

World's Healthiest Fast Food: Effects of Breastfeeding on Child Development

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Abstract

This research was conducted to determine whether or not breastfeeding has an effect on childhood development. It is important for mothers to know all of the possible effects breastfeeding could have on their children when they are deciding how they feed their infant which makes this research question important to almost all mothers. Many sources were found with varying views to help come to the conclusion that further research and tests are needed in order to answer the research question. There are many other factors such as socioeconomic status that must be taken into consideration when examining the effects of breastfeeding on a child. However, after reviewing the literature, I was able to come to the conclusion that breastfeeding is beneficial, even though it might not have a direct relation to enhanced child development. Breastfeeding is beneficial because of the longstanding idea that breast milk has health and nutritional benefits for the mother and baby. Based on studies and experiments that were included in the research, it is likely that breastfeeding has some sort of link to increased cognitive development rather than physical, social, or personality development.

Keywords: breastfeeding, cognitive, development, infancy, cohort

The Effects of Breastfeeding on Child Development

All around the world, mothers are encouraged to breastfeed their newborn babies for a variety of reasons whether it be for cultural purposes, health benefits to mothers, or nutritional benefits for the babies. However, it is not common knowledge whether or not breastfeeding impacts a child's development in any particular way. Children who are breastfed as infants could have significant advantages as they grow up like the ability to do better in school. Women who are unable to breastfeed or those who choose not to breastfeed could be putting their children at a significant developmental disadvantage. Researching these possibilities is important because it affects every person in some way and finding answers could influence the decisions of mothers to breastfeed their children.

Background

The research topic examined many aspects of child development as it relates to breastfeeding. Topics relating to child development are extremely important to understand because the knowledge is helpful in understanding why children develop the way they do and to what extent a parent can control this development. Breastfeeding and its relation to child development is a rising question in today's society as debates over what the best way to feed an infant is. Understanding words and concepts related to child development is important in order to understand the research conducted. Many of the research studies found were cohort studies which is a study of a group of people born around the same time in the same place (Feldman, 2018). Additionally, one specific study looks at the nurturing hypothesis which states that breastfeeding serves as a proxy for family socio-economic characteristics and parenting behaviours (Huang 2016). Lastly, most of the research relates breastfeeding to cognitive

development specifically, and cognitive development is, “the development involving the ways that growth and change in intellectual capabilities influence a person’s behavior” (Feldman, 2018, p. 4). This information led me to developing the following research question.

Research Question

The research question I chose to examine is whether or not breastfeeding has an effect on the development of a child. This question considers breastfeeding’s effects on physical, cognitive, social and personality development of children. I chose this topic because the effects of breastfeeding is a highly controversial and talked about question in today's society. Many women are encouraged to breastfeed their children by health care professionals and I chose this question in order to understand why and if there are other benefits that health care professionals are unaware of. Since it is common knowledge that breastfeeding helps the mother after pregnancy, I was curious to know the extent to which it affects the child. Additionally, I wanted to know if mothers who can not breastfeed or choose not to are putting their children at a significant disadvantage. This is an important research question because it is valuable information that can be used by almost all mothers when deciding to breastfeed their kids. Rather than breastfeeding because you're told to, this research allows moms to get an idea of the impact breastfeeding can have on a child even after their not being breastfed anymore.

Search Criteria

The first step for conducting research was to conduct a review of existing research in order to determine what has already been published concerning breastfeeding and child development. In order to find credible and reliable sources to use for my research, I used Longwood University's Greenwood library website. Also, I used Feldman's textbook on child development to define key terms and understand basic concepts relating to this topic. Before

reading the articles, I made sure they were peer reviewed in order to ensure it was a credible resource to use. Additionally, I made sure the articles were published within the most recent decade to ensure that the information was current and relevant to today's society. The key words I used to find articles related to my topics were “breastfeeding,” “child development,” “infancy,” and “cognitive development.” Quantitative research was the primary method of research that I used because I found many articles that dealt with numbers or quantities relating to breastfeeding and development. Most of the research I found were longitudinal studies because it's important to study these cases over a long period of time in order to get the most accurate information and results. Also, it's harder for a mother to remember how much she breastfed or when she stopped when you ask her later on in the child's development process which is why it is important to start early and keep track of breastfeeding and how the child develops as it's happening.

Literature Review

Throughout my research, I found many connections between the articles I read as well as many articles that contradicted each other. There were two main arguments throughout all of my articles. They either agreed that breastfeeding did have an effect on child development or said that there is not enough evidence to assume that it has an effect on child development. Each article I found looked at breastfeeding in a slightly different way whether it be looking at different ages of children, different lengths of breastfeeding or different effects of breastfeeding on child development. However, there were many relationships throughout the articles that can be used to help make stronger conclusions.

