

RELATIONSHIP OF CHILDREN'S AWARENESS WITH THEIR DIETARY HABITS AMONG GOVERNMENT MIDDLE SCHOOLS OF DISTRICT BANNU KP, PAKISTAN

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ABSTRACT

Pakistan is undergoing rapid development resulting in changing lifestyles. Childhood dietary habits are changing and might result in childhood obesity and related health risks. The main objective of this research study was to investigate the relationship of children's awareness with their dietary habits among Govt. Middle Schools in the Locality of District Bannu KP Pakistan. A cross-sectional study was conducted among Seventy-Two (72) Govt. Middle schools-children aged 12–15 years. Total (209) respondents were systematically sampled from three randomly selected clusters. A Structured questionnaire was used to collect data. Awareness and dietary habits were determined from frequency of food consumption, habitual patterns and attitude toward their diet. The collected data were tabulated and were analyzed by using statistical packages for social sciences (SPSS) version (24.0). On the basis of analyzed data, the researcher found significant children's awareness towards healthy diet. On the other hand, a high incidence of unhealthy dietary habits, such as having deep-fried food, consuming foods high in sugar, low nutritional foods, eat too much as possible, too spicy and salty foods consumption were found among children.

Keywords: Awareness, attitude, dietary habits, children.

1. INTRODUCTION

Dietary habits are actually the choice of foods preferred by people in their daily lives. There is more authenticity to the phrase “you are what you eat” (Renner et al., 2012). The efficiency of different function of the body is obviously determined by what you eat every day. Our bodies regulate and stay in function on the food that we eat on a daily basis. Eating a clean and balanced diet with healthy choices is essential for optimal health (Nestle, & Marion, 2013). A healthy diet comprised on sufficient amount of all essential nutrients which provide sufficient energy to the body. Healthy diet is the prime need for optimal health of every individual (Haas, 2002). A healthy diet helps to improve health standard, avoid chronic disease and assist the body in overall sense of wellbeing and vitality (Amarantos, Martinez, & Dwyer, 2001). Healthy dietary habits help a person stay in shape throughout the life span (Bandura, 2004).

Although the problem of unhealthy dietary habits has been recognized in Pakistan for several decades as underlying much of infant and under 15 years children. The country still suffers from high rates of childhood malnutrition and has made little progress in the past 20 years to address the issue (UNICEF, 2007). Developing country such as Pakistan is facing a

growing epidemic of under nutrition resulting in prevailing of micronutrient deficiencies in the population. The results of the National Nutrition Survey (NNS) (2001) found that rates of malnutrition in children under five were as: wasting 13%, underweight 38% and stunting 37% and these figures showed little or no improvement in the NNS 2011. Moreover in the same survey, 13% of non-pregnant and 16% of pregnant women were undernourished. (Aga Khan University And UNICEF. National Nutrition Survey, 2011)

This severe situation of under nutrition in the country is coupled with rising tide of non-communicable diseases (NCD) posing the double burden of disease on the country (Gillespie, & Haddad, 2001). Demographic transition to rapid unplanned urbanization and increasing globalization has led to changes in lifestyle, food availability and consumption in the population. High-energy expenditure in the form of energy dense low nutrient value foods is significantly increasing the prevalence of overweight and obesity in the population (Drewnowski, & Specter, 2004).

Surveys have shown that an estimated 40 million individuals in Pakistan suffer from high blood pressure, 32 million from heart disease, 24 million from obesity, 18 million from high cholesterol and 8 million from diabetes (Wasay, Zaidi, & Jooma 2014). These results can be attributed to a combination of dietary deficiencies, poor maternal and child nutrition, food insecurity and high illiteracy rates. Even though many of these diseases with strong links to nutrition may take years to develop, it is imperative that optimal nutrition throughout all phases of life is implemented. The burden of non-communicable disease, along with over and under nutrition poses a huge burden on the already over-utilized multi-tiered health care system in Pakistan.

