



Good nutrition style and its effect on students' achievement

Nancy Wasef Yousef Sweidan

Instructor, Al- Balqa Applied University

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Abstract

The purpose of this study was to investigate the effect of good nutrition on the 6th grade students' achievement in English Language in Jordan. To achieve the purpose of the study, a pre/post-test was constructed to measure students' achievement in English language. The test consisted of twenty items on English language. The sample of the study comprised (113) 6th grade students in Aisha bint Al Rasoul School for girls and Marj Al Hamam Basic School for boys in Amman and was distributed into four sections, which were selected purposefully. The sample of the study was distributed into four groups (two experimental and two control groups). The experimental group's students take good and healthy breakfast meal while the control groups' students don't take their breakfast at home and depend on eating sweets at the break in school. The sample of the study was (60) students in the experimental group and (53) students in the control group. Those groups were distributed into four purposefully selected sections in two schools in Amman. Descriptive statistical analyses were used (Means and Standard Deviation) for the pre and post- tests of students' English language test to experimental and control groups. The findings of the study indicated that there were statistically significant differences in the post- test between the control and the experimental groups in favor of the experimental group. The researcher proposed some recommendations to enhance the importance of good nutrition style on students' achievement in English language such as conducting further studies on other populations and for a longer time.

Keywords: Nutrition Style, Students' Achievement, Good Nutrition Style

INTRODUCTION

The effect of proper nutrition on thought and comprehension

Care must be taken to provide healthy food for our children and take care of their nutrition at home and school, as the responsibility of parents at home is great in preparing the appropriate food for their children that they love and desire, and provided that it is healthy and good, and they must also provide breakfast for their children to eat in school. And the responsibility is greater for teachers in schools where they must follow students during the break and follow-up of those who do not eat and transfer them to the counselor to know the reasons for not eating meals in the break, and they must, in cooperation with

the school administration, develop a suitable food program for students in terms of follow-up to the school canteen and the health conditions for it, and follow up the nutritional value of the items in it, as well as setting up special programs to help poor students. They should also spread health awareness of the school in terms of good food, through activity sessions, radio and publications, and hosting specialists in that field https://bohoot.blogspot.com/2017/03/blog-post_889.html.

Musaiger (2003) and Sumaili (2011) stated that the nutritional status of a child is generally affected by the care of his mother and the extent of her interest in it, and that attention and focus on the mother should be included in nutritional education programs. Studies indicate that there are many challenges that a child faces in the first years of his life, the most important of which are related to building his intellectual and educational capabilities, and

cognitive development and mental development in childhood are affected by internal and external factors, and proper nutrition is one of the most important factors that activate the child's intellectual activity as well. It helps in developing his teaching and cognitive achievement abilities (Wilson; 2006, p76).

The best way to ensure that children get the nutrients they need is through diversification into nutritious, low-fat, and low-sugar foods. Basic and light meals should be dependent on the required curriculum with quantities proportional to the age of the children, food is supposed to be served at intervals not exceeding a few hours in the vital part of Children's Day and to organize basic and light meals to be delicious and give the appropriate amounts of milk group rations, Milk, cheese; meat group, chicken, fish, legumes and eggs, vegetable group; fruit group; bread group, starches (Manaf, 2013)

Significance of the Study

The significance of this study stems from the following:

It is the first study conducted in Jordan; in fact, it enhances the importance of good nutrition style among students in Jordanian schools since there is a focus nowadays on the educational process in general and on the children's performance in particular. So, the researcher decided to investigate the effect of taking healthy breakfast on students' achievement in Jordan specifically in English.

Statement of the Problem

Many studies have resulted in a strong correlation between health, nutrition, school performance and nutrition affecting the student's development and academic achievement, hunger affects the student and enthusiasm for learning as it affects his ability to focus and learn, low alertness, attention and healthy nutrition reduces dropout rates and increases student effectiveness in the lesson, so, taking healthy breakfast may affect the students concentration and aware, and it may help them do better in their exams, in this study the researcher tried to investigate this relationship between good nutrition and students achievement in general and in English language in particular.

