Correlationship Among Knowledge, Attitude, Practice and Health Status of People Regarding Junk Food Consumption

[1]Dr. Suchandra Samanta Mandal, [2]Dr. Arnab Samanta, [3*]Dr. Deb Prasad Sikdar
[1]Assistant Professor, [2]Professor & Principal, [3]Professor
[1]Krishnanagar B.Ed College, Nadia, West Bengal, India
[2]Netaji Subhas Chandra Bose Institute of Pharmacy, Chakdaha, Nadia, West Bengal, India
[3]Department of Education, University of Kalyani, Nadia, West Bengal, India

*Corresponding Author:
Dr. Deb Prasad Sikdar
Professor, Department of Education, University of Kalyani,
Pin: 741235 West Bengal, India

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Abstract
Background: Junk food consumption is a very big concern in today's lifestyle. Most of the people of West Bengal, India, including children, adolescents, adults are involved in Junk food consumption practice. It may be due to their lack of adequate knowledge regarding Junk food characteristics or proper attitude towards Junk food consumption. Junk food consumption practice should have some harmful health effect. The aim of the present study is to find out the correlation among the knowledge regarding junk food, attitude towards junk food consumption, junk food practice and the health consequences of junk foods on the people of West bengal.

Materials and Method: Hypotheses were framed to find out the correlation among knowledge, attitude, practice and health status of the people of West Bengal a state of India. To test the hypotheses, the bivariate Pearson correlation coefficient, r, was measured among the pairs of the continuous variables like, A-score versus K-score, P-score versus K-score, H-score versus K-score, A-score versus H-score, P-score versus A-score, P-score versus H-score obtained from the data collected by Survey using standardized questionnaires.

Result: Positive correlation co-efficient had been obtained between Knowledge and Attitude score, Knowledge and Health score, Junk food practice and Health score.

Conclusion: Significant co-relations had been found between knowledge and attitude of people, Knowledge and health, attitude and Junk food practice, junk food practice and health of people of West Bengal.

Keywords: Attitude, Correlation, Health status, Junk Food, Knowledge, Practice

Introduction

Nutritional status as well as health status of people become highly affected by their varied eating pattern. Eating behaviour or food consumption practice of an individual is increasingly becoming one of today's great concerns for health problems. According to WHO (1948) health is a condition of mental, social and physical comfort and contentment. It is not just the non-appearance of illness, physical or mental weakness [1]. According to WHO, occurrence of deaths due to overweight and obesity is more than malnurousment [2]. About 57% cardiovasculas deaths are assosiated with high BMI and less physical activity [3].

Nowadays, Frequent Junk food eating practice has become a common problem among tenagers and young adults in West Bengal. According to National Institute of Nutrition (NIN) foods consisting little or no proteins, vitamins or minerals but high amount of sugar, salt and fats are called Junk Food [4].

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Carbonated soft drinks, highly salted snacks like chips, refined carbohydrates like candy, cake, chocolates are common junk food [5]. Generally, several harmful additives are added to Junk food to increase taste, flavor, colour and longer self-life. As a result Junk foods containing such additives may give intolerance, allergic reactions and long term ailment like cancer etc. [6].

This is one of the main causes of obesity problem [7]. Furthermore, lack of physical activity along with excess calorie intake leads to unhealthy weight gain [8].Obesity further leads to other disease such as, cardiovascular diseases, liver and kidney diseases, sleep apnea, depression etc. [9].

Healthy eating habit is prerequisite for healthy life style. For this,people of West Bengal should avoid Jung food eating practice. Knowledge is the behaviour and test situations whichemphasizes remembering by recall or recognition of phenomenon, ideas or materials [10]. People must have knowledge regarding Junk Food characteristics, nutritional facts and their effect on health. People should have proper attitude towards Junk food which will influence their Junk food consumption habit or practice. An individual's internal evaluation of an object is his/her attitude [11]. Their attitude towards Junk food may include subjective belief [12], perceived behavioral control [13], parental attitude [14].