In this alarming situation, nutrition education naturally becomes the most essential tool for promoting a health culture within the country and eventually changing behaviour. Many countries have adopted nutrition education as a prime component of their public policy and have been successful in achieving dietary changes at the population level (Kearney, 2010). Nutrition education can be targeted by different strategies, in different settings accompanied by environmental support to influence consumer awareness, attitudes, skills, preferences and behaviour around food, diet and nutrition (Story, Neumark-Sztainer, & French, 2002)

According to Schreck, Williams and Smith (2004) childhood is a critical stage for health and development. Nutritional awareness is believed to be important in order to promote healthier eating habits. However, just awareness about healthy diet alone may not be sufficient to change dietary habits. There is need to merge a positive attitude toward healthy eating early in childhood. A research study further revealed that eating habits, ways of life and behaviour styles are recognized at some point of childhood which could persist to adulthood (Brown, & Ogden, 2004).

Health and wellbeing are closely interlinked with dietary habits of an individual. Healthy eating in childhood avoids the risk direct nutrition associated complications of health such as obesity, diabetes, and others cardiovascular diseases. Therefore, healthy dietary habits may be promoted among the children (Hasler, 2002). It is very important to use proper diet as an essential ingredient that helps to promote human health and well-being. The role of healthy eating in childhood and adolescence is more important and essential. According to Alderman, Behrman, and Hoddinott (2005) the use of diet has a special direct impact on children's physical and mental health, as well as the development of consciousness. In addition, it has a long-term impact on the overall health state and wellbeing.

Childhood obesity is a steeply increasing global public health problem (Hanley et al., 2000). Problems associated with heavy fats in body are related to improper eating habits, sedentary life and unawareness about risk factors unhealthy dietary habits. It is necessary for every individual to have proper knowledge and understanding and positive attitude with their dietary habits.

Awareness about good nutrition is a key factor in healthy lifestyle of children. In order to know the eating habits of children, it becomes necessary to assess the nutritional status of children and taking into account the different foods that they choose to eat (McKinley et al., 2005). Research evidence explored that dietary habits attained in childhood and persist in adulthood (Hewitt, & Stephens, 2007). Parents' attitudes should not directly affect their children through meals purchased and served at home that influence the exposure of children and their habits and desires (Brown, & Ogden, 2004).

Some research evidence supports a parental role in creating good dietary habits among their children. Patrick and Nicklas (2005) reported a relationship between the use of foods from mothers and children for most nutrients in pre-school children, and suggested parental response to try to improve child foods. The researcher assessed the relationship of children's awareness and attitude with their dietary habits in the locality of District Bannu, KP, Pakistan.

2. METHODS AND MATERIALS

2.1 Research Design and Population of the Study

A quantitative research design with cross sectional approach was adopted to facilitate this particular study. The population of this research study comprised of all the students studying at Govt. Middle Schools of District Bannu, KP, and Pakistan.

2.2 Sample Size and Sampling

The total numbers of Govt. Middle Schools (Male) in District Bannu KP, Pakistan were Seventy-Two (72) and total numbers of students enrolled were Four thousand and four hundred forty-six (4446). So it was quite difficult to visit each and every respondent of the study. In order to select a suitable sample from the whole population the researcher used multi stage sampling technique.

In first stage the researcher divided the whole population into three clusters (City, town and village schools). In second stage the researcher selected 20% schools from each cluster and 20% respondents from each school by applying proportionate sampling. Detail of sampling and sample size is given in below table:

<i>First stage</i>			<i>Second stage</i>		
Population	Proposed Cluster	Total schools	20% of schools	Numbers of students	20% of Students
Govt middle schools	City schools	20	04	311	63
	Town schools	16	03	255	51
	Village schools	36	08	521	104
Sample size					218

2.3 Instrument for Data Collection

There are many instruments used for data collection such as questionnaire, tests, observation, interview and checklist based on the existing nature of the study. In this particular study the researcher used a self-prepared questionnaire as, Kelley *et al.*, (2003) indicated that Questionnaire is an easy and a suitable instrument for data collection.

2.4 Instrument Design

The questionnaire used for the data collection was comprised of 60 questions. In which 40 questions with pre-defined choices, Likert scale and 20 close ended questions.

2.4.1 Questionnaire Development Procedure

The primary draft of questionnaire was developed in the guidance of supervisor. The proposed questionnaires were handed over to the respondents and were encouraged to give any suggestions regarding various statements of the questionnaire. The recommendations of respondents were taken into consideration in order to finalize the questionnaire. So, the final draft of questionnaire was translated to the national language Urdu on the recommendation of respondents in order to avoid ambiguity during providing information about the selected problem.

