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# Short-Term Memory of Preschool Children and Breastfeeding Duration (Comparative Study)

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**ABSTRACT:**

This research aimed to investigate the benefits of breastfeeding on short-term memory in preschool children and to identify differences in short-term memory between breastfed children based on gender and age. The researchers followed a causal-comparative approach, conducting a cross-sectional study between two groups of children. The study sample consisted of 32 children, divided into two groups: a breastfed group of 17 children who were breastfed for two years, and a formula-fed group of 15 children. The Stanford-Binet Intelligence Scale-4 (SBSI-4) was applied to all participants to measure short-term memory. Data were analyzed using the (SPSS) program, using independent samples t-tests and paired samples t-tests. The results showed statistically significant differences ($p < 0.000$) in mean short-term memory scores between the preschool children, favoring the group of children who were breastfed for two years. There are statistically significant differences ($p < 0.000$) in the mean short-term memory test scores among breastfed children, according to the age variable, favoring the 5-6 year group. However, there are no statistically significant differences in the mean short-term memory test scores among breastfed children according to the gender variable. Based on these findings, the researchers offer several recommendations, most importantly: encouraging mothers to breastfeed their children for as long as possible during the first two years to give the child the optimal opportunity for brain development, which in turn promotes the development of psychological and cognitive traits, including memory.

Keywords: short-term memory, breastfeeding, alternative feeding.

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**مستخلص :**

هدف هذ البحث إلى الكشف عن فوائد الرضاعة الطبيعية على الذاكرة قصيرة المدى لدى أطفال ما قبل المدرسة، ومعرفة الفروق بين الأطفال الذين رضعوا رضاعة طبيعية في الذاكرة قصيرة المدى وفقًا لمتغيري الجنس والعمر، اتبع الباحثان منهج الدراسات السببية المقارنة من خلال دراسة مقطعية بين مجموعتين من الأطفال و تألفت عينة الدراسة من 32 طفلاً، قُسِّموا إلى مجموعتين: مجموعة الرضاعة الطبيعية، التي ضمت 17 طفلاً رضعوا رضاعة طبيعية لمدة عامين، ومجموعة التغذية البديلة، التي ضمت 15 طفلاً. طبق عليهم مقياس مدى الأرقام لقياس الذاكرة قصيرة المدى، وهو أحد مكونات مقياس ستانفورد بينيه للذكاء(SBSI–4) ، وتم تحليل البيانات باستخدام برنامج(SPSS) باستخدام اختبار(ت) لعينتين مستقلتين واختبار (ت) لعينتين مرتبطتين وأظهرت النتائج أنه يوجد فروقًا ذات دلالة إحصائية ($p < 0.000$) في متوسط درجات الذاكرة قصيرة المدى بين أطفال ما قبل المدرسة، لصالح مجموعة الأطفال الذين رضعوا رضاعة طبيعية لمدة عامين. توجد فروق ذات دلالة إحصائية ($p < 0.000$) في متوسط درجات اختبار الذاكرة قصيرة المدى بين الأطفال الذين يرضعون رضاعة طبيعية، وذلك وفقًا لمتغير العمر لصالح المجموعة (5–6 سنوات). بينما لا توجد فروق ذات دلالة إحصائية في متوسط درجات اختبار الذاكرة قصيرة المدى بين الأطفال الذين يرضعون رضاعة طبيعية وفقًا لمتغير الجنس. وبناءً على النتائج التى تم التوصل اليها قدم الباحثان بعض التوصيات والمقترحات أهمها: حث الأمهات على إرضاع أطفالهن رضاعة طبيعية لأطول فترة ممكنة خلال السنتين الأوليين، لكي يحظى الطفل بالفرصة المثلى لنمو الدماغ، مما يُعزز بدوره في نمو السمات النفسية والمعرفية، بما في ذلك الذاكرة.

الكلمات المفتاحية: الذاكرة قصيرة المدى، الرضاعة الطبيعية، التغذية البديلة.

## Introduction:

Breastfeeding is considered as the best, safest, and most beneficial method for both the newborn and the mother, especially during the first six months of the newborn's life. Studies have proven the importance of breastfeeding from the first day of infant life; therefore, many health organizations worldwide recommend exclusive breastfeeding of infants (السيد، 2006). Associations with full-scale IQ of children at ages 8 and 15 years, as well as the components of IQ, and the other phenotypes that were strongly related to having been breastfed for 6 months (Golding et al., 2005)

Breastfeeding plays a vital role in the child's mental, physical, and emotional development.

