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BREASTFEEDING AND IT'S RELATION TO THE WEIGHT OF CHILDREN FROM 3 TO 6 YEAR OLD IN AL-HASSA

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ABSTRACT

Background: Obesity is defined as excessive accumulation of fatty tissue that can hinder the effective functioning of the human body. As a result, health problems may ensue, leading to a poor quality of life and decreased lifespan. When seen in childhood, the issues of obesity can be far more extensive, as health problems occur earlier in life and place a burden on the child, family, community and health care system. **Aim:** To investigate the relationship between breast-feeding and obesity in children in Al-hassa and to see if the breast-feeding protects children from obesity. **Methods:** Questionnaires were self-administrated to mothers of children between age from 3-6 years in Al-hassa, and the researcher went to kindergartens to mugger current weight and height of children. **Result:** 100 (71.43%)respondents mother are considered valid for analysis. the major type of feeding is breast and formula feeding in the same time(57% of children). the result showed no significant difference of breast feeding on the prevalence of being overweight or obese in children from 3- 6 years old (P value>0.05). The prevalence of obesity and overweight is 9% among 3to 6 year children. **Conclusion:** this study indicated that the breastfeeding did not affect the weight of the children.

KEYWORDS: breast-feeding, formula feeding, BMI.

INTRODUCTION

Breast-feeding provides many health benefits for both baby and mother.[1] It helps a woman to lose weight after birth and return uterus to its normal size more quickly. Breastfeeding is the ideal nutrition for infants. It has the perfect mix of vitamins, protein. And it's all provided in a form more easily digested than infant formula. Breast milk contains antibodies that help

baby fight off bacteria and viruses. Also, children who were breast-fed are significantly less likely to become obese later in childhood.[1]

Children who are obese are likely to be obese as adults, with shorter lifespan of five years. The first problems to occur in obese children are usually emotional or psychological[2], also life-threatening conditions including diabetes[3,4] high blood pressure[5], heart disease, sleep problems, cancer, and other disorders.[6,7]

In the last few years the relationship between breast-feeding and children obesity has been a major focus of interest. Since 2000, sixteen studies on this issue have been published, some have found relationship, while other not.

One of the studies which were conducted in southern Germany on1999 showed the prevalence of obesity in children who had never been breast fed was 4.5% as compared with 2.8% in breastfed children. breast feeding remained a significant protective factor against the development of obesity and being overweight.[8]

another study that conducted At age 4 years in USA ON 2004 showed the prevalence of obesity was 11.5%. Only 16% of children were breast-fed 8 weeks or longer. Breast-feeding was associated with a reduced risk of obesity only in white children whose mothers had not smoked in pregnancy.[9]

new study on this year 2013 in Japan that showed under some factor ,the breast feeding at 6 to 7 months of age was associated with decreased risk of overweight and obesity compared with formula feeding. The adjusted odd ratio were 0.85 and 0.55 for overweight and obesity, respectively, at 7 years of age. Similar result were observed at 8 years of age.[10]

in this reach ask: Dose breastfeeding lowers the risk of obesity in children from 3 to 6 years old in Alhassa ?

Literature review

The effect of genetics factors in childhood obesity

According to Claudio Maffeis in Aetiology of overweight and obesity in children and adolescents, Which recorded in August 2000, The Available evidence of this study suggests that, obesity results from multiple interactions between genes and environment. Parents obesity is the most important risk factor for childhood obesity. Studies indicated that

inheritance is able to account for 25% to 40% of inter-individual difference in adiposity. In most cases, genes involved in weight gain do not directly cause obesity but they increase the susceptibility to fat gain in subjects exposed to a specific environment.

Effect of the formula feeding on childhood obesity

According to the study In Canada On 2012 showed, formula fed babies are more likely to be overfed and obese than breast fed babies. Formula has a higher amounts of protein which has many calories that make baby at high risk to being overweight as infant and also as they grow older compared to breast milk protein. Formula milk also can increase plasma insulin levels of baby which lead to stimulate disposition of adipose tissue in the body. This adipose tissue can stores fat. These higher insulin levels are also associated with an increased rate of Type 2 diabetes later in life. So Continue to give milk to children adds extra calories to their diet, which increases the possibility of later obesity.

fast food and child obesity

the result of previous research for children ate more fast food compared with without show similar result. Children are exposed to those unhealthy food choices have higher chance to gain weight According to the Department of Health Policy & Management, Columbia Mailman School of Public Health, New York. They found the consumption more total energy, more total fat, more carbohydrate and sugar, less fiber and fruit. So, the consumption of fast food among children increase risk of obesity.