2.4.2 Questionnaire Format/Parameters

The questionnaire was comprised of demographic information, awareness about healthy diet, attitudes towards diet and dietary habits.

2.4.3 Instrument Validity

Validity is the extent to which a test measures what it claims to measure (Kumar, 2009). Validity of research can be explained as an extent at which requirements of scientific research method have been followed during the process of generating research findings (Kothari, 2004). The questionnaire was made valid through content validity.

2.4.4 Instrument Reliability

Reliability is concerned with the consistency of the measurement, which means whether the questions in the survey get same type of responses when the conditions remain the same. Reliability is also associated with internal consistency, which means whether the same characteristic is measured by different persons. The internal consistency is the most frequently used method to validate the reliability of the instrument and the same has been used in the present case. The reliability measures were assessed through Cronbach's Alpha and found .643, .885 and .624 respectively which were highly significant. The below Alpha reliability coefficient of individual items of awareness about Diet

Table 1: Showing Alpha Reliability Coefficient of individual items of Attitude toward healthy diet

Cronbach's Alpha	N of Items
.885	20

Table 2: Showing Alpha reliability coefficient of individual items of Dietary habits

Cronbach's Alpha	N of Items
.624	20

2.5 Ethical Consideration

Ethical approval to conduct the research study was obtained from Department of Sports Sciences and Physical education, Gomal university Dera Ismail Khan. The purpose and method of the research study were explained with head teachers and other concerned teachers for data collection. Respondents were assured about the confidentiality of data.

2.6 Data collection Procedure

The researcher personally contacted to each and every respondent and distribute questionnaire among them for data collection. The researcher personally collected back all the questionnaires from respondents after completion.

2.7 Data Analysis

The collected data was analysed through inferential and descriptive statistical approaches with the Statistical Packages for Social Sciences (SPSS) version 24.0. Independent *t*-tests and simple analysis of variance (ANOVA) used to check the significant demographic differences of students' awareness, attitude towards healthy diet and dietary habits. Co-relation coefficient bivariate used to evaluate the relationship of children's awareness and attitude towards their dietary habits. Linear Regression was also applied to assess the effect of demographic attributes upon children's awareness and attitude toward their dietary habits.

3. RESULTS

Table 3: Showing frequencies and percentages of children's awareness about healthy diet

S. No	Statements Vegetables and fruits	Healthier	Unhealthier	Don't Know
1.	Vegetables	202 (92.7%)	11 (5.00)	5 (2.3%)
2.	Fruits	179 (82.1%)	28 (12.8%)	11 (5.00%)
3.	Dry fruits	139 (63.8%)	55 (25.2%)	24 (11.0%)
4.	Fruit juice	100 (45.9%)	86 (46.4%)	32 (14.7%)

As Table 3 depict that most of the respondent perceived positive awareness about healthy diet. A large number of respondents stated that Vegetables and fruits are healthier food, Vegetables= 202 (92.7%), Fruits=179 (82.1%), Dry fruits=139 (63.8%) and Fruit juice 100 (45.9%)while small portion opined unhealthier 11(5.00), 28(12.8%), 55(25.2%) and 86(46.4%)and Don't Know 5(2.3%), 11(5.00%), 24(11.0%) and 32(14.7%) about the statement.

Table 4: Showing frequencies and percentages of children's awareness about healthy diet

S. No	Statements Meat, Fish, Poultry	Healthier	Unhealthier	Don't Know
1.	Chicken	124 (56.9%)	74 (33.9%)	20 (9.2%)
2.	Meat	161 (73.9%)	29 (13.3%)	28 (12.8%)
3.	Fish meat	151 (69.3%)	51 (23.4%)	16 (7.3%)
4.	Eggs	167 (76.6%)	33 (15.1%)	18 (8.3%)

Table 4 also shows a similar response of respondents perceived that Meat, Fish and Poultry are healthier food Chicken= 124(56.9. %), Meat=161(73.9%), Fish meat= 151(69.3%) and Egg=167(76.6%).

Table 5: Showing frequencies and percentages of children's awareness about healthy diet

S. No	Statements Bread and cereals	Healthier	Unhealthier	Don't Know
1.	Grains	135 (61.9%)	57 (26.1%)	26 (11.9%)
2.	Rice	129 (59.2%)	63 (28.9%)	26 (11.9%)
3.	Slice Bread	114 (52.3%)	76 (34.9%)	28 (12.8%)
4.	Potato	142 (65.1%)	50 (22.9%)	28 (11.9%)

Table 5 represents the responses of large number of respondents were found healthier about Bread and cereals. (Grains=135(61.9%), Rice =129 (59.2%), Slice Bread=114 (52.3%) and Potato =142 (65.1%).