Purpose of the Study

The purpose of this study is to investigate the effect of good nutrition on the 6th grade students' achievement in English Language in Jordanian schools in the first semester of the academic year 2019/2020.

Questions of the Study

1. Is there any relationship between good nutrition of 6th grade students and their achievement in English language?

2. Is there any relationship between 6th grade students' achievement in English language due to their gender?

Definition of Terms

Good Nutrition Style: Meals include all types of food necessary for the students' mental growth.

Achievement: The results of the students that was achieved on the test that was prepared by the researcher.

Limitations of the Study

This study is limited to the 6th grade students at Aisha bint Al Rasoul School for girls and Marj Al Hamam Basic School for boys in Amman, and to any other similar samples during the first semester of the academic year 2019/2020.

Previous Studies

Many studies were conducted about the effect of good nutrition on students' achievement; the researcher reviewed some of these studies:

Leos et al (2013) conducted a study entitled " Not just for poor kids: The impact of universal free school breakfast on meal participation and student outcomes". The researchers estimate the impact of New York City's shift to universal free school breakfast. Breakfast participation increased modestly for all school meal eligibility groups. Increases for those previously free-meal-eligible suggest a non-price mechanism. A concurrent lunch price increase did not affect full price students' participation. The researchers claimed that they find limited impact of the policy change on educational outcomes.

Acham et al (2012) conducted a study entitled "Breakfast, midday meals and academic achievement in rural primary schools in Uganda: implications for education and school health policy." In their study they stated that underachievement in schools is a global problem and is especially prevalent in developing countries. Indicators of educational performance show that Uganda has done remarkably well on education access-related targets since the introduction of universal primary education in 1997. However, educational outcomes remain disappointing. The absence of school feeding schemes, one of the leading causes of scholastic underachievement, has not been given attention by the Ugandan authorities. Instead, as a national policy, parents are expected to provide meals even though many, especially in the rural areas, cannot afford to provide even the minimal daily bowl of maize porridge. To assess and demonstrate the effect of breakfast and midday meal consumption on academic achievement of school children, the researchers assessed household characteristics, feeding patterns and academic achievement

of 645 school children (aged 9_15 years) in Kumi district, eastern Uganda, in 2006_2007, using a modified cluster sampling design which involved only grade 1 schools (34 in total) and pupils of grade four. Household questionnaires and school records were used to collect information on socio-demographic factors, feeding patterns and school attendance. Academic achievement was assessed using un standardized techniques, specifically designed for this study.

Underachievement (the proportion below a score of 120.0 points) was high (68.4%); in addition, significantly higher achievement and better feeding patterns were observed among children from the less poor households. Achievement was significantly associated with consumption of breakfast and a midday meal, particularly for boys, and a greater likelihood of scoring well was observed for better nourished children.

The researchers observed that underachievement was relatively high; inadequate patterns of meal consumption, particularly for the most poor, significantly higher scores among children from 'less poor' households and a significant association between academic achievement and breakfast and midday meal consumption.

Basch, C. (2011) conducted a study entitled "Breakfast and the Achievement Gap among Urban Minority Youth" the aim of his study is to outline the prevalence and disparities of breakfast consumption among school-aged urban minority youth, causal pathways through which skipping breakfast adversely affects academic achievement, and proven or promising approaches for schools to increase breakfast consumption. On any given day a substantial proportion of American youth do not eat breakfast. On an average day, less than half (~46%) of children participating in free or reduced-price lunch also participated in the School Breakfast Program for which they were also eligible. In a large study of 9-year-olds, 77% of White girls and 57% of Black girls consumed breakfast on all 3 days assessed; by age 19, the respective rates were 32% and 22%. Neuroscience research has identified the processes by which dietary behavior influences neuronal activity and synaptic plasticity, both of which influence cognitive functions. Participation in School Breakfast Programs has also been associated with reduced absenteeism. Universal School Breakfast Programs and allowing youth to eat breakfast in the classroom (vs cafeteria) are approaches that have been shown to increase participation. The researcher conclude that skipping breakfast is highly and disproportionately prevalent among school-aged urban minority youth, has a negative impact on academic achievement by adversely affecting cognition and absenteeism, and effective practices are available for schools to address this problem. Despite wide availability, the majority of American youth do not participate in School Breakfast Programs. High-quality universal breakfast programs that allow students to eat breakfast in the classroom are

especially needed for youth who are not likely to get good nutrition the rest of the day.