Effect of the lifestyle and electric games on childhood obesity

According to the study that conducted by Jennifer Warner on 2004 July 2, In this study explained the relation between the lifestyle and childhood obesity. children who spend a lot of time playing video games, watching TV and have physical inactivity are more likely to be obese. On the contrary, children who are doing physical activities and eating breakfast have lower risk of childhood obesity. Another study that done on 2012 May 4, by Mayo Clinic staff showed, The best chance to get a healthy weight is eating a healthy diet and exercising more. Physical activities is a critical part of weight loss. It is not only burns calories but also builds strong bones and muscles and helps children sleep well at night. A way to increase children physical activity is limitation of video games and TV times to no more than 2 hours a day. Also, there is study on2010 September 22, by Jessica Schorr Saxa that showed Physicians and lay people who recognize the fact of the relation between the children lifestyle and obesity often respond with exhortations about the need to educate the public about good

nutrition, physical activity, and limits on screen time.

Effect of physical activity on obesity

There are factors that protect children from obesity, in addition to breastfeeding, such as physical activity.

Increase children's activity level begin as early as four years of age may be helpful in preventing obesity. Mo-Suwan describe an intervention involving 300 pre-school children participated in a 15 minute walk before nursery school and a 20 minute dance routine after their afternoon sleep, 3/week. This study showed a near-significant decrease in triceps skin folds over time in children who had exceeded the 95th percentile. Thus, there is some evidence that organised physical activity even in children aged four years, can be helpful in preventing or treating obesity. Moreover, relatively simple activities, such as short walks, even in this age group, appear to contribute to a reduction in obesity.

Behavioral and Psychological Factors and child Obesity

According to Lancaster General Neuropsychology Specialists

Jennifer C. study in 2009 which shows that, The etiological basis of eating disorders and obesity usually lies in some combination of psychosocial, environmental, and genetic or biological attributes. Individuals who suffer from psychological disorders (e.g. depression and anxiety) may have more difficulty controlling their consumption of food, exercising an adequate amount, and maintaining a healthy weight.

So Psychological and behavioral issues play significant roles in both the development and consequences of obesity.

METHOD

Study design

The research method is using a descriptive study which is collecting information without changing the environment (i.e., nothing is manipulated), a descriptive study can provide information about the naturally occurring health status, behavior, attitudes or other characteristics of a particular group. Descriptive studies are also conducted to demonstrate associations or relationships between things in the world around us. Descriptive studies can involve a one-time interaction with groups of people (cross-sectional study).

Data collection and analysis

It was random sampling, it was taken from a two kindergartens (Al-Nour kindergarten and Al-Qara), the questionnaires were given to the mothers, sample size was 100 child from the age of 3 to 6 years old.statistically analysis done by using SPSS program.

RESULTS

The overall response rate to the questionnaire was 71.6%. A total of 100 questionnaires were completed for 4 to 6 years old children.

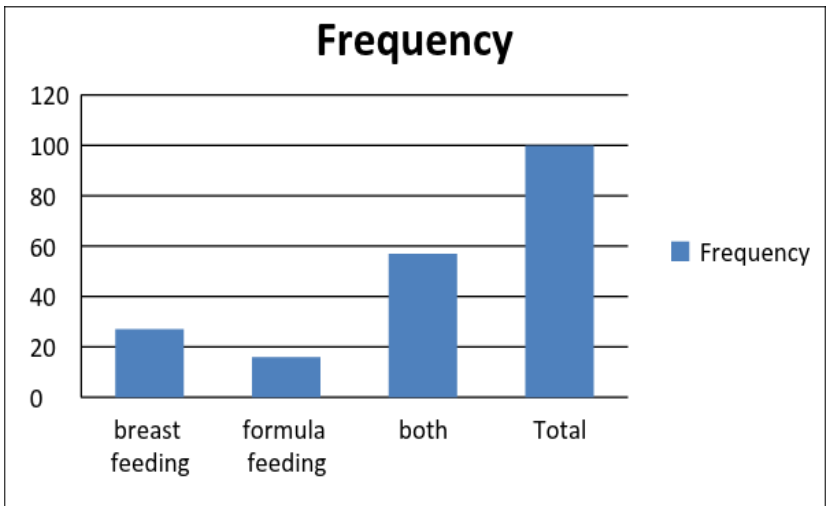

Chart 1: frequency of type of feeding at birth in children.

