.

Results

The data from the post partum sheets did not prove to be useful because the questions were not routinely answered, so the rate of use and perceived effectiveness could not be consistently tracked. However, the client satisfaction surveys achieved a 50% return rate with extremely positive comments. Mothers reported that the music helped to relax them during pregnancy, labour, and delivery; helped to shift their focus from pain and fear to music and relaxation; made them feel more comfortable with the hospital setting; helped to relax them during fetal monitoring; assisted in helping to grieve a previous infant death and enjoy the birth of their new baby; helped to reduce stress during prenatal complications; helped to reduce blood pressure; helped achieve goals of drug free deliveries, and helped to relax both mothers and babies at home. For a more comprehensive list of reported benefits, please see Appendix B.

Conclusions

Music is fast becoming a more popular means of pain and anxiety management during pregnancy, labour, and delivery. Clinical and experimental data suggest that it is an effective adjunct to traditional pain and anxiety management techniques (Browning, 2000; & Durham & Collins, 1986). Maintaining a sense of security and achieving personal control are key components to perceived satisfaction during labour and delivery (Goodman et al., 2004; & Melender et al., 2002). The anecdotal data collected

during this pilot program suggests that music therapy is an effective tool in achieving these goals. In addition, the data suggests that a hospital-based program is an effective way to reach a significant number of women who would consider using music therapy as a tool for pain and anxiety management and for relaxation and birthing preparation.

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Appendix A
Client Satisfaction Letter and Survey

Dear Client,

The first year of being able to offer Music Therapy services to Obstetrical clients at Valley Regional Hospital has just drawn to a close. In order to provide the best service possible, your feed back concerning your Music Therapy experience is extremely valuable. This will allow me to make changes and improvements to the service that will best serve the needs of those seeking Music Therapy services in the future.

Included in this package is a client satisfaction survey which is designed to find out how and when you used Music Therapy and if you were satisfied with the results. This survey is also designed to find out what changes or improvements need to be made to the program. Your response to this survey would be greatly appreciated. Any information you provide is completely confidential, and it is not necessary to put your name on the survey. A postage paid envelope has been included for your convenience in doing so.

Thank you for your time and attention to this matter.

Appendix B
Unedited Survey Comments

1. It enabled me to limit my stress levels and I feel it decreased the amount of intervention needed in my birthing
2. Even post natally I used very few medications and recovered very quickly after my c section by using MT to reduce stress, manage pain, and pace my recovery.
3. I also used the tapes when I breast fed for the first two months. They helped me relax my baby and we breast fed with complete success and are still breast feeding at eight months.
4. I used them in early labour to focus
5. We have a colicky baby so they have helped me remain calm a few times when I was frustrated at not being able to stop our baby from crying
6. I was able to focus on me and what I would have to do during the labour process.
7. The relaxation sessions with the music therapist before labour were really wonderful, taught me how to relax and enjoy it.
8. During my labour I used it to relax me.
9. Relaxation and a sense of calm in myself. As well it allowed my fears to disappear and kept me focused.
10. I very much appreciated the service and hope it continues for others.
11. I loved it and looked forward to each session! Each visit was a time for me when all I needed to focus on was my pregnancy and the upcoming birth of my baby.
12. I hoped that I would actually relax a bit and try to enjoy the experience of being pregnant. I felt I achieved both with the music therapist's help.
13. The birth was an incredibly positive experience with excellent nurses and my techniques learned from the music therapist to help me. I managed a completely drug free birth thanks in part to my music therapy.
14. We used the tapes for many months, both to sooth our new born baby and to help us relax as well. I cherish the tapes even a year later and have very fond memories when ever I play them.
15. I was able to relax a bit and start to enjoy the thought of being pregnant and having a baby. I was actually able to grieve for our child that was lost and try to realize that this pregnancy was a new child.
16. I would HIGHLY recommend music therapy. It was an incredibly positive experience for me in what was otherwise an incredibly stressful time
17. I listened to the music it helped me to relax throughout the whole time of labour just about to the end.
18. I still use the tapes in the baby's room. He likes it. He finds it soothing.
19. The therapy helped me a great deal during the weekly test, which was a very anxious time for both my husband and I. My tapes were played all through labour including my labouring at home.
20. Having the therapy helped my experience and I am very positive, and also having the sessions actually in the department I think also helped me a great deal, because I became familiar with the floor and the staff. The program I think is wonderful

21. A benefit to any mother and baby. My baby loves classical music! And many other forms of music.

22. During weekly monitor sessions, at home for relaxation, and during the first stages of delivery.

23. The music gave me a focal point to assist with pain management. I avoided all forms of medication during my labour and birth of my child.

24. It was a great option and an effective tool!

25. We worked together to customize two tapes and did a few practice sessions at the hospital- I used daily at home and used during the entire labour and delivery which occurred without any epidural.

26. I wore the tapes out but have most of the music on CD's and the baby and I listen a great deal of music – the baby immediately responds to music in a positive way.

27. It enabled me to control my high blood pressure until the last month without medication – also became a familiar focal point for labour and birth – the breathing relaxing had become an almost automatic routine.

28. I think music therapy was a key tool to my successful epidural free delivery and would certainly recommend it to anyone.

29. I used it to help me sleep at home when pregnant and to keep me relaxed during labour.

The birth was too quick to even press play!

30. I have (used the music at home) some to help me try and sleep during the day, which I found difficult.

31. My blood pressure stayed down, I am no longer taking medication for it! And I have enjoyed some relaxing “me time”. I think that's great!

32. I hope you continue to offer such a great service to expectant mothers.

33. I used up until I received my epidural.

34. (I hoped) That it would assist me in having a drug free delivery – which it did!

35. I was able to focus on the music instead of the pain and remain calm.

36. I felt immediately what I wanted out of the sessions.

37. Used throughout early labour until I received some medication (to take the edge off).

38. Being able to manage labour pain without resorting to epidural. My mind was already set

about using an epidural until I realized it was not always guaranteed, music therapy gave me a much more pleasant option.

39. It should be offered as an alternative at all hospitals.

40. I think the tapes helped to keep me relaxed and helped to shift my focus.

41. Yes, during breast feeding, I felt it was familiar soothing for me and for my baby.

42. For me it was most useful before during late pregnancy. I would use it to help me relax
and then fall asleep

43. I really enjoyed the sessions at the hospital while I was pregnant. Unfortunately I ended
up with a c section and was not able to use it during delivery.

44. Yes, my son listens to them while playing and we take it in the car. I also enjoy
it.

45. It gave me a chance to focus on myself and my baby. It took me away from
every day
hustle and bustle

46. I think it is a wonderful program! I would love to use it in my future pregnancies.