Al-Sharif (2010) conducted a study entitled " a proposed program for developing food awareness for secondary school students in the Kingdom of Saudi Arabia" The study aimed to identify the availability of nutritional awareness among female students of secondary school, and its relationship with the level of awareness of specialization, age group, monthly income and father and mother education for them. It also aimed at designing a program in nutritional education to develop nutritional awareness among female students. It used the descriptive approach through which the level of nutritional awareness was identified in the following aspects: nutritional tendencies, food behavioral habits, and the cognitive level in the nutritional information of the sample members, through a questionnaire as a study tool prepared specifically for this purpose. The tool was applied to a random sample represented by the second year secondary students in Makkah, with (479) students. After analyzing the data, the study showed the following results:

- The level of nutritional awareness of the sample is low in terms of behavioral eating habits.
- The level of nutritional awareness of the sample is high in terms of nutritional tendencies.
- The level of nutritional awareness among respondents is high in terms of knowledge information.
- There are statistically significant differences in the level of nutritional awareness and cognitive levels of the sample members due to the father's and mother's education only.
- There are no statistically significant differences in the level of nutritional awareness and cognitive levels of the sample members due to age, specialization, and monthly income (Al-Sharif, 2008).

Lahibi (2009) conducted a study entitled "the effectiveness of a counseling program to develop nutritional awareness for autistic mothers and supervisors" The study aimed to identify the nutritional problems facing autistic mothers and children, and to find simple solutions to nutritional problems facing them, and to know the effectiveness of the counseling program in developing the ability of mothers and supervisors to plan meals suitable for the condition of infected children before and after the counseling program. The results of the research showed that the average age of the mothers was 36.19+ - 52.6 years, while the supervisors' age was 29.9+ - 51.5 year, the nutritional awareness of mothers and supervisors also decreased, and this was linked to their educational level, while the program demonstrated its effectiveness in raising nutritional awareness from low to medium and with statistically significant differences at the probability level of less than (0.01) (Al-Lahibi, 2009).

Al Laili (2007) study aimed to identify food awareness and nutritional practices among kindergarten teachers on the physical development of children in Jeddah, as a

questionnaire was used for the teacher and another for the child, the results showed that the third of the sample 34% studied kindergarten specialization. It was clear that 60% of the kindergarten teachers did not receive training courses in the field of kindergarten, and the nutritional awareness of kindergarten teachers was measured by answering fifty questions, it was found that 62% of the teachers in the research sample have an average nutritional awareness, while 25.7% of kindergarten teachers were aware of high awareness, while weak awareness amounted to 11.7% of teachers. The high nutritional awareness has spread between the age group (40-49) and found a statistical relationship between the nutritional awareness and the age groups. And the average nutritional awareness was sufficient by 68.9% between the pre-school teachers and the average nutritional awareness was at the percentage of 70 % among the female teachers with a high school diploma. It was noted that the lower the educational level of the teacher, the higher her nutritional awareness, and it was found that the average nutritional awareness reached the highest percentage among female teachers who specialize in kindergarten 71.1%, whereas, the weak nutritional awareness was found at the percentage of 18.3 between female teachers who did not have training courses, and there is a statistical relationship between nutritional awareness and the teacher's courses. It was found that the high nutritional awareness increased by 40% of female teachers who received additional training

courses in different fields other than kindergarten. It was also found that the average nutritional awareness at the rate between 80% of female widows and 63.8% of female teachers is not married (MS), meaning that there is no relationship between nutritional awareness and the social condition of the teacher.

Design and Methodology

This chapter described the study population, sample, variables, instrument, procedures and the statistical analyses that were used in the study.

Population of the Study

The population of the study consisted of: All the 6th grade students in WadiElsir Directorate of Education enrolling in the first semester 2019/2020 whom they form (1720)

Sample of the Study

The sample of the study comprised of (113) 6th grade students in Aisha bint Al Rasoul School for girls and Marj Al Hamam Basic School for boys in Amman and was purposefully selected and distributed into four sections. Table (1) shows the distribution of the students' sample distribution.

