Demographic variables and nutritional status: A comparative study

Madhumala Kumari, Sharda Kumari and Nishat Shaheen

DOI: https://doi.org/10.22271/allresearch.2020.v6.i9f.7945

Abstract

The purpose of this study was to measure the effect of demographic variables on nutritional status of the respondents. For this 200 adolescents were selected through purposive sampling technique. For collecting demographic information a schedule was prepared. The obtained data were analyzed on percentages of number and the differences of well nourished & under nourished respondents. Results confirmed the hypothesis of difference between well nourished & under nourished in their background variables viz. urban-rural, high socio economic status & low socio economic status and high caste and low castes.

Keywords: well nourished, under nourished, adolescents

Introduction

A socio-psychological study of the well-nourished and under nourished adolescents is important in view of the fact that nutrition plays an extra-ordinary vital role in the rise and growth and decline of the nations because of its effect on health, efficiency and personality as a whole. Corinne H. Robinson (1968) has rightly remarked: “In fact the history of the world could, probably be written in terms of food”. Of course a man can be known by his food habit. It has been rightly said: “you are what you eat”. As a matter of fact, nutrition together with social a psychological factors determine whether a child will realize his full potential.

The present study includes study of adolescents i.e. 12 to 14 years of age or students of class eight & nine. The study will be done by categorizing them into two groups i.e. under-nourished well nourished. The categorization will be done as per their food habits.

It is supposed that there would be difference in the social environment of the well-nourished and under -nourished adolescents and therefore, home environment in general and parent child relationship particular and in addition to it socio-economic status, caste, education, culture and rural-urban background have been taken into consideration. It is also supposed that there would be differences in the personality characteristics of the well-nourished and under nourished adolescents.

Ghazi et al. (2012) conducted study on nutritional status, nutritional habit and breakfast intake in relation to IQ among primary school children in Baghdad City, Iraq. To assess the nutritional status and nutritional habit of primary school children and to relate it with their Intelligence Quotient (IQ) score using standardized tools. A total of 106 children from each school were then identified by stratified random sampling according to grade. The result concluded that the prevalence of malnutrition was 12.1% among Iraqi children. Nutritional status, nutritional habit and breakfast intake were significantly associated with children's intelligence. Malnutrition among children is still to be a public health issue in Iraq and it is affecting the child cognitive function and academic performance at school.

Mujeeb and Visweswara (2000 [9] conducted a study on variations in dietary pattern and nutrient intake of 450 families with 2276 individuals, between 0-50 years age group at Hyderabad. The result showed that almost the intakes of all nutrients lower than requirements (RDA) among low income families whereas upper, middle and high income families consumed more than the recommendation allowance.
Kanjilal et al. (2010) [7]. Has presented paper on to measure the extent of socio-economic inequality in chronic childhood malnutrition across major states of India, using National Family Health Survey-3 data. The result concluded that across the states, a disproportionate burden of stunting was observed among children from poor SES, more so also in urban areas. The state having lower prevalence of chronic childhood malnutrition showed much higher burden among the poor. Babar et al. (2010) [1]. Focused the Impact of socio-economic factors on nutritional status in primary school children. It was a cross sectional survey conducted at Lahore from February to August 2005 among primary schools from public and private sectors to assess the nutritional status of primary school going children age 5-11 years belonging to different socio economic classes of the society. The Result concluded that nutritional status of children from lower socio economic class was poor as compared to their counter parts in upper socio economic class.

Biro et al. (2009) conducted study on environmental influences on scholastic achievement of first-grade elementary school students. A total no of 149 were selected Roma. The result concluded that intellectual abilities were strongly influenced by family SES and family educational climate were most predictive of scholastic achievement.

Ivanovic et al. (2002) presented study on the inter-relationships between nutritional status, brain development and scholastic achievement of Chilean high- school graduates from high and low intellectual quotient and socio-economic status. Result showed that past nutritional status, brain development, child IQ and scholastic achievement are strongly and significantly inter-related.

Suvarna and Itagi (2009) [10]. Conducted study on Nutritional status and level of intelligence of school children. The research study was conducted in Dharwad district during 2005-06 on a 102 rural school children aged between 7 - 10 years. The results indicated that there was no significant difference found in the mean height and weight of boys and girls. The nutritional status was positively correlated with age of children. The nutritional status was positively correlated with intelligence, socio economic status and level of participation. It is highlighted that the nutritional status was positively and significantly correlated (0.67) with level of intelligence.

Basu et al. (2010) [2]. Conducted study on Cognitive Functioning, Personality Variables and Academic Achievement of Hemophilic and Normal Children of Kolkata.24 Hemophilic and adolescents were compared with a matched group. The findings revealed that there was little difference between the two groups in terms of intellectual level, and most dimensions of personality, although the Hemophiliacs fared worse than Norma’s in neuropsychological, social and academic aspects.

**Objective of the study the main objective of the study are**

1) To assess the nutritional status of Respondents of rural & urban background
2) To assess the nutritional status of high-socio economic & low-socio economic Respondents.
3) To assess the nutritional status of a High Castes & Low Castes Respondents.

**Hypothesis**

1) Well-Nourished would differ significantly from under nourished adolescents in their rural-urban background
2) Well-Nourished would differ significantly from under nourished adolescents in their high-socio economic & low-socio economic status.
3) Well-Nourished would differ significantly from under nourished adolescents in their high castes & low castes.

**Methods**

**Sample**
The present study was under taken on a sample of 200 adolescents of Darbhanga district. Purposive sampling technique was used. The age group of the respondent was ranged from 6-18 years.

