Massage Therapy in Neonatal Population: Literature Review

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A literature review serves a significant role in providing valuable data analysis regarding nursing topics utilized in practice. Using research from multiple data sources provides valid and valuable evidence in supporting nursing practice methods (Houser, 2018). A topic worth researching is nonpharmaceutical treatments that can benefit populations (Cheever & Hinkle, 2018). It is a necessity that researchers study the benefits of using nonpharmaceutical treatments in neonates and the potential health benefits these treatments may entail. This paper provides an in-depth analysis regarding the nonpharmaceutical treatment of massage therapy and its effect on neonatal populations. There will be an exploration regarding the effect massage therapy has on growth, mother and infant bonding, and hyperbilirubinemia levels of neonates. This topic is significant because noninvasive treatments that may benefit the health of neonates need investigating to provide a foundation for nursing practice.

Article One: Introduction

The first article analyzed is the “Effect of tactile/kinesthetic massage therapy on growth and body composition of preterm infants” (Elmoneim et al., 2020). This research aims to explore how kinesthetic massage therapy affects the body of preterm neonates. Researchers have already determined that the growth of lean mass has a better outlook than the growth of fat when it comes to health outcomes for neonates, so they curiously researched whether massage therapy had an effect on body composition and if it promoted lean mass. Researchers randomly selected preterm neonates who were under the gestational age of 35 weeks. There was a total of 60 neonates who were able to partake in this study. The researchers split the neonates into two equal groups of 30. The first group received sessions of massage therapy for five days. The massages

lasted fifteen minutes, and healthcare providers implemented massage thirty minutes after the neonate's afternoon feeding. Researchers split the fifteen-minute massage into 5 minutes of tactile massage, which included pressure strokes to the body, 5 minutes of kinesthetic massage, including muscle flexion and extension, and another five minutes of tactile massage. The second group of neonates received routine care without massage. Researchers studied heart rate, oxygen saturation, blood pressure, and respiratory rate during the massage. Researchers also monitored the body composition of the neonates before and after the full five days of massage therapy. Researchers used a scan to measure the density of bones and fat and lean mass ratios of massaged neonates and those who did not receive massages. Researchers determined that the massaged neonates did not show any signs of stress during the implementation of therapy. Researchers also determined that the neonates who had massage therapy had an increase in weight gain, an increase in length, and compared to the neonates who had routine care, they had increased fat, lean mass, and bone density. Researchers believe that preterm neonates had better lean mass to fat mass distribution overall than neonates who did not receive massage therapy (Elmoneim et al., 2020).

Key Points

The researchers make many critical points during this study. One in which is that massage therapy was associated with weight gain when neonates received massage therapy for five days. Not only did these neonates gain weight cumulatively over the five days, but their weight also increased daily. Cumulatively, neonates who received massages gained 77 grams compared to the neonates who received routine care. These neonates gained 25 grams cumulatively. Daily, massaged neonates gained approximately 19 grams, while routine care neonates gained just over 3 grams (Elmoneim et al., 2020).

Another point that the researchers make was an association of increased length gain with the massaged neonates. Still, this length was seen in daily length and mid-arm circumference; however, not in thigh circumference, head circumference, or ponderal index gain. The researchers also included important information about the vital data for the neonates receiving massage therapy and those receiving routine care. Neonates receiving therapy had an increased heart rate during implementation; however, the neonates in routine care did not experience increased heart rates (Elmoneim et al., 2020).

Researchers gathered this critical information using a randomized, controlled, single-blind trial. The participants in this trial were patients from the neonatal intensive care unit (NICU) at Mansoura University Children's hospital. The patients included in this study were stable preterm neonates less than 32 weeks gestation. These neonates did not need supplemental oxygen and were not suffering from cardiac issues or known infections. Researchers also noted that these neonates were receiving sufficient breast milk or formula. Researchers gauged facial expressions, crying, and signs of distress to monitor the neonates' behavior to collect the data. Researchers also monitored vitals to measure heart rate, oxygen saturation, respiration, and blood pressure and took vitals before the massage, during the massage, and after the massage. Researchers used a densitometer to measure bone density, body fat, and lean mass. When it came to statistical analysis, the researchers used software to aid with Kolmogorov-Smirnov testing. This test examines the distributed data analysis. Researchers also used Mann-Whitney U and Chi-square tests to learn more about the variable data (Elmoneim et al., 2020).

Research determined no observable physiological or behavioral stress during massage therapy when observing the facial and observable expressions. Researchers also determined that the software data showed an increase in weight gain and growth. These variables received a p-

value of 0.01, which is significant. The body composition analysis showed that massage therapy increased body composition changes compared with the neonates receiving routine care. Researchers discovered that neonates who received therapy had a higher heart rate while receiving treatment for vitals. The p-value was at 0.004, which is significant. After receiving the data, researchers concluded that massage therapy is associated with increased fat mass, lean mass, tissue mass and had overall benefits in body composition. This massage therapy improved the growth of neonates and aided in healthy bone growth and bone density (Elmoneim et al., 2020).

Assumptions

This research article provides the assumption that massage therapy in preterm neonates provides better health outcomes compared to preterm neonates who did not receive massage. The author explains known data that massage therapy leads to faster weight gain, independent oral feedings, less pain response, fewer infections, and overall, a shorter hospital stays due to the health benefits. Because of this information, the reader assumes that massage therapy would have a beneficial outcome in neonates' growth and body composition. The researchers also explain that neonates experience tactile stimulation in the womb similar to the strokes received during the massage therapy. This information provides the assumption that tactile massage therapy provides the neonate with the stimulation they cannot receive due to being born prematurely. This information suggests that providing a stimulation given in typical development will most likely have a more beneficial outcome than those neonates who did not receive the necessary stimulation (Elmoneim et al., 2020).

Deficit/Conclusion

The researchers provide an acceptable and logical line of reasoning. The researchers used discovered data relating to massage therapy practice in neonatal populations and decided to test whether the perceived benefits of massage would benefit body growth and composition. Because the previous data suggests that neonates receiving massage therapy have decreased stress, pain responses, infections, and need for medical treatment. It is logical to assume that massage therapy would benefit the overall body fat to lean mass ratios. The researchers developed interventions to obtain evidence to prove the benefits of massage therapy on body composition. After implementing massage therapy on premature neonates, researchers collected data and compared that data to the premature neonates who did not receive massage therapy, and concluded that massage therapy had benefits related to body growth and composition (Elmoneim et al., 2020).

The implementation of this article is that providing massage therapy is an uncomplicated, noninvasive treatment that provides many benefits to the patient. This intervention helps the patient, and the research gathered in this study suggests that massage therapy for neonates should be standard nursing practice. Based on the data collected, if the nursing practice does not include massage therapy for preterm neonates, the neonates would not be provided the much-needed stimulation. This lack in practice can inhibit massage therapy's benefits, such as increased growth, fat mass, and lean muscle mass. It can also inhibit improved growth parameters and the benefits discovered in past research, such as increased weight gain, less stress, faster independence in feedings, and lower infection rates (Elmoneim et al., 2020).

References

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