Table 1: The sample distribution

School	Control group	Experimental group	total
in Aisha bint Al Rasoul School for girls	31	32	63
Marj Al Hamam Basic School for boys	22	28	50
Total			113

Instrument of the study

The researcher designed an achievement test based on the instructional material of the 6th grade English textbook to collect the data. Validity and reliability were ensured.

Reliability of the Instrument

To ensure the test reliability, the researcher followed test/retest technique. The researcher applied it to a pilot sample of (25) subjects excluded of the study sample in the same schools from which the subjects were chosen with a two-week period between the pre-test and the post-test. The reliability of the test was calculated using

correlation coefficient that was (0.89) which is considered appropriate for conducting such a study.

Validity of the instrument

The researcher validated the instrument by submitting it to a jury of two EFL professors teaching at Al Balqa Applied University, two supervisors of English language working at the Wadi Elsir Directorate of Education, the Jury were asked to add, omit or make any changes on the items of the instrument. The test consisted of (30) items in its first draft, and it became (25) items as returned from the jury. The researcher followed the recommendations of the jury and made amendments accordingly.

Instructional Material

The instructional material was the 6th grade English textbook which consists of 8 units.

Procedures of the Study

To implement the study, the following procedures were followed:

- Identifying the population and sample of the study
- Constructing the instruments of the study.
- Conducting the pilot study
- Ensuring the validity and reliability of the instrument of the study.
- Applying the instrument of the study.
- Use SPSS to analyze the collected data.
- Presenting the findings and the discussions of the study

Statistical Analyses

Descriptive methods (means and standard deviation) were used for pre and post tests for the achievement test of the experimental and control groups.

Comparison statistical method (Two-Way ANOVA) was used to make a comparison between the control and the experimental groups.

Findings of the study

The purpose of this study is to investigate the effect of good nutrition style on 6th grade students' achievement in English language in Jordanian schools. The researcher followed the equivalent pre /posttest two group designs. Therefore, the means, standard deviations and Two-Way ANOVA analysis of variance were used to analyze data. The results were displayed based on the questions of the research.

To determine if there is a statistically significant difference between the experimental and control groups, a t-test for independent samples was conducted. Table 2 shows the results.

Table 2: Means and Standard Deviations of the Achievement of two Groups on the Pretest

	GROUP	N	Mean	Std. Deviation	Et	Edf	Sig. (2-tailed)
Pre	Experimental	60	55.36	7.06	.461	111	.647
	Control	53	54.75	7.10	.461	109.165	.647

Table 2 indicated that the difference between experimental and control groups is not statistically significant at ($\alpha=0.05$). Thus, since the difference was not significant, the two groups were assumed equivalent and the sample was divided into two groups, an experimental and a control group. The means for the experimental group was (55.36) while it was for the control group (54.75), which means that there were nearly the same. The experimental group which their parents were involved in their educational progress consisted of (60) male students while the control group consisted of (53)

male students. So Table (2) above showed that there are no statistically significant differences in pretest due to group variable.

Table 2 also showed that the difference between the achievement of the two groups on the pretest was not statistically significant at ($\alpha=0.05$). Since there was no statistically significant difference between the control and experimental groups on the pretest, it was for the experimental (.647) which was more than (.05) and it was for the experimental (.647) too which is also above (.05) so, the groups were assumed equivalent.

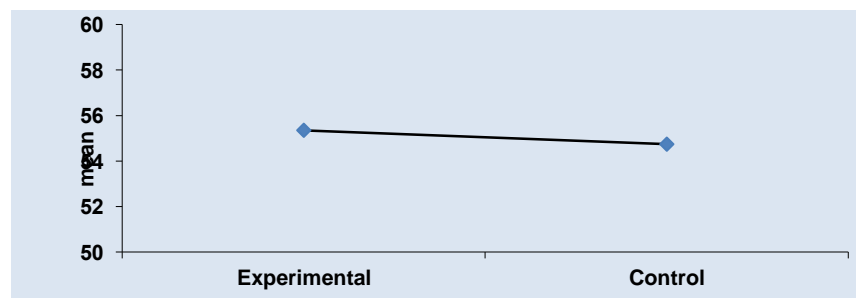


Diagram 1: Experimental and control groups mean on pre-test

Diagram 1 showed that there were no statistically significant differences between experimental and control groups in the pretest which means that they were nearly equivalent.