This study aimed to investigate the benefit of breastfeeding on the short-term memory of a sample of preschool Sudanese children, and to determine whether the impact of breastfeeding differs according to variables of sex and age of children.

## Research Problem:

The problem is exploring the benefit of breastfeeding on the short-term memory of preschool children, also investigating whether there are differences in short-term memory among breastfed children according to variables of sex and age of children. We formulated a research problem in the following questions: 1. Are there statistically significant differences in short-term memory between the group of children who were breastfed for two years and the group of children fed alternatively? 2. Are there statistically significant differences in short-term memory between breastfed children according to variables of sex or age of children? 3. Are there statistically significant differences in short-term memory between breastfed children according to variables of age of the children?

## Research Objectives:

The objectives were identified as follows:

1. Differences in short-term memory between the breastfed children group and the alternative feeding children group.

2. Differences in short-term memory between breastfed children according to the variables of sex and age.

**Research Hypotheses:**

1. There are statistically significant differences in the mean short-term memory scores between the children who were breastfed for two years and the alternative feeding children group.

2. There are statistically significant differences in the means of short-term memory scores between breastfed children according to the variable of children's age.

3. There are statistically significant differences in the mean of short-term memory scores between breastfed children according to the variable of children's sex.

**Research terms**:

**Short-term memory:**

(the memory that can hold information in a temporary form that can be manipulated and updated) Norris, D. (2017)

Procedurally defined (the scores of the sample members on the digit span test, Stanford-Binet Intelligence Scale- 4 (SBSI-4) which was used in the research

**Breastfeeding**:

(which is defined by breastmilk as the only source of sustenance ) Krol and Grossmann, 2018)

**Research specifications:**

This research was conducted in Jabal Awliya district in Khartoum State, in the year 2023, the participants are preschool children in Al-Yaqeen Kindergarten in Al-Fath Al-Aqliyeen City and Al-Jumruk Kindergarten in Al-Kalakla East

**Theoretical Framework and Previous Studies:**

**Literature review :**

**Short-term memory:**

Generally, memory is a cognitive mental process that stores and retains information, experiences, and various situations that a person encounters or learns. The retrieval and recall of this information serve the awareness of the person. Memory functions retrieve the required information after a period of

time, whether long or short. Remembering is the retrieval of elements, topics, and their associated past experiences. Therefore, the process of remembering focuses on recognizing past experiences, and the main function of memory is to retrieve events and situations that an individual has previously encountered. Thus, remembering is considered a complex mental process (الشرقاوي، 2003). The short-term memory refers to a similar concept, called working memory, which is a type of memory used when we want to recall information briefly for reflection (Engle et al., 1999).

**The function of Short-term memory:**

Sometimes short-term memory is also called (working memory) because it receives information from sensory memory, encodes and processes it initially, and makes decisions about whether to use it, discard it, or transfer it to long-term memory for permanent retention. Besides that, it receives information from long-term memory and processes it, extracting meaning, connecting and organizing it, and converting it into a memory function (الزغلول، 2002). Short-term memory receives only the information that is being attended to. Short-term memory capacity is limited, ranging from 5 to 9 units of information, with an average of 7 units. Short-term memory represents the conscious aspect in the cognitive system, and information is retained for a very short period, not exceeding 30 seconds. The concept of short-term memory is one of the oldest and most widely accepted ideas about memory, it differs from long-term memory, this distinction of memory formation systems appear in research of brain injury by Baddley and Hitch (1974), they found that short-term memory remained functional even when long-term memory suffered significant impairment, this clearly indicating that the brain regions responsible for each type of memory differ in their underlying neural mechanisms. Later, the experimental studies conducted on animals confirmed that (Squire et al., 1993).

Short-term memory is the second stage where some information received from sensory memory to store. It serves as a temporary storage repository where information is retained for a time period ranging from 5 to 30 seconds. Information entering this memory undergoes changes and transformations, being represented differently than it is in sensory memory.