The first study I found was conducted to further research about whether or not breastfeeding affects children after 14 months since they had already found from a previous

study that breastfeeding showed an association with 14 month old mental development (Julvez, 2013). The study monitored how often a mother breastfeeds her child as well as the health and diet information about the mother from pregnancy until the child was four years old (Julvez, 2013). The study also took factors such as maternal IQ, level of education, and social class into account (Julvez, 2013). It found that full, long term breastfeeding was shown to have an independent association with neuropsychological development of children at 4 years old (Julvez, 2013). Maternal indicators of intelligence, psychopathology, and colostrum n3 fatty acids did not explain this association (Julvez, 2013).

The second source I found studies the nurturing hypothesis and breastfeeding impacts on a child's academic abilities and behavior problems (Huang, 2016). Specifically, they tried to find nutritioning and nurturing links from breastfeeding (Huang, 2016). It found that breastfeeding positively benefited children's academic abilities, but the behavior problems were due to other factors relating to the nurturing hypothesis such as socioeconomic status (Huang, 2016).

The next source I found examined what makes up breastmilk and if this had any relation to increased development. This source examined how infant development was affected by breastfeeding and how it relates to the “long-chain polyunsaturated fatty acids” (LCPUFA) that are in breast milk (Keim, 2012). The study examined LCPUFA in breast milk and formula given to neonates in the first four months after birth and then compared this to how they had developed by 12 months old (Keim, 2012). It found that neonates who were exclusively breastfed had more advanced development than formula fed neonates, however it did not correlate to the fatty acid concentration in the different milks (Keim, 2012).

Another interesting source related to this topic looked at multiple different studies and research to come to a conclusion about whether or not breastfeeding affects an infant's development (Rey, 2007). In comparison to the previous studies, this source made different conclusions and stated that it is uncertain whether or not breastfeeding affects cognitive development (Rey, 2007). The source states that it is more likely that intelligent women will breastfeed which produce more intelligent babies which is why many people think there is a direct link between development and breastfeeding (Rey, 2007). Although, it is still unclear whether or not breast milk has a direct effect on child development and more studies need to be conducted in order to come to a complete conclusion (Rey, 2007).

Similarly, the next source used data from two other studies to come to a conclusion about whether or not breastfeeding affects a child's cognitive development and their ability to do well in school (Huang, 2014). It analyzed data from the three waves of the Child Development Supplement (CDS) of the Panel Study of Income Dynamics (PSID) to review the theory that children who are breastfed have higher test scores (Huang, 2014). The data was collected from a range of different age groups of children whose families live in similar conditions and earn an average income of \$52,000 (Huang, 2014). It was concluded from this data that “the breastfeeding gap appears at a very early age and persists over time” (Huang, 2014, p. 6). It found that breastfeeding is associated with higher reading and math scores and that the gap in cognitive ability remains throughout childhood (Huang, 2014). The source states that “breastfeeding increases the AP and LW test score by about 3–3.5 points at age 3, and the PC score by 3.5 points at age 6” (Huang, 2014, p. 6). However, it found that breastfed and non-breastfed children have similar growth trajectories in test scores (Huang, 2014).

Another related source found contains a study that examines the effects of breastfeeding on cognitive development of infants (Sloan, 2010). The experiment tested mothers who breastfed for 19 weeks, four months, and not at all and compared the cognitive development of their infants (Sloan, 2010). Cognitive development was assessed using the Bayley Scales of Infant Development (Sloan, 2010). It found that the infants who were breastfed longer had higher cognitive development scores than children who were breastfed for a shorter period of time or not at all (Sloan, 2010). Mean cognitive scores were significantly higher in breast-fed infants (110) compared with formula-fed infants (105) (Sloan, 2010).

Lastly, the final source found is a breastfeeding review that contains information about the basics of breastfeeding and cognitive development in children (Tawia, 2013). The source includes data charts and examples of how different levels of breastfeeding affects a child's development such as their brain structure and educational achievement (Tawia, 2013). The source concludes that breastfeeding has a large effect on cognitive development and that the effects of not breastfeeding your child can be detrimental and has several negative impacts on their development (Tawia, 2013).

The biggest connection I found between the articles dealt with the nutrition and health factors associated with breastfeeding. In addition to examining the relationships between breastfeeding and development, the cohort study on full breastfeeding gave information about the nutritional benefits that breastfeeding has for children (Julvez, 2013). Similarly, the study that examined the nurturing hypothesis and how it relates to improved academic achievement included information about investigating nutritional benefits of breastfeeding (Huang 2016). Additionally, two other studies about breastfeeding and infant development talked about the

nutritional benefits of breastfeeding (Keim, 2012, Sloan 2010). All three articles agreed that although it is probable that breastfeeding has a correlation to better child development, breastfeeding has many nutritional and health benefits that mothers should take advantage of. Additionally, almost all of the sources found links to cognitive development, but many of the articles stated that breastfeeding your child leads to increased academic abilities and higher test scores (Huang, 2014, Huang, 2016, Tawia, 2013).

