

Baby Massage on Gross Motor Development in Infants

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ABSTRACT

Baby massage is very important for the baby's health. Especially if it is done by the parents themselves. So the role of parents is needed in providing massage to babies. The purpose of this study was to determine the effect of infant massage on gross motoric development in infants. This study combines the meta-analysis method, which is a statistical technique to combine the results of 2 or more similar studies in order to obtain a quantitative blend of data. There are 7 journals used in this study. Where the seven are summarized briefly and can produce conclusions related to the relationship between infant massage and motor development in infants. Based on the results of research from the seven journals, it showed effective results for stimulating baby's motor development, namely baby massage.

Keywords: baby, massage, motoric

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INTRODUCTION

According to World Health Organization (WHO) data based on regional divisions of countries in 2018, as many as 12% of children under five in the world experience weight gain disorders with detailed data showing that Southeast Asia has the highest prevalence of 14.1%, followed by the United Arab Emirates. 13.9% and in the third place is occupied by Western Asia Pacific, with a prevalence of 10.5%.

The results of data from the United Nations Children's Fund (UNICEF) and the Lancet Series show that the prevalence of more than 25% (250 million) of children under five in the world does not reach their development potential. Asia ranks third highest in the world after Africa and Europe (United Nations Children's Fund, 2012, Black et al., 2016;)Data in Indonesia states that around 12.8-16% of children under the age of 5 years experience general developmental delays, such as delays in gross motor development, fine motor skills, language and social development.

Based on the data on growth and development disorders in the world and in Indonesia, it is a global commitment to build investment in infants as outlined in one of the visions of the 2016-2030 Sustainable Development Goals (SDGs) concerning ensuring that all human beings can fulfill their potential in terms of dignity and worth. equality by protecting, promoting and supporting the development of infancy. This SDGs target will have a direct impact on the stability and prosperity of the nation in the future, because in the eyes of the world, babies are a valuable investment for survival in preventing an increase in morbidity on growth and development (Ritcher et al., 2016).

Factors that influence growth and development are internal and external factors. One of the external factors is the stimulation factor (Soetjiningsih & Ranuh, 2017). In addition to nutritional status, stimulation has an important role to increase the growth and development of infants. Lack of stimulation can cause delays in growth and development and even permanent disorders (Mulyati et al., 2017; Ministry of Health, 2016). The Indonesian government has provided support and attention

to the growth and development of infants and toddlers as stated in the Decree of the Minister of Health of the Republic of Indonesia (Kemenkes RI) Number 28 of 2017 in Article 20 point 2C paragraph (2) concerning the permit and implementation of the practice of midwives stating that midwives are authorized to monitor growth development of babies carried out through early detection and stimulation of growth and development (Kemenkes RI, 2017). Baby massage is one form of growth and development stimulation that can be done.

Touch stimulation can stimulate all sensory and motor functions that are useful for brain growth, forming emotional, inter, intrapersonal intelligence and to stimulate other intelligences. Children who receive directed and regular stimulation will develop faster than children who do not receive stimulation (Soedjiningsih, 2009). The Decree of the Minister of Health Number 900/MENKES/SK/VII/2002 concerning the Registration and Practice of Midwives states that midwives have the authority to monitor the baby's developmental body through early detection and stimulation of growth and development 2009.

According to Roesli, baby massage is the oldest and most popular touch therapy known to man. Baby massage has long been practiced almost all over the world, including Indonesia and has been passed down from generation to generation (Prasetyono, 2009).

Based on this background, the authors are interested in making a literature review entitled "Baby massage on Rough motoric development in infants".

METHOD

Researchers chose literature review as the research method in this paper, which tries to explore how the effect of infant massage on infant weight gain. Sources for conducting this literature review include systematic computerized database search studies (Pubmed, Pro Quest, and google scholar). Literature review is a research methodology that aims to collect and take the essence of previous research and analyze some of the expert's overview written in the text. (Snyder, 2019).

RESULTS AND DISCUSSION

Several studies have shown that there is an effect of infant massage on infant weight gain. This can be seen in the following table:

