

# **The Effects of Breastfeeding on Childhood Obesity**- Created by Emma Bennett.

Based upon the research question- “Does breastfeeding infants from birth till 6 months of age reduce the likelihood of them developing childhood obesity before 6 years of age?”

## **Introduction**

Within New Zealand over the past two decades, obesity has reached epidemic proportions. While on my Primary Health Placement in Lawrence, breastfeeding education would often be provided by the Registered Nurses within the rural setting. For my own personal knowledge regarding breastfeeding, I did some research on the positives and negatives both breastfeeding and bottle-feeding have on the health of a baby. A strong theory which was portrayed throughout the research was that breastfeeding was beneficial as it presented as a preventative measure for childhood obesity. This theory gave me a starting point to develop a research question which then allowed me to develop my literature review. Developing a literature review posed as an excellent opportunity to evaluate the current research available regarding the effects of breastfeeding on childhood obesity, and finally allowed me to develop my recommendations which will ensure that mothers, families and babies are provided with patient-centred evidence based nursing practice.

## **Results from Literature Review**

### Metabolic imprinting

Formula milk often has 70% high concentrations of protein compared to that of natural breast milk. Greater intakes of protein may influence the development of childhood obesity through the need for higher concentrations of insulin within the body. Programming of higher long-term insulin concentrations has been linked to the development of insulin resistance within children (Singhal & Lanigan, 2007).

### Behavioural Programming

Naturally an infant is able to self-regulate their energy intake while breastfeeding. For mothers who formulae feed their babies, they often do so at specific times of the day and upon routine. They also encourage the infant to consume a large quantity of milk by encouraging an infant to finish a bottle, overriding the child's appetite signals. Breastfeeding encourages the child to adopt healthy dietary and lifestyle choices, while teaching the child to self-regulate their consumption (Singhal & Lanigan, 2007).

### Duration of Breastfeeding

The duration for which an infant is breastfeed postpartum is having significant effects on the prevalence of obese and overweight toddlers (Anderson, Hayes and Chock, 2013). This was also supported by Weyermann, Rothenbacher and Brenner (2006) who found that children which were breastfed for six months compared to that of three months had a strong decrease in the risk of developing childhood obesity.

### Lifestyle of the family

Huss, Ludvigsson, Enskar and Ludvigsson (2008) found the same common trend between childhood obesity and exclusive breastfeeding as Weyermann et al (2006) and Anderson et al (2013). But believed that the association did not remain statistically significant when other factors such as parental smoking, education, and parental country of birth, civil status, parental wage and mother's gestational weight were included in the analysis. These factors commonly influences the lifestyle the family live and the socio-economic status they withhold.

## **Nursing recommendations**

- Ensure healthcare professionals are providing person-centred and whanau-focused breastfeeding education to mothers and families.
- Encouraging mothers within a clinical setting to initiate breastfeeding within the first hour postpartum.

## **Conclusion**

Through implementing these two recommendations along with the information stated during the literature review I believe as healthcare professionals, we can be having a positive influence on the increasing prevalence of child obesity within New Zealand. From the research previously been conducted, we can confidently suggest that exclusive breastfeeding for the first 6 months of a baby's life will have positive influences on their health later in life. Ensuring we are providing effective evidence-based information, using patient-centred and whanau focussed models, we are ensuring that mothers and families have a better chance of initiating breastfeeding and providing breastfeeding for longer durations.

## **References**

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Figure 1. Breastfeeding vs Bottle feeding Mothers (Riverside, 2016)



## Rationale- breastfeeding/obesity

Developing a poster ensures that information provided will be targeting both visual learners and individuals who learn best through reading. Education regarding obesity needs to begin at childhood, so developing a poster with appealing colours, written in user friendly language and displayed in locations accessible by children would be essential to begin this education process. It was also important to maintain the formalities that would target an older audience such as appropriate headings while providing information which they are able to relate too through personal experiences.

The poster I created was designed to target health care providers, children and parents of expecting children. It was created as a primary prevention method which will educate parents on the importance of encouraging breastfeeding postpartum, in order to reduce the chances of their child developing childhood obesity. It was also aimed at primary health care workers, as it provides information on effective education methods which will benefit the future health of adolescents.

According to Jackson and Sheldon (2010) a poster serves as a storyboard to share information in a succinct way. Posters broadly publicise findings to a variety of people. This enables information to be expressed to my targeted wider population while addressing all socio-economic group within an extended community. This can range from health professionals, parents, children and extended family of the expecting mother. Extending this public health message means that a greater number of people are being educated on the benefits of breastfeeding and its effects on reducing childhood obesity for children later in life.

Jackson , K ., & Sheldon , L . ( 2000 ). Demystifying the academic aura: Preparing a poster . Nurse Researcher, 7( 3 ), 70 – 73 .

PECOT category	Information relating to question	Explanation
Population	The population I am considering is children between the ages of 0- 6 years old. Along with those who were, and were not breastfed for the first 6 months postpartum.	Breastfeeding infants up until the age of 6 months tends to be the main time period influencing the development of childhood obesity. Children breastfeed up until the age of 6 years are nearly 3 times more at risk of becoming obese or overweight than a child younger than 4. Reviewing children up until the age of 6 allows us a timeframe long enough to see the effects of childhood obesity.
Exposure (intervention)	Children who were breastfed for the first 6 months and yet developed childhood obesity by the age of 6 years	I will be looking for articles which who used research from both infants who were brought up on breastmilk compared to those who were brought up on formulae milk. And looking for correlating weights/BMI relationships between both experiments.
Comparison/ control	Children who were breastfed for the first 6 months of their life while maintaining a healthy BMI till 6 years old.	I wanted to see the results from the predicted healthy weights of children who were breast feed and compare them to children who weren't breastfeed and see if there is a tendency for weight gain.
Outcome	Either the a child maintains a healthy weight or they develop childhood obesity determined by their BMI weight	Our outcome is to see if breastfeeding your child from birth for 6 months reduces the chance of them developing childhood obesity before the age of 6 years.
Time	From the day of birth until the child is 6 years old.	Children breastfeed up until the age of 6 years are nearly 3 times more at risk of becoming obese or overweight than a child younger than 4. Reviewing children up until the age of 6 allows us a timeframe long enough to see the effects of childhood obesity.

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