All of the sources that I examined investigated child development from a wide range of age groups. Many of the sources found that breastfeeding had a link to increased infant mental development (Keim, 2013, Rey, 2007, Sloan, 2010). In contrast, other sources found links between breastfeeding and development in school age children (Huang, 2014, Huang 2016) One article looked at both infants and school age children to come to their conclusions (Julvez, 2013). It is important that these sources looked at the development of many different age groups because child development lasts all the way until adolescence and it's important to see how breastfeeding could affect the entirety of child development. Additionally, it's interesting to see how the articles came to similar conclusions when they were investigating different age groups.

Limitations of Studies

There were a few limitations and concerns with the sources that were gathered. Only one of the sources I found included information about what makes up breastmilk and if this is linked to enhanced child development and found that it did not have any correlation (Keim, 2012). Since only one source was found with this information, it's hard to use this as reliable information without many different sources to back up the conclusion it made. Also, only two of the sources found took the mothers socioeconomic status into consideration when conducting

their research (Julvez, 2013, Huang, 2016). This is a major limitation because this has a huge impact on breastfeeding and child development and must be taken into account when conducting studies. In addition, most of the research found gave information about cognitive development and it was harder to find research that included other parts of development such as physical, personality or social. Lastly, only two of the articles looked at different women who breastfed for different amounts of time and concluded that the children of women who breastfed for the longest period of time had increased cognitive development (Sloan, 2010, Tawai, 2013).

Revisiting Question

Throughout the research process, the biggest take away from the variety of information is that views about this topic are divided. Some researchers believe that breastfeeding children is extremely important because their studies and research have shown that breastfeeding has an impact on a child's development in some way. However, other researchers have concluded that there is no significant evidence to assume that breastfeeding enhances a child's development. After looking at a variety of different opinions and studies, it seems that breastfeeding does have a positive impact on child development in some ways, even though they may not be as significant. With this information, it is important for mothers to consider breastfeeding their kids because of the nutrition and health benefits it's already known to provide, and also because of the possibility that breastfeeding will ultimately enhance a child's development.

For those who support the theory that breastfeeding impacts development, the results gathered from these researchers showed a significant impact on childrens' cognitive development and abilities to do well in school later on in their development. On the other hand, it was concluded from other sources that breastfeeding does not have a direct effect on child

development based on the research and experiments that they conducted. Additionally, the question is left unanswered in many articles whether or not breastfeeding affects child development. However, new studies and further research could disprove this theory.

Since the research contained evidence that supported both sides of the research question, it is difficult to say that the question is answered. There tends to be more evidence to support the fact that breastfeeding does enhance child development, however more research and tests need to be done in order to fully come to this conclusion. Specifically, the research finds links between breastfeeding and cognitive development. Overall, I learned from this research that although not fully proven, breastfeeding has the potential to have significant positive effects on child development and there should be further research about the topic to come closer to a conclusion.

Future Research

While conducting this research, many other questions arose that could be used for future research. Since there are so many other factors that can influence a mother's breastmilk or a child's development, it's important to research these further questions in order to understand the extent of how breastfeeding affects a child while taking these factors into account. For example, noting whether or not a mother has breastfed in a previous pregnancy is important because it could affect the breast milk in a future pregnancy. Examining the effect of how long during a child's life a mother decides to breastfeed is important to research as well. Also, it's important to note a mother's socioeconomic status because this can influence a child's development because of the lack of proper nutrition, healthcare, and access to certain resources. Another aspect to consider that could help understand the effects of breastfeeding is how preterm or postmature children are impacted by breastfeeding. Studying this topic could help to understand the benefits of breastfeeding as a whole. Additionally, it's important to research how a mother's age, medical

history, genetic history, and cultural background affects their breastmilk or the baby's development. Lastly, it's important to research the effects of breastfeeding on the entirety of a child's development rather than just its younger years. It would be interesting to see if breastfeeding a baby affects them later on in their development.

Conclusion

In conclusion, it is still uncertain whether or not breastfeeding has an effect on child development. Although research leans towards supporting this theory, there is not enough evidence to make it a fact that breastfeeding is the direct cause of better child development. With more research and tests, it is more likely that researchers would be able to find more evidence to support the theory. Further research is also necessary in order to understand the variety of other factors that influence child development that could be related to breastfeeding. Taking everything into consideration, it is still important to encourage women to breastfeed because of the health and nutritional benefits as well as with the possibility of enhanced child development. However, there isn't enough research and evidence to prove that if you do not breastfeed, it would hurt the child.

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