

Music Therapy and Music Selection --- a Case Study of Music Intervention during Pregnancy

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Abstract: “Music Therapy” is an emerging interdisciplinary subject based on social development, which has merged together with psychology, medicine, neuroscience and musicology. Music therapy abandons the traditional diagnostic model, which only focuses on patients’ pathological changes. It simultaneously heals patients’ body and mind, hence to achieve a better therapeutic effect. Music therapy has analgesic effect, which has been clinically applied to puerperia and used to divert puerperia’s attention from pain during labor. Applying music therapy during pregnancy to relieve tension and prevent negative emotions that may cause harmful effect to pregnant woman and the fetus.

Keywords: Pregnancy delivery; Music therapy; Music choice

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Pregnancy is a special physiological process that female goes through. During pregnancy, it not only changes the physical condition of pregnant woman, but also significantly changes her psychology. Due to the pressure from life and work, the new mother is to be at a loss. The pregnant woman is likely to have anxiety, depression, irritability, and other bad emotions, which will not only be harmful to the pregnant woman, but also affect the growth and development of the fetus. Excluding drug treatment, the application of music therapy to intervene pregnant women can ease maternal anxiety and tension and reduce the adverse factors caused by psychological changes, hence to make it through pregnancy. It is helpful to the physical and mental health of pregnant women and fetuses^[1].

1 Intervention of Music Therapy during the Process of Childbirth

1.1 Overview of Music Therapy

Since the beginning of civilization, music has been used for healing. A famous American music therapist Bruscia, once said: "Music therapy is a systematic intervention process. In this process, the therapist applies various forms of music experience and during the treatment corresponding therapeutic relationship has developed as the motivation to help the therapeutic object reach the goal of health." Due to the particularity of the delivery process, listening to the music therapy is mostly applied in the clinical delivery process^[2].

The history of music therapy in our country can be tracked back from ancient times to modern times. There has been music and dance since thousands of years ago, and it also contains profound significance of health care and treatment. Among original songs and dances there are some related to music movement therapy, which can effectively relieve the gloomy mood and be helpful to mental and physical conditioning and other effects. For pregnant women, it is more effective to apply music to prenatal education. Music is the best therapist. From the perspective of traditional Chinese medicine psychology, music can influence and regulate emotion effect. When listening to the musical tune, it can produce resonance interaction between emotions and organ. Hence to realize the effect of veins movement and smoothness of heart pulse and spirit. As a famous expert in music prenatal education in China, Nie qiaole has been engaged in music prenatal education for many years for music therapy and child psychology. She has proposed to integrate parent-child relationship training into prenatal education courses, and maintaining a favorable

maternal mood be considered as an significant appeal of prenatal education^[3].

1.2 Analgesic Effect in Music Therapy

The idea of music relieving pain can be explained by Gate Control Theory(GCT). It was developed by Melzack and Wall, which explains pain perception from many perspectives. Over the past few decades, it has been supported by many researchers and developed into one of the most influential and significant theories of pain perception. The theory believes that before harmful and non-harmful stimulation reaches the brain, the nerve center acts as a "gate" that can be opened or closed hence to adjust pain. When the pain signal passes through the nerve conducting fiber to the spinal cord, the "gate" is not closed and the pain is transmitted. If the "gate" is shut down, there are fewer or no nerve fibers to transmit the pain. There are certain factors to determine the "gate" are turned on or off: the amount of harmful stimulation, the amount of stimulation that brain perceives as causing mood changes and so on. Due to the limitations of our intuitive system, it is impossible for us to pay attention to everything that happens in the surrounding environment all the time. At this moment, we choose the factors that are worthy of attention around us (Donald,2006). The theory is that in everyday life, when an harmful or non-harmful stimulus occurs, pain will be reduced if the nerve center is hold by another stimulus (music on TV, sounds of conversation, smells, *etc.*)Because these sensations are more stimulating than pain, we experience a gradual decrease in pain when our attention is attracted to internal and external stimuli (music, conversation, *etc*)^[4].

1.3 Frequent Psychological Barriers of Pregnant Women

1.3.1 The tension of being a new mother

Pregnancy is not only a physical change for the general female, but also a significantly psychological test. Without any drug intervention, but to take other ways for the maternal psychological counseling, it has become an significant part of the maternal psychological construction. The psychological reaction of the first pregnancy is normally stronger, known that in the belly be pregnant with a new life will show excitement and thrilled state. In the meantime, knowledge deficiency in how to increase nutrition and how to raise a healthy baby, which is anxiety mixed with pleasure^[5].