Their knowledge ,attitude, their junk food eating practice and concerns about health should have some interelationship.The main objectives of the present study were as follow:

1. To carry out correlation study to find out whether any significant effect of knowledge regarding Junk food is present on attitude towards Junk food.

2. To carry out correlation study to find out whether any significant effect of knowledge regarding Junk food is present on practice of Junk food consumption.

3. To carry out correlation study to find out whether any significant effect of knowledge regarding Junk food is present on health of the people.

4. To carry out correlation study to find out whether towards Junk food any significant effect of attitude is present on practice of Junk food consumption.

5. To carry out correlation study to find out whether any significant effect of attitude towards Junk food is present on health of the people.

6. To carry out correlation study to find out whether any significant effect of practice of Junk food consumption is present on health of the people.

Materials And Methods

Following hypotheses were framed for the correlation study:

H_1: There is significant correlation between knowledge and attitude of people of West Bengal regarding junk food.

H_2: There is significant correlation between knowledge and practice of people of West Bengal regarding junk-food.

H_3: There is significant correlation between knowledge and health of people of West Bengal regarding junk-food.

H_4: There is significant correlation between attitude and practice of people of West Bengal regarding junk-food.

H_5: There is significant correlation between attitude and health of people of West Bengal regarding junk-food.

H_6: There is significant correlation between practice and health of people of West Bengal regarding junk-food.

Correspondingly, Null Hypothesis $^0H_1$ to $^0H_6$ was framed to test the hypotheses.

The target population in the present study was the people of different educational status (primary, secondary, higher Secondary and above) of male and female category from two locations urban and rural areas of West Bengal. The sample had total1100 subjects.

Data was collected from the sample by administering standardized Knowledge questionnaire [15], Attitude scale, Practice questionnaire [16] and Health

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Questionnaire. Knowledge score (K-score), Attitude score (A-score), Practice score (P-score) and Health score (H-score) were calculated by the score obtained from the questionnaires.

The bivariate Pearson correlation coefficient, r was estimated between a pair of continuous variables like, (i) K-score versus A-score, (ii) K-score versus P-score, (iii) K-score versus H-score, (iv) A-score versus P-score, (v) A-score versus H-score, (vi) P-score versus H-score. By the value of r the strength and direction of linear relationships between those pairs of variables were indicated. Correlation coefficient, r can be denoted by the following formula

$$r = \frac{cov(x,y)}{S_x S_y}$$

Here, *cov(x.y)*= Sample covariance of sample x and y.

S_x and S_y = Sample standard deviations of x and y respectively.

The r-values range between –1 and +1 [17]. Direction of the relationship is indicated by this sign. By the magnitude of r, the linear associations between the two variables studied were indicated.