To determine if the two groups are equivalent in the level of their educational progress due to the effect of having breakfast, a posttest was conducted and Table 3 presents the results.

Table 3: t-test Results of the Experimental and the Control Groups on the Posttest.

	GROUP	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Post	Experimental	60	85.59	7.91	5.319	112	.000
	Control	53	76.16	10.88			

Table 3 showed that there was a statistically significant difference at $\alpha=0.05$ between the achievement of the experimental group and that of the control group on the posttest in favor of the experimental group. This difference indicated that having breakfast may have had a positive effect on students' achievement. The mean score for the experimental group on the posttest was (85.59) while that of the control group was (76.16).

Table 3 also showed that there was a statistically significant difference between the experimental group

and the control group on the posttest, was significantly better than that of the control group.

The researcher also conducted a two-way analysis of variance to analyze the posttest achievement scores of the two groups. Table 3 showed the results. So table above shows there are statistically significant differences in posttest due to group variable in favor of the experimental group.

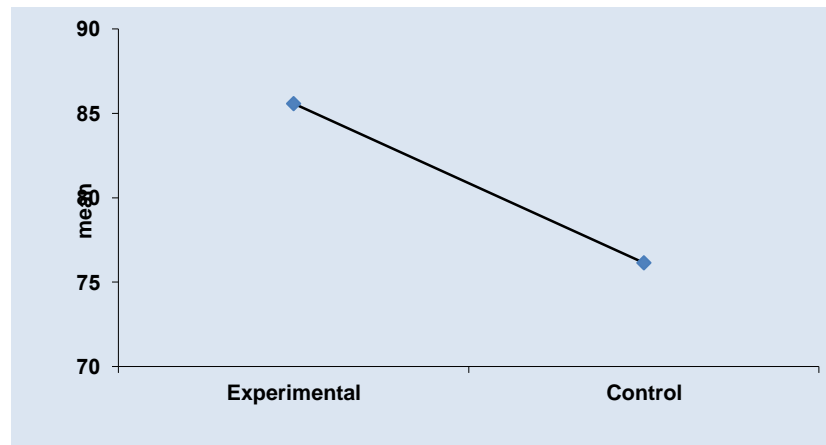


Diagram 2: Experimental and control groups mean on post-test

DISCUSSION OF THE FINDINGS

Eating breakfast can help students get their daily nutrient needs more easily, since children who eat breakfast regularly consume approximately 20% to 60% of iron, B vitamins, and vitamin D, compared to children who do not eat breakfast, as well as Children who eat breakfast tend to eat more fiber daily, lower fats, dietary cholesterol, and lower risk of obesity. Not only does breakfast fill the stomach, it can also help children improve their academic performance, as children who eat breakfast get higher test scores, have a higher concentration, and have better behavior at school. Students eating breakfast gives them

the nutrients to start their day in a good mood, as not eating breakfast can cause irritability, and eating breakfast improves the psychological state in the morning. A study conducted in 2012 showed that when people ignore breakfast, they are more likely to overeat high-calorie foods during the day, as the nutrients in the breakfast boost metabolism, which leads to preventing weight gain.

RECOMMENDATIONS

In light of the results of the study, the researcher recommends the following:

1. Take care to eat five meals a day and be rich in nutrients important for growth and disease prevention.
2. Providing healthy nutrients on the table regularly encourages eating and getting used to them.
3. Having breakfast on a daily basis helps to pay attention to the teacher.
4. Care must be taken to eat the prescribed rations of each food group.
5. Food should be varied in one serving.
6. Ensure that you drink enough fluids such as water, milk, and juices.
7. Sugary foods and sweets should be reduced.
8. Stay away from soft drinks.
9. Parents should set a good example in terms of practicing healthy eating habits.

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