1.3.2 Worries about work and family

Pregnancy is a big challenge for a professional female. Women will be adjusted position after pregnancy, and also their salaries will be affected accordingly. It will be quite difficult to adjust to an ideal position after childbirth, and it will take several years to get back to or even catch up with the original state. In this case, the pregnant woman is more or less worried about the future changes in the workplace, consequently the pressure and anxiety will have different influences upon the pregnant woman and the fetus^[6].

1.3.3 The fear of giving birth

Pregnant pregnant women have insufficient knowledge about childbirth, through observing other pregnant women, and talking with relatives and friends, they are more likely to be afraid of the pain during the production process. In the early stages of giving birth process, the contractions give delivery woman a strong and persistent pain, and if the attention of the woman is always focused on the tension of pain, anxiety and fear and other adverse mental emotions can cause fetal hypoxia, uterine inertia and prolonged labor. In the intense psychological pressure and intense physical pain, simple language comfort is obviously almost useless, and some auxiliary methods are needed to adjust it.

2 Types of Music Therapy During Pregnancy

2.1 Pure Music Listening Therapy

Music therapy method is also known as receptive music therapy method, that is, the treatment subjects listen to the pre-recorded music or live music. Through listening to the music, the patients achieve the physiological, psychological, cognitive, spiritual and emotional treatment. Listening to music can change people's psychological and physiological state hence to produce a good emotional response. During the process or after the process of listening to the pleasing music, the patient's body will become relaxed, and the nervous mood will be greatly relieved, or the depressed mood will be released. Beautiful music can stimulate pregnant woman's hearing, and then generate excitement in the brain, and then the body will stay in favorable condition, thus having a positive influence on the fetus. As for the fetus, after 16 weeks pregnancy they start to have hearing ability. From this stage starting to carry out fetal music education also can stimulate the fetal

hearing organs, and then stimulate brain development^[7].

2.2 Combination of Music and Pregnancy Yoga

Yoga for pregnant women is a quite effective form of fetal education, by combining traditional yoga philosophy with human breathing energy and fetal education. Having accompanied by soothing music, pregnant women can strengthen their physical fitness under scientific and effective yoga practice, which also can carry out a good effect of fetal education. Through yoga practice, pregnant women can effectively achieve a natural labour, for those who frequently do yoga, can improve its blood circulation ability, consequently it can bring positive effect for childbirth. Yoga practice can also enlarge woman's pelvis, which is also of huge significance for a smooth delivery. In the rational yoga practice and soothing music, it can better release pregnant women's pressure, therefore pregnant women can maintain a positive mood during the pregnancy period, so as to achieve physical relaxation and control blood pressure. Pregnant women body changes significantly in the whole pregnancy, and pregnant women yoga is a very good exercise. During pregnancy yoga exercise, it is very helpful for pregnant women pelvic floor muscle. Having combined with music, pregnancy yoga can have a positive influence on pregnancy and childbirth^[8].

The combination of music and pregnancy yoga can effectively relieve the pregnant woman's mood and pressure, therefore eliminate the pregnant woman's nervous psychology and stress. In the meantime, it can also effectively control pregnant woman's blood pressure changes, which has certain positive effect on the regulation of the brain feeding center, so as to better control the pregnant woman's intake of food. Pregnancy yoga can soothe the pregnant woman's state of mind, help the pregnant woman to conduct better mood adjustment, but also can remove the excess energy from the pregnant woman's body. Yoga practice during pregnancy can help pregnant women to maintain a positive physiological and psychological state, which is also helpful for the metabolism of pregnant women, so as to effectively prevent the phenomenon of hypertension and diabetes during pregnancy. Pregnant women's excessive anxiety and fear can induce premature rupture of membranes, which have extremely adverse effects on fetal growth and development. With music coordination in practicing yoga, it can effectively active the labor process, shorten the second stage of labor and total labor process. Through pregnancy yoga

training it can better control the pregnant woman's weight, also can effectively control the probability of macrosomia birth. To some extent, it reduce the chances of cesarean delivery which caused by neonatal giant baby.

2.3 Musical Coordination during Labor

Listening to music at the beginning of giving birth, not only helps to soothe muscles and spirit, it is also helpful to be more tolerant of pain, which is because the music accelerates the maternal body generating natural element of eliminating the pain. This element is synthesis of endorphins, which can increase endorphins levels in the blood. Endorphins has obvious analgesic effect, which can help the smooth natural delivery.