**Measures**
A schedule was prepared comprising of demographic information like rural-urban Age, Sex, SES & Caste etc.

**Results & Discussion**
The responses obtained on demographic information were statistically analyzed for this study to test the demographic variables t- test was computed. The result is presented in Table-1.1.

| Groups     | N  | Number of | % of | Difference of % between well nourished & under nourished |
|------------|----|-----------|------|----------------------------------------------------------|
| Rural      | 100| 30        | 70   | 40                                                       |
| Urban      | 100| 80        | 20   | 20                                                       |

The table reveals the differences in the background (rural-urban) of the well-nourished and under nourished. Out of 100 respondents having rural background only 30, where found to be well nourished, whereas 70 were under nourished. In terms of percentages the rural background respondents had higher percentage (70%) of under nourished than well-nourished group how had comparatively low percentage (30%) and the difference of percentage between well nourished & under nourished was found to be 40%. As regards urban background out of 100 respondents 80 were found to be well nourished and 20 under nourished. In terms of percentage the urban respondents had higher percentage of well-nourished 80%. Than under nourished respondents who had comparatively lower percentage 20% and the difference of percentage between the two was found to be 20 hence the hypothesis framed in this case was retained.

From the result it is apparent that urban background provided to be more favorable for well-nourished than rural background.
The table indicates the differences in the SES background of the well-nourished & under nourished respondents. Out of 100 respondents having High SES 85 were found to be well nourished whereas 15 were under nourished. In terms of percentages the high SES group respondents has higher percentage 85 of well-nourished than under nourished who had comparatively low percentage 15 and the difference of percentage between well nourished & under nourished was found to be 70. As regards to low SES group, out of 100 respondents 45 were found to be well nourished and 55 under nourished. In terms of percentages the low SES respondents had higher percentage of under nourished 55 then well-nourished respondents who had comparatively low percentage 45 and the differences of percentages between the two was found to be 10. Hence the hypothesis framed in this case is confirmed. From the result it is obvious that high SES background proved to be mere favourable for well-nourished than low SES background.

Table 1.2: Comparison between well-nourished and under nourished respondents of high SES & LOW SES

| Groups    | N  | Number of | % of | Difference in percentage between well nourished & under nourished |
|-----------|----|-----------|------|-------------------------------------------------|
|           |    | Well nourished | Under nourished | Well nourished | Under nourished |
| High ses  | 100 | 85         | 15    | 85      | 15      | 70 |
| Low ses   | 100 | 45         | 55    | 45      | 55      | 10 |

The table reveals that the difference in the high caste low caste respondents of well nourished & under nourished out of 100 respondents belonging to high caste, 68 were well nourished whereas 32 were found to be under nourished. In terms of percentage the high caste respondents had higher percentage 68 of well-nourished than under nourished who had low percentage 32 and the difference of percentages between well nourished & under nourished was found to be 24. As regards low caste, out of 100 respondents 12 were found to be well nourished whereas 88 were under nourished. In terms of percentages of the low castes respondents had lower percentages of well-nourished 8 then under nourished respondents who had higher percentages 88 of under nourished and the difference of percentages between under nourished & well-nourished is 8847. Hence the hypothesis framed in this case is proved. It is because high castes respondents are generally well developed and intellectually superior and so they are supposed to be known more about adequate dietary habits than the low castes respondents who are not so developed.

Conclusion
The well-nourished respondents significantly differed from the under nourished respondents in their demographic variables viz. rural-urban. HSES & LSES & high caste and low castes.

Reference
1. Babar NF, Muzaffar R, Khan MA, Imdad S Impact of socio-economic factors on nutritional status in primary children. J Ayub Med. Coll. Abbottabad 2010;22(4):15-19.
2. Basu J, Chowdhury MR, Mitra AK. Cognitive funder nourishedeating, personality variables and academic achievement of Hemophilic and normal children. Indian Psychol. Studies 2010;55(2):165-171.
3. Hanscombe KB, Traskowski M, Haworth CMA, Davos PSP, Dace PS, Plomin R. Socio-economic status (SES) and children’s Intelligence (IQ). In a UK-Representative Sample SES Moderates the Environmental, Not Genetic, Effect o IQ. PLoS ONE 2012;7(2):e30320. https://doi.org/10.1371/journal.pone.0030320
4. Heaven PCL, Ciarrochi J, Leeson P. Cognitive ability, right-wing authoritarianism, and social dominance orientation: a five-year longitudinal study amongst adolescents. Intelligence 2011;39:15-21.
5. Ivanovic DM, Leiva BP, Pérez HT et al. Head size and intelligence, learning, nutritional status and brain development Head: IQ, learning, nutrition and brew Neuropehysiol. 2004;42(8):111s-31.
6. Jackson RT, Rashed Moraza. Rural urban differences in weight, body image and dieting behaviour among adolescent Egyptian school girls. J Nutr Dietet 2003;42:326.
7. Kanjilal B, Mazamdar PG, Mukherjee M, Rahaman MI 3;H. Nutritional status of children in India: household socio-economic condition as the contextual determinant. International J Equality in Health 2010;9:19.
8. Khalifa AG, Hasaballa F, Tawfik S, Mansour M. Nutritional status and cognitive performance of primary school children relationship to social status and academic achievement. Egyptian J Ped. Neurosc. 2014;1(1):18-32.
9. Mujeeb UR, Rehman Visweswara Rao K. Variations in dietary pattern and nutrient intakes by economic status. The Indian J Nutr. Diete. 2000;37:172.
10. Suvarna K, Itagi SK. Nutritional status and intelligence of school children. Karnataka J Agric. Sci 2009;22(4):874-876.