The strength can be interpreted by the following general guidelines

$0.1 < |r| < 0.3$ weak correlation

$0.3 < |r| < 0.5$ moderate correlation

$0.5 < |r|$ strong correlation

Result

A person may have good knowledge regarding Junk food (higher K-score). It is also expected that the person should have proper attitude towards Junk food (higher A-score). Person having higher A-score and K-score is naturally expected to consume lesser quantity of Junk food in practice (i.e. lesser P-score). Further a person consuming high amount of Junk food is expected to have poorer health (i.e. higher H-score). SPSS (Ver. 20) was used to calculate the Correlation Coefficient in all combinations of the variables. The correlation matrix obtained from SPSS is represented in the Table 1 and the scatter plots obtained from correlations between various pairs are depicted in figure 1. Individual scatter plot has been shown in Figure 2.
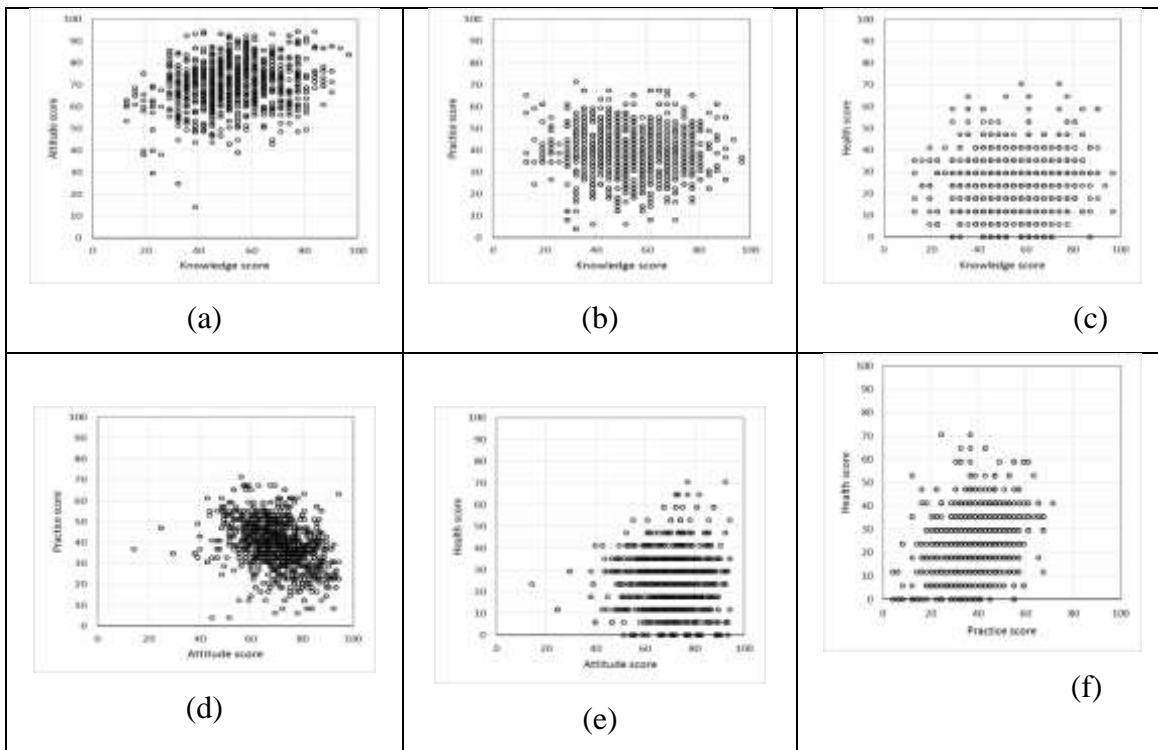
Table 1: Pearson's Correlation table

		Knowledge Score	Attitude Score	Practice Score	Health Score
Knowledge Score	Pearson Correlation	1	0.223[**]	– 0.033	0.093[**]
	Sig. (2-tailed)		0.000	0.270	0.002
	N	1100	1100	1100	1100
Attitude Score	Pearson Correlation	0.223[**]	1	– 0.337[**]	– 0.005
	Sig. (2-tailed)	0.000		0.000	0.857
	N	1100	1100	1100	1100
Practice Score	Pearson Correlation	– 0.033	– 0.337[**]	1	0.305[**]
	Sig. (2-tailed)	0.270	0.000		0.000
	N	1100	1100	1100	1100
Health Score	Pearson Correlation	0.093[**]	– 0.005	0.305[**]	1
	Sig. (2-tailed)	0.002	0.857	0.000	

	N	1100	1100	1100	1100

Figure 1: Scatter plots obtained from correlations between various pairs of K-score, A-score, P-score and H-score
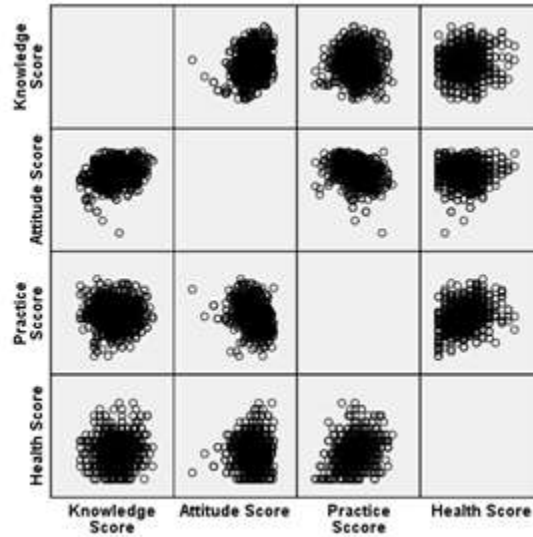
Figure 2: Individual scatter plots obtained from correlations between (a) K-score vs. A-score, (b) K-score vs. P-score, (c) K-score vs. H-score, (d) A-score vs. P-score, (e) A-score vs. H-score and (f) P-score vs. H-score