**The importance of short-term memory:**

Short-term memory is considered one of the fundamental mental abilities for every individual; necessarily, no cognitive process can occur without it. It is crucial for receiving new information and environmental stimuli related to an

individual's perception of environmental elements. It is also essential for retrieving information and experiences from long-term memory, allowing its components to be linked to perceived events within the processes of thinking and analysis. Therefore, psychology should generally focus on short-term memory in all individuals, working to strengthen and enhance it, and studying the factors that influence it, especially during early childhood, including breastfeeding.

**Breastfeeding:**

Breastfeeding is the complete reliance of the infant on breast milk without any supplements from birth. It typically continues for up to two years of age, and may be exclusive for most of the first year, then supplemented with other foods for the remainder of the two years. Breastfeeding is the process of feeding an infant from the mother's milk from birth to two years (weaning). It provides both nutritional and emotional fulfillment for the child, offering nourishment, care, and affection during the breastfeeding period (الزغلول والزغلول، 2002). Breastfeeding is mentioned in the Holy Quran in the verse: "And We have enjoined upon man [care] for his parents. His mother carried him, [increasing her] weakness upon weakness, and his weaning is in two years. Be grateful to Me and to your parents; to Me is the [final] destination." (سورة لقمان، الأية 14). It is also mentioned in Surah Al-Baqarah, verse 233: "Mothers shall breastfeed their children for two full years for whoever wishes to complete the nursing period." (سورة البقرة، الأية 233)Thus, breastfeeding is for two full years for those who wish to complete it.

**Benefits of breastfeeding:**

Breastfeeding is not merely satisfying a physiological need, but rather a comprehensive psychosocial situation involving both the infant and the mother. It is the first opportunity for social interaction between the two (سولسو، 2000). If a mother decides or is forced to use formula feeding, it should be considered that this should be a supplement and not the sole method of feeding whenever possible. There are cases where breastfeeding is contraindicated for the infant, such as when there is no milk in the breasts, and the mother has an illness that would be exacerbated by breastfeeding or harm the infant. In such cases, there is no alternative to formula feeding (المشاغبة، 2012). Breastfeeding also benefits mothers through; derives pleasure from knowing that she is the source of her child's nourishment, besides physical and psychological benefits which come from breastfeeding. It is known that breastfeeding helps the uterus contract to its normal size. Furthermore, it saves the mother the effort of preparing formula,

and she is reassured by the hygienic conditions provided by breastfeeding. Through breastfeeding, the mother can also understand her newborn, who clings to her breast, and the relationship between them is strengthened (الفلسفي، 2008).

Exclusive breastfeeding during the first year of life is positively associated with improved memory skills, early language acquisition, and motor skills at 18 months of age. These developmental benefits continue into late childhood and adolescence (Leventakou et al., 2015). The benefits of breastfeeding on cognitive abilities persist into late childhood, as it has been positively associated with increased intelligence, academic achievement, and income level at age 30, as well as with reading ability at age 53 (Victora et al., 2015; Richards et al., 2002).

Immediately breastfeeding, which occurs after birth giving plays a significant role in reducing the risk of intellectual disability in newborns. This is demonstrated by a clinical study comparing breastfeeding history with a diagnosis of specific language impairment in typically developing children compared to children who were breastfed for a shorter period (Diepeveen et al., 2017). These findings lead to a negative correlation between breastfeeding and intellectual disabilities. There is a link between early alternative feeding and the diagnosis of certain intellectual disabilities. Research from various countries has linked breastfeeding to cognitive development later in life, including improved memory, language skills, and intelligence (Mortensen et al., 2002; Oddy et al., 2002).

In addition to the benefits of breastfeeding for a child's cognitive development, it also benefits their social and emotional development. Conversely, formula feeding is associated with numerous psychological and health problems, such as increased susceptibility to infectious diseases, allergies, and weakened immunity. The child may also experience emotional instability. While breastfeeding has many advantages and is important, its benefits are countless, far surpassing those of formula feeding. Formula feeding, on the other hand, carries numerous risks that affect both the child and the mother (مختصي، 2015).

Breastfeeding advantages is very important for humanity, but unfortunately, only 37% of infants over six months old around the world are breastfed, while the rest are fed by alternatives or formula. The duration of breastfeeding is shorter in wealthy countries compared to poorer countries, with some exceptions. Breastfeeding offers lifelong protection for mothers against breast cancer, aids in family planning (birth spacing), and protects against ovarian cancer and type 2 diabetes. In this way, breastfeeding can prevent the deaths of 823,000 children

worldwide annually by the age of five, and can prevent the deaths of 20,000 mothers from breast cancer. These survival opportunities are equal in both poor and wealthy countries (Victora et al., 2016).