Table 6: Showing frequencies and percentages of children's awareness about healthy diet

S. No	Statements Milk and milk products	Healthier	Unhealthier	Don't Know
1.	Milk	196 (89.9%)	22 (10.1%)	00 (00%)
2.	Butter	151 (69.3%)	55 (25.2%)	12 (5.5%)
3.	Custard	109 (50%)	74 (33.9%)	35 (16.1%)
4.	Chocolate	129 (59.2%)	74 (33.9%)	15 (6.9%)

Table 6 shows that Milk and milk products were also found a healthier choice as perceived by the respondents. Milk 196 (89.9%), Butter 151 (69.3%), Custard 109 (50%) and Chocolate 129 (59.2%).

Table 7: Showing frequencies and percentages of children's awareness about healthy diet

S. No	Statements Snakes and fast food	Healthier	Unhealthier	Don't Know
1.	Burger	151 (69.3%)	55 (25.2%)	12 (5.5%)
2.	Soup	123 (56.4%)	74 (33.9%)	21 (9.6%)
3.	Snakes	100 (45.9%)	86 (46.4%)	32 (14.7%)
4.	Chana Chaat	116 (53.2%)	70 (32.1%)	32 (14.7%)

In table 7 Majority of the population opined healthier choice about Snakes and fast food i.e. Burger =151 (69.3%), Soup=123 (56.4%), Snakes=100 (45.9%) and Chana Chaat=116 (53.2%).

Table 8: Showing Pearson Co-relation Bivariate showing the relationship of Children's Awareness about healthy diet and Dietary Habits

Correlations		Awareness about healthy diet	Dietary Habits
Awareness about healthy diet	Pearson Correlation	1	.360**
	Sig. (2-tailed)		.000
	N	218	218
Dietary Habits	Pearson Correlation	.360**	1
	Sig. (2-tailed)	.000	
	N	218	218

** Correlation is significant at the 0.01 level (2-tailed)

In Table 8 the Pearson Co-Relation Bivariate illustrates the relationship of Children's Awareness about healthy diet and Dietary Habits. The analyzed data showed that the correlation coefficient "R" of children's awareness and attitude towards healthy diet is .360 and P value is .000, ($p < 0.01$). Hence, it can be said that there is a significant positive relationship of children's awareness about healthy diet and dietary habits. Therefore, the Alternate hypothesis stated above is accepted.

4. DISCUSSION

The hypothesis of current study concerned that a significant relationship found between children's awareness about healthy diet towards healthy dietary habits. The hypothesis concerned that significant relationship found between children's awareness and their dietary habits. The present study elaborate that children perceives positive habits towards healthy diet because of sufficient awareness about healthy diet. The study found that there was a significant relationship between awareness about diet and dietary habits of the children. Ruel et al. (1992) finding also supported the finding of current study that healthy dietary intake in children are closely associated with awareness toward healthy diet because nutritional awareness promotes dietary habits in children. Another study also suggested that knowledge about healthy eating isn't always enough; practical aspects need to also be emphasized to students, because there is no purpose for gaining knowledge without realizing what is being taught (Woodruff, & Hanning, 2009).

5. CONCLUSION

The study was conducted to assess the relationship of children's awareness with their dietary habits among govt middle schools. The results indicated that major portion of the respondents were highly aware about healthy diet. However, the analysed data shown positive attitude among school going children toward healthy diet. Similarly, a wide incidence of unhealthy dietary behaviours, such as taking deep-fried sustenance and using foods high in sugar and salty foods were recorded among students. Children prefers to eat snacks and oily foods which indicating the presence of unhealthy dietary habits. The results indicated that demographic attributes (Age, school location, Grade and monthly income) significantly affect the children's awareness, attitude towards healthy diet and dietary habits. The demographic characteristics have produced variation in the awareness, attitude and dietary habits of respondents. Based on the analyzed data the respondents of 14 years age, of 8th class, from City schools, having monthly income 30,000 and above, shown highly awareness about healthy diet.

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