

## **Massage Therapy Among Pre-term Infants: An Evidence Based Practice**

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### **Abstract**

Infant massage is noted to have been in practice for a long time by most countries. Recently, most professionals and non-professionals alike are utilizing infant massage. An extensive literature search of Google scholar, Pub Med, EBSCO host, CDC, AHRQ, WHO, was done. Two hundred and seven articles were found and reviewed resulting to seven articles being critically appraised. Results showed that massage therapy among preterm infants will increased weight of low birth weight preterm neonates at two months old. It is also noted that massage therapy is similar to kangaroo carry since both increases birth weight thereby decreasing hospital stay. These findings support massage therapy among preterm infants provided that nurses and mothers will comply with proper massage therapy protocol/guideline. Using an evidence-based guideline will have low cost to the patient and will decreased workload of nurses. A seminar/workshop for NICU nurses that would enable them to train concerned mothers regarding massage therapy for preterm infants.

Keywords: Massage Therapy, Preterm Infants, Evidence Based Practice

### **1. Introduction**

Infant massage is noted to have been in practice for a long time by most countries. Recently, most professionals and non-professionals alike are utilizing infant massage. During infant massage different types of oils can be used. Notably by merely touching is tantamount with massage therapy. Shears, (2006) defines massage as “healing” therapy where muscles and other soft tissues of the body are manipulated to improve health and well-being using different strokes and pressure techniques that enhance blood flow, remove wastes, stretch ligaments and tendons, easing physical and emotional tension.

Furthermore, massage therapy as pointed out by Field, et al., (2008) decreases stress on premature infants through stimulation of pressure receptors triggering parasympathetic response hence promoting growth and development and increasing weight of preterm infants. Remarkably, during infant massage muscles are relaxed promoting more sleep for the infant which believes to help in the growth and development.

Several studies had been done on how massage therapy works. A study conducted by Kulkarni et al, (2010) revealed that massage is more useful when some kind of lubricants will be used and has harmful effects like physical injury and increased risk of infection when not performed appropriately. Similarly, in another study conducted by Beider et al., (2007) on pediatric massage found out that massage therapy improves psychological and physiologic status of children with various health conditions.

Accordingly, low birth weight is one of the main determinants of neonatal and postnatal morbidity causing infant's death or long-term hospitalization (Field et al., 2011). Statistical data from the WHO as cited by Bellamy (2001) showed that the rate of LBW is 17% in the whole world, 6% in industrialized countries, 21% in developing countries and it is 10% in Islamic Republic of Iran.

Fortunately, based on the result of one study, the LBW rate in Yazd, Iran, is 8.4% (Bellamy, 2000). Recently, in the United States infant massage is observed to be a practice. It is quickly being documented as a beneficial therapy for infants. Likewise, in healthy infants, massage therapy promotes bonding between parent and infant promoting development of warm positive relationships. It has also been observed to lessen stress responses to painful medical procedures like inoculations, teething, constipation pain, and colic. Infant massage does not only benefit the infant, but also the person giving the infant a massage.

In local settings it had been observed that preterm babies have long hospital stay and they are high risk for developing infection thereby causing high hospital cost. Furthermore, it is also observed that nurses practice massage therapy in preterm babies however, in an interview with these nurses they claim that they are not aware of the effects of massage therapy and that they are just doing as part of their culture. It is also noted that these nurses do not do the correct technique in massage therapy since they are not aware of the proper technique in doing massage therapy. Hence, the researcher being a nurse is interested in massage therapy among preterm infants since she believes that this will improve quality of life.

## **OBJECTIVE OF THE STUDY:**

### **PICO QUESTION**

<b>P</b> OPULATION	Preterm Infants
<b>I</b> NTervention	Massage and Exercise Therapy
<b>C</b> OMPARISON	No Massage or Exercise
<b>O</b> UTCOME	Increase Weight Gain

Among preterm infants, does Massage and exercise therapy increases weight gain compared with no Massage nor exercise? Specifically, the study aimed to know the following:

1. Does massage therapy and exercise therapy increases weight gain compared with no massage nor exercise;
2. Development of a protocol on massage therapy;
3. Effectively of the protocol.

## **2. Methodology**

### **Research Design**

An extensive literature search of Google scholar, Pub Med, EBSCO host, CDC, AHRQ, WHO, was done. Several electronic data base and keywords were used for literature search. Two hundred and seven articles were found and reviewed. Sixty seven (67) abstract that matches

the research term use; seventy (70) articles that are identified by an alternative means; seven (7) articles being recorded; two (2) articles excluded at the title stage; twenty (20) articles excluded on the abstract stage; thirty (30) articles excluded during first reading; ten (10) articles meeting cut offs and; one (1) articles reviewed but was excluded because it was written in German and no available English translation. Seven (7) articles were retained, copied and are coded for appraisal. To appraise the articles, synthesis tables using the Schultz format were developed using increased weight gain as the outcome variable.

### **3. Results and Discussion**

From the synthesis reviewed on the research studies conducted on the practice of massage therapy, it revealed that massage therapy among preterm infants will increased weight of low birth weight preterm neonates at two months old. It is also an effective and safe non-medical intervention that can increase weight of preterm babies with low birth weight. Furthermore, in many studies it is consistent that moderate pressure massage therapy increases weight more than the light pressure massage on preterm infants. It is also noted that massage therapy is similar to kangaroo carry since both increases birth weight thereby decreasing hospital stay.

It is further noted that the following are the six strokes done in 10 seconds while putting the baby in prone position are: (1) head from crown to neck, (2) shoulders from middle of back to arms, (3) back from neck to waist, (4) legs from top of thighs to ankles, (5) arms from shoulder to wrist and; (6) position the baby to a supine position and do six movements of each arm to elbow and leg to knee (Field Protocol, 1986). During massage therapy the Infants should be observed continuously for heart rate, respiratory rate and percutaneous oxygen saturation. Massage are done at the NICU by registered nurses who are trained.

### **Conclusion**

These findings support massage therapy among preterm infants provided that nurses and mothers will comply with proper massage therapy protocol/guideline. Using an evidence-based guideline will have low cost to the patient and will decreased workload of nurses. Furthermore, it will also decrease hospital stay. A seminar/workshop for NICU nurses that would enable them to train concerned mothers regarding massage therapy for preterm infants. Such training would be enhanced with the distribution of handouts of the developed practice guidelines on massage therapy to ensure a continuous review of the subject matter.

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