Table 1. Judgment results from the literature review

Year	Author	Research purposes	Method	The Result
2015	Rahayu Setyaningsih Kristiani Eka Prasetyo Asri Utami	The purpose: Of this study was to correlate of infant massage and motoric development in infants aged 1-12 months in District Pundungsari Bulu Sukoharjo.	This study was a non-experimental studies, correlation approach. This study was a non-experimental studies, correlation approach.	The research found that respondents do baby massage with continue and not continue and motoric development found delayed, normal and advance. After the test results obtained chi square $p < 0.000$ to $p < 0.0$. Of this study is infant massage correlate with motoric development in infants aged 1-12 months
2016	Dea Novinda Geovani	This study aimed to determine the effect of infact massage by mothers on growth and gross motor development of infants age 1-3 months old	This study was a quasi experimental with pretest-posttest control group design.	The results showed that baby massage by the mother affected gross motor development and baby's weight
2017	Yayah Rokayah dan Lisa Nurlatifah	To determine the effectiveness of baby massage on growth and development in infants aged 5-6 months	The type of research used is a quasi-experimental approach with a non-randomize pretest-posttest approach with a control group	The results showed that descriptively the average increase in growth (weight and length) and developmental progress (gross motor, language, fine motor, and social) was higher in the

			design.	intervention group than the control group. The results of statistical tests obtained a value ($p = 0.01$) so it can be said that baby massage has a positive impact on gross motor skills (0.37)..
2018	Suharto, Suriani, Arpandjam'an	For the effect of baby massage on improving gross motor and fine motor skills in infants aged 3-24 months	This type of research is a pre-experimental research with a one-group pre-test and post-test research design	The results showed that the ability to control the arms with a p value = 0.000, the ability to control the body with a p value = 0.001, the ability to control the legs obtained a p value = 0.004 and the finger coordination ability obtained a p value = 0.004 The conclusion of this study is that massage of infants aged 3 - 24 months has an effect on increasing the ability to control the arms, body, lower legs and finger coordination
2019	Marethalina	The purpose of this study was to determine the effect of infant massage on gross motor development in infants aged 3 - 12 months	Quantitative research method, quasi-experimental research type, with non-randomized pre and post controlled group design.	Based on the results of Fisher's test, it is known that the significance value (p -value) is $0.015 < 0.05$ as a predetermined level. Conclusion: There is a significant relationship between baby massage and gross motor development in infants aged 3-12 months.
2020	Yen, Risa Sanputri	The purpose of this study was to determine the effect of infant massage on gross motor development and infant weight gain.	This research is an experimental study with pre and post control group design	The results showed an increase in gross motor development of infants in the experimental group (60.6%) and control (9.1%) with a p value = 0.001, and an increase in infant weight in the experimental group with a median (1000 grams) and control (350 grams). grams) with $p=0.001$. This study can be concluded that baby massage has an effect on gross motor development and increased baby weight
2021	Ani T Prianti Darmi Mudyawati kamaruddin	The purpose of this study was to determine the effect of motor, mental and social on infants	The research method uses a pre-experimental design with a one group pretest and posttest research approach	The results obtained p -value $0.000 < 0.05$ which indicates that there is an effect of baby massage on motor development in infants 3-6 months.

Motor development at the time the baby is born to the age of 1 year occurs very quickly because at this age the development of brain cells is very rapid and also rapidly develops muscle strength from cranial to caudal which makes muscle tone symmetrical. Motor development depends on the loss of primitive reflexes and the appearance of postural reactions at 3 months of age (Bersntein & Shelov, 2017). In addition, at the age of 3 months and above, babies are able to receive stimulation and touch/massage the baby perfectly (Kusumasuti, 2016), neck control which has begun to mature (Rahayu, 2015). In this age range, nerve development is very rapid so massage is expected to help the baby's nervous maturation (Subakti & Anggraini, 2008). The most rapid weight gain

occurs at the age of the first 3 months since birth, which is around 700-1000 grams (Soetjiningsih & Ranuh, 2017).

Baby massage besides helping growth in increasing body weight can also provide benefits for gross motor development (Khusaiyah, 2018; Jin et al., 2007). The basic (physiological) mechanisms of infant massage include massage which increases the activity of the vagus nerve which affects the mechanism of food absorption, activity of the vagus nerve increases the volume of breast milk, the production of serotonin increases endurance, the release of neurochemical beta endorphins affects the growth mechanism, and massage will change the waves in the brain, this is what explains so that there will be gross motor development and an increase in baby weight (Widodo & Herawati, 2008; Guyton & Hall, 2016; Kalsum, 2014; Field et al., 2011).

Many studies have shown that infant massage provides enormous benefits for infant development, both physically and emotionally. Baby massage will stimulate an increase in vagus nerve activity which will lead to better absorption in the digestive system so that the baby will be hungry faster and breast milk will be better produced.

CONCLUSION

Based on the results of the study, it can be concluded that massage in infants can improve gross motor development. This is because massage that is carried out regularly on babies is used to massage the legs, abdomen, chest, hands, back, and stretching movements can improve gross motor development. This is because with the stimulation through touch good skin/light massage in infants will stimulate the brain's nerves to control motor activity so as to improve gross motor development. Based on the results of the study it was also concluded that there was an effect of massage on infants on the improvement of gross motor skills in infants.

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