During the first stage of labor and the second stage of labor, puerperia will appear serious contractions phenomenon. At this time, most puerperia will be panic, crying, gradually lose certain confidence in childbirth, and some even claim to terminate the pregnancy. At this time the medical staff need to give more encouragement to puerperia, using motivational language to increase their self-confidence. The caretaker try to avoid using sarcastic language to the parturient women during the process of giving birth, so as to prevent more psychological pressure and adverse effects on the mother and fetus. During childbirth, medical staff can play soothing music for the mother. For example, light music such as Spirit and Lotus in yoga music can effectively reduce their nervous psychology. In the meantime, it is necessary to guide the effective breathing methods for parturient women and apply correct method for abdominal pressure. By the end of the third stage of labor, the mother's fear for contractions will fade away and she will be anxiously worrying about the health of her child. Pregnant women insist on yoga practice for a long time, it has many advantages for their own health and fetal growth and development. During the process of production, cooperating with music coordination and using beautiful melody to relieve the psychological pressure of pregnant women, so that it can reach an ideal state of breathing and relaxing, therefore waiting for the birth of the baby in a pleased mood. Furthermore, to some extent, the music and conversation in the delivery room can comfortably improve the maternal mood, so as to eliminate the maternal tension and fear, and can better distract the maternal attention, consequently shorten the labor process and reduce the maternal pain. Through music therapy intervention, it is of huge

practical significance and far-reaching influence on the family and the society to prevent the pregnant women from bad emotions such as irritability and depression during pregnancy, which is for sure worthy of extensive promotion and application^[9].

3 The Choice of Music in Music Therapy for Pregnant women

Music can deliver physical and psychological health to pregnant women and fetuses. Music fetal education can relieve the stressful mood of pregnant women, maintain a positive state of mind which will pass this information to the fetus. Affected by this positive mood, the fetus will be stably and healthily grow in the pregnant woman's belly. Besides its positive psychological effects, music can also have physiological effects on pregnant women and their fetuses. Yoga practice during pregnancy is a great exercise for pregnant women.

To some extent, music coordination can effectively eliminate the anxiety and nervousness of pregnant women in childbirth. Music coordination has a favorable analgesic effect on pregnant women. To some extent, it can effectively stimulate the central nerve hearing system of pregnant women and increase the concentration of enkephalin, so as to suppress pain. And to play soft soothing music during the process of pregnant women production, for example, yoga music *Our Future*, it allows pregnant women to relax during production and helps to relieve the tense mood. Playing light music in the delivery room, the rhythm of the music to be soft and gentle, will give one person the kind of relaxed feeling. The volume needs to be moderate, and makes it clear for pregnant women to feel the rhythm of the music. To certain degree, it can shorten the labor process, and effectively enhance natural birth, so as to reduce the chances of cesarean section for pregnant women.

Music has a certain education functions, which can not only soothe the pregnant woman's mood, but also influence the fetus through sound waves. Therefore, when pregnant women choose music in the early stages of pregnancy, they should firstly consider the music with a steady rhythm and a slow melody so as to relieve the nervous mood. For the middle and late stages of pregnancy, music can be appropriately added some elements with a sense of rhythm, hence stimulate the growth and development of fetal motor nerves. For instance, Mozart's Sonata for two pianos in D major is one of the most famous fetal education music all over

the world. Its lively rhythm and neat structure will promote the spatial thinking structure and cognitive ability development of the middle-late fetus^[10].

During the selection of the song, music need to avoid those wide frequency symphony and high frequency composition, which leads to the fatigue of brain. The basal membrane of cochlea is affected by high frequency stimulation, which will be harmful to fetal education. And don't choose those music that has a sudden sound in the music, especially the low and medium frequency music, which is easy to enter into the utero, with a sudden burst of music. It is not suitable for the fetal education. Choose the music that the sound pressure is the main advantage, control the soothing and soft music between 5, 1500hz. Besides consider the frequency of music, it also need to analyze the rhythm of the music, and consider the effect of rhythm on the fetus, so do not select the music that has the intense rhythm stimulation to the fetus.

4 Conclusion

Music therapy intervenes in pregnant women during pregnancy so as they can better relax and exercise their bodies, brains and hearts. Sticking to yoga training during pregnancy can encourage pregnancy to maintain a pleasant and peaceful attitude during pregnancy, in the meantime also make it easier and relaxing for pregnant women to give birth. The long-term music intervention not only helps to relieve the tense and anxiety of pregnant women, but also to avoid the prenatal and postnatal depression, hence have a positive effect on the fetus.

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