The above chart shows 27 of children had breast fed, 16 children had formula feeding, and 57 children had both breast and formula feeding in the same time.

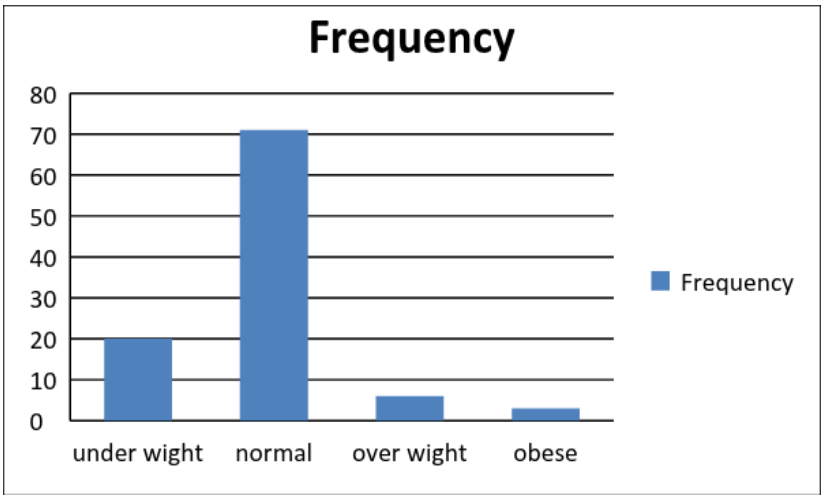

Chart 2: frequency of body state in children.

From the chart, 20 of children are under weight, 16 of children are normal weight, 6 children are overweight, and 3 children are obese.

Relation between type of feeding and body state among 3 to 6 years olds children.

It shows 27% of children had breast fed (29.6% of them are under weight, 63% are normal 3.7% are overweight and 3.7% are obese).

16% had formula feeding (31.3% of them are underweight, 62.5% are normal, and 6.25% are obese).

57% had both breast and formula feeding in the same time (12.3% of them under weight, 77.2 % are normal, 8.8% are overweight, and 1.75% are obese).

The above data shows no significant difference P value (>0.05) of breast feeding on the prevalence of being overweight or obese in children from 3- 6 years old.

Relation between other risk factorS "other than breastfeeding" and body state.

the relation of other risk factor "other than breastfeeding" 35 children are spend more than 3 hours on TV & electronics and lot of them are (28 children) normal body state. 20 children are physical very active. 12 children are normal state, 83 children are Skip meal, 7 are chronic disease "7% of sample". 10 children have Inherited obesity, 3 only are overweight and obese. 18 children have inherited thinness. 8 children only Psychological problem. 2 children have big appetite, 85 children have normal appetite, 13 have no appetite.

DISCUSSION

It showed that majority of participants had feed their children breast and formula milk at the same time. However the breast feeding don't have the protective effect from the risk of obesity on the childhood (P>0.05). research which is done in the 1958 birth cohort, show no protective effect of breast feeding on obesity. Another study also evidence the Breastfeeding has many benefits but it did not prevent obesity or overweight in the children who had been breastfed. instead of previous study in literature review which confirm the effect of breast feeding in lower the risk of overweight and obesity in the children.

Maybe these studies depend on other factor that help the breast feeding to show their effect in BMI, effect of breast feeding may be limited to a specific period or depend on other cofactors.

CONCLUSION

This research study the relation between the breast feeding and obesity in children between the age of 3 to 6 years old.

It shows that breastfeeding did not affect the children's weight, there are other factors affect the weight status of children such as physical activity, familial life style.

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