One might ask what makes breastfeeding so beneficial for a child's cognitive development. The warm communication and physical contact between newborn and mother satisfy the needs of both mother and newborn, leading them to maintain their mental health, leading them to healthy selves and bodies. Besides the factor related to the nutritional composition of mother breast milk, specifically the presence of nearly exclusive long-chain polyunsaturated fatty acids (LC-PUFAs), including docosahexaenoic acid (DHA) and arachidonic acid (ARA). These two elements are found in breast milk and are generally absent in formula. They contribute to the healthy neurological development of myelin cells, which occurs during the first 18 months of life. Newborns produce a small amount of DHA during the first two weeks of life but are unable to produce sufficient quantities until around six months of age. This clearly indicates the importance of breastfeeding, as breast milk provides essential LC-PUFAs for the newborn's psychological, cognitive, and neurological development (Krol and Grossmann, 2018).

**Previous Studies:**

1. Golding, et al. (2025)

*"Associations between Duration of Breastfeeding and Neurocognitive Development of the Offspring"*

The study compared children who were breastfed for at least six months with children who had never been breastfed concerning 373 different neurocognitive outcomes measured from infancy to late adolescence using data collected by the Avon Longitudinal Study of Parents and Children. They examined unadjusted regression associations and selected 152 of the 373 variables where the P-value for comparison between the two groups was $P<0.0001$. These 152 outcomes were then adjusted for seven social and other factors, revealing 42 outcomes with adjusted associations at $P<0.001$: specifically, these included associations with full-scale IQ at ages 8 and 15 years, as well as the components of IQ.

2. Lee, et al. (2016):

*Effect of Breastfeeding Duration on Cognitive Development in Infants: 3-Year Follow-up Study*

This study investigated the link between breastfeeding duration and the continuity of cognitive development in infants up to three years of age. It was a follow-up study conducted in Korea, beginning in 2006, and included 697 infants aged 12-14 months and 36 months. The Infant Growth Scale was used, and the duration of breastfeeding and formula feeding was measured. The relationship between breastfeeding and cognitive development was analyzed using multiple linear regression. The results revealed a significant positive correlation between breastfeeding duration and cognitive development. Furthermore, statistically significant differences were found in cognitive development between infants who were breastfed for more than nine months compared to those who were breastfed for only one month. These findings confirm that longer breastfeeding duration improves cognitive development in infants.

3. Cable, et al. (2011);

*"Gender differences in the effect of breastfeeding on adult psychological well-being"*

The study investigated psychological well-being in adults according to breastfeeding in childhood. The sample of study consisted of 13509 cases born between 1958 -1970. The researchers defined adult psychological well-being in terms of measures of emotional distress and self-efficacy. The researchers used path analysis to test life-course pathways between breastfeeding and adult psychological well-being independent of socio-demographic factors at birth and the childhood role psychosocial adjustment. The results indicated that being breastfed indirectly contributed to adult psychological well-being among women through the pathway from childhood psychosocial adjustment. Whereas, being breastfed was not associated with psychological outcomes among men. The findings suggest that being breastfed can be important for women's psychological well-being throughout the life course.

4. Kramer, et al. (2008):

*"Breastfeeding and Child Cognitive Development—New Evidence from a Large Randomized Trial"*

The study investigated the effect of exclusive or continuous breastfeeding on improving the cognitive abilities of children up to 6.5 years of age. A nine-year follow-up study was conducted, which consisted of 13,889 children. Collected data included: IQ scores, academic achievement, reading, writing, and arithmetic. The results revealed an increase in verbal IQ scores ranging from 7-14 points, practical IQ scores ranging from 3-7 points, and overall IQ scores

ranging from 2-6 points. There was also an increase in reading and writing achievement in the experimental group.