(a)

(b)

(c)

(d)

(e)

(f)

Discussion

Following inferences may be drawn from Table 1:

a. Significant correlation was found between Knowledge and Attitude (p = 0.000 < 0.01). But the strength of the correlation was weak (Pearson correlation 0.223). The correlation was found to

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be positive, i.e. a person having higher K-score will show higher A-score. Therefore, hypothesis H_1 was accepted.

b. Significant correlation was not found between Knowledge and Practice (p = 0.270 > 0.01) and the strength of the correlation was also very weak (Pearson correlation –0.033). The correlation was found to be negative, i.e. a person having higher K-score did not show higher P-score. Therefore, hypothesis H_2 was rejected. In a study, it has been found that University hostlers knew the importance of fruits but prefer fast food instead. Breakfast skipping is very common [18]. Many children were found to eagerly consume junk food having little knowledge of its bad consequences [19]. A study found that even though people were aware about junk food they had inadequate knowledge and unhealthy food practices were observed among them [18]. In another study although the school children were found to have awareness regarding ill effect of junk food consumption, they are craved for junk food for their taste [20].

c. Significant positive correlation was found between Knowledge and Health (p = 0.002 < 0.01) although the strength of the correlation was weak (Pearson correlation 0.093). The correlation was found to be positive, i.e. a person having higher K-score will show higher H-score. Therefore, hypothesis H_3 was accepted.

d. Significant correlation was found between Attitude and Practice (p = 0.000 < 0.01) although the strength of the correlation was weak (Pearson correlation –0.337). The correlation was found to be negative, i.e. a person having higher A-score will show lesser P-score. Therefore, hypothesis H_4 was accepted.

e. Significant correlation was not found between Attitude and Health (p = 0.857 > 0.01) and the strength of the correlation was also very weak (Pearson correlation –0.005). The correlation was found to be negative, i.e. a person having higher A-score will show lesser H-score. Therefore, hypothesis H_5 was rejected.

f. Significant correlation was found between Junk food practice and Health (p = 0.000 < 0.01) and the strength of the correlation was moderate (Pearson correlation 0.305). The correlation was found to be positive, i.e. a person having higher P-score will show higher H-score. Therefore, hypothesis H_6 was accepted. No significant association was found between Body Mass Index (BMI) and fast food intake [21]. In another study junk food availability did not significantly increase the BMI or obesity among school children. It may be due to limited access [7]. Another researcher tried to find out the effect of junk food consumption on health of adolescents [22].

Conclusion

From the present study it may be concluded that better knowledge about junk food shows better attitude towards junk food. It may also be concluded that very little correlation is present between knowledge and practice of consumption of junk foods or better knowledge about junk food shows lesser Junk food consumption. Further it may be said that better knowledge about junk food shows better health towards junk food although the correlation was very weak. It was also evident that better Attitude about junk food leads to better Practice. Attitude about junk food did not have any correlation with Health of the people. And higher consumption (higher P-score) of junk food was found to lead to poor health (higher H-score). Every aspects of the present study were attempted wholeheartedly in spite of some unavoidable constraints and limitations. So, there may be some incorrectness in this study. For this reason, there is need of some more extensive studies. However, the present study has some scopes for further studies. Study based on socio-economic status or different cultural background may be carried out to correlate the knowledge, attitude, junk food practice and their impact on the health of people. Same may be done with illiterate people as they may not have the formal scientific knowledge but they may be more influenced by the cultural background in selecting food.

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