5. Abul-Fadl, et al. (2005):

*"The Psychological Benefits of Continued Breastfeeding into the Second Year for Mother and Child"*

The study explored the effect of continued breastfeeding on the cognitive and emotional development of children. The study sample consisted of 150 children and their mothers (couples), with an age range of 18-24 months. Sixty of the children continued breastfeeding for two years, while the other sixty discontinued breastfeeding after one year. Depression and anxiety were measured in the mothers, while the children's developmental and behavioral indicators were assessed. The results showed that cognitive development and normal behavioral patterns were higher in children who continued breastfeeding for the second year compared to those who discontinued breastfeeding in the first year. However, mothers developed higher anxiety for those who discontinued breastfeeding after one year, while depression was higher in those who continued breastfeeding for the second year.

**Methodology and Procedures:**

**Methodology:**

The current research adopted the Casual Comparative Research method, which studies differences between groups. The basis of the Casual Comparative Research approach is to begin with noticeable differences between two groups, then search for the possible causes or consequences of these differences. Casual Comparative Research studies are conducted as an alternative to experiments.

**Society and participants:**

**Society:**

This research rolled in Jabal Awliya district in Khartoum State, the participants is preschool children in Al-Yaqeen Kindergarten in Al-Fath Al-Aqliyeen City and Al-Jumruk Kindergarten in Al-Kalakla East. ( روضة اليقين بمدينة الفتح العقليين، وروضة الجمارك بمدينة الكلاكلة).

**Participants:**

The participants are 32 children in the preschool period aged 2-6 years, they were selected using a simple random method and divided into two groups according to their feeding during the first two years of their life: 17 children who were

breastfed for two full years, and a 15 children who were fed alternatively by formula or other foods reasonably mother's employment or death. Parental consent was obtained for participation in the research.

We confirmed that there are no conflicting variables related to children, like the age range must be between 2 and 6 years, and ensured that participants were not suffering from any psychological, mental, or physical disorders that could affect their responses on the test, as confirmed by the parents and Kindergarten documents.

**Research Instrument:**

The instrument was the digit span test, which is included in the Stanford-Binet Intelligence Scales 4 (SBIS -4) as the test (No 8). This test consists of 28 items divided into four dimensions: age group, item number, numbers, and numbers in reverse order. The test includes matrices of numbers, starting with a sequence of one digit, ascending to eight digits, and then descending to a sequence of three digits. The child is asked to repeat the numbers in the same order they heard them. If they make three consecutive errors, the test is stopped.

**Results and Discussion:**

**First hypothesis:**

“There are statistically significant differences in the mean of short-term memory scores between the group of children who were breastfed for two years and the group of children who were alternative feeding”

To test this hypothesis, we used the T-test for two independent samples, and the results are shown in Table 1 below.

Table (1) shows the results of the t-test for two independent samples, to determine differences in short-term memory scores between participants based on the breastfeeding variable.

| Group | number | Mean | Standard Deviation | Difference Between Means | Calculated t-value | Degrees of Freedom | Significance Level | Conclusion |
|---|---|---|---|---|---|---|---|---|
| breastfeeding | 17 | 120.9 | 29.75 | 33.2 | 3.4 | 30 | 0.002 | There are |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Alternative feeding | 15 | 87.7 | 24.37 | | | | | significant differences |

We observed from Table 2 that the T-student value was 3.4, which is significant at the P 0.002 level. The mean short-term memory score for the breastfed children group was 120.9, while the mean for the alternating feeding children group was 87.7. The standard deviation for the breastfed group was 29.75, while the standard deviation for the substitute feeder group was 24.37. The difference between the means of the two groups was 33.2 points. This indicates there are statistically significant differences between the two groups, favoring the breastfeeding children group, thus confirming the first hypothesis: that there are statistically significant differences in short-term memory between the breastfed infants and the alternative feeding children group, favoring the breastfeeding group.

This result is consistent with the study by Kramer et al (2008), which found differences between breastfed and formula-fed infants in both academic achievement and overall intelligence in favor of breastfed children. It is also consistent with the study by Abul-Fadl et al (2005, which found statistically significant differences in overall cognitive development between those who were breastfed for two years and those who were not, favoring breastfed infants. Furthermore, this result is consistent with the study by Lee et al. (2016, which found statistically significant differences in cognitive development among breastfed infants. Additionally, this result is similar to the result of Golding et al (2005). which proved associations between duration of breastfeeding and neurocognitive development in the spring.

The warm communication and physical contact between newborn and mother satisfying whole needs of mother and newborn, which lead them to maintain their mental health, leading them to good mental health. Breast milk is considered the ideal nutrition for newborns, providing essential and unique nutrients that may not be available in alternative formulas, including formula. The importance of nutrients found in breast milk, such as long-chain polyunsaturated fatty acids (LC-PUFAs), including docosahexaenoic acid (DHA) and arachidonic acid (ARA), is significant. These two elements contribute to the healthy neurological development of myelin cells, which comprise the white and blue matter (Krol

and Grossmann, 2018). Therefore, infants who are breastfed have healthy and more developed central nervous systems, including the brain, which supports their cognitive abilities and development throughout their lives. Consequently, their mental faculties, including memory, are more advanced compared to those of infants fed formula.

**Second hypothesis:**

"There are statistically significant differences in the mean of short-term memory scores between children who were breastfed according to the variable of children's age."

To verify the hypothesis, we used a t-test for two paired samples.

Table (2): shows the results of the T-test for two paired samples to determine differences in breastfeeding among participants based on age.

| Group | number | Mean | Standard Deviation | Difference Between Means | Calculated t-value | Degrees of Freedom | Significance Level | Conclusion |
|---|---|---|---|---|---|---|---|---|
| 2-4 years | 7 | 98.6 | 22.41 | 38 | 3.3 | 16 | 0.005 | There are significant differences |
| 5-6 years | 10 | 136.6 | 24.2 | | | | | |

According to above table 2; the mean of the 2-4 years children group is 98.6, while the mean of the 5-6 years children group is 136.6. The differences between the means of the two groups is 38 points, therefore this is indicating that they are statistically significant differences between the two groups in short-term memory, favoring the 5-6 years age group. The differences in this result between breastfed children may be attributed to the chronological age variable; older infants generally have greater cognitive development and, consequently, greater short-term memory capacity. The benefit of breastfeeding on human cognitive is continues through life-span up to adult age, evidence of this comes from many studies (Golding et al., 2025; Mortensen et al., 2002; Victora et al., 2015)

**Third hypothesis:**

"There are statistically significant differences in the mean of short-term memory scores between breastfed children according to the variable of children's sex"

We used the T-test for two paired samples to test this hypothesis; the result is shown in the following table 3.

Table (3 shows the results of the independent samples t-test to determine differences in short-term memory scores between participants based on gender.

| group | Number | Mean | Standard Deviation | Difference Between Means | Calculated t-value | Degrees of Freedom | Significance Level | Conclusion |
|---|---|---|---|---|---|---|---|---|
| Males | 10 | 124.4 | 28.03 | 8.4 | 0.56 | 16 | 0.58 | No significant differences |
| females | 7 | 116 | 33.67 | | | | | |

The result shown in the table 3 above, indicated that the mean of the breastfed males group is 124.4, while the mean of the breastfed females group is 116, and the difference between the means of the two groups is 8.4, the P-value is not lower than P 0.05, It is observed from the table above that the T-value is 0.56, which is not significant at the 0.05 significance level. This indicates that there are no statistically significant differences between the two groups according to the variable of sex.

The result of this hypnosis was reflected in another way in a study by Cable et al. (2011), which indicated that psychological well-being among women is linked to the breastfeeding pathway of psychosocial adjustment from childhood. However, being breastfed was not associated with psychological outcomes among men. We conclude from this comparison between males and females that breastfeeding is important for children, whether males or females. In all cases, the child needs breastfeeding, the benefits of which are evident.

**Recommendations:**

1. Mothers should exclusively breastfeed their children for two full years unless there are compelling reasons preventing them from doing so.

2. Mothers who are unable to breastfeed for any reason should consider the importance of breastfeeding newborns for at least six months.

3. Awareness and guidance programs should be developed for families and the community regarding the importance of breastfeeding and its impact on the cognitive and psychological development of the newborn.

**Conclusion:**

1. There are statistically significant differences in the mean of short-term memory scores between the group of children who were breastfed for two years and the group of children who were alternative feeding, favoring the group of children who were breastfed for two years.
2. There are statistically significant differences in the mean of short-term memory scores between children who were breastfed according to the variable of children's age, favoring the 5-6 year group.
3. There are no statistically significant differences in the mean of short-term memory scores between breastfed children according to the variable of children's sex.

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The Holy Quran.

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