

General hygiene perception of school going girls: The socio-ecological interpretation

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ABSTRACT: The social ecology of health consists of both socio-economic and bio-ecological services as well as functions. The hygiene perception is contributed by the family education. The Institutional interfaces as well as the school environment so she is thriving with the present study is examine the general hygiene practice of school going girls in terms of 28 exogenous variables.

The study was conducted in some semi-urban area of West Bengal and comprised of 190 respondents, i.e., school going in age category of 10-19 years. The following variables i.e. age, education, parent education, total family income, distance from home to school, BMI, haemoglobin and total calorie from diet have been found significantly correlated with a hygiene perception.

The corresponding stepwise regression analysis conducted on the same evince casual variables that the variable education, distance from home to school, and body of the respondents are functionally critical in characterizing health perception of school going girls. So the variable under consideration can be applied and executed for the creation better hygiene perception, otherwise the evolving motherhood can face a serious catastrophe, good enough to make the family and nation suffering.

Keywords: Hygiene perception, Body weight, Hb4, Serum Albumin, Calorie in diet.

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I. INTRODUCTION

Across the world, the problem of malnutrition has been perceived as the most dangerous and menacing factors towards ensuring a decent and secure livelihood. The situation has gone further worse for some African and South East Asian countries. The problem of malnutrition has got social, political, technical and motivational dimensions as well.

Education being the basic driving force for any economic and social process per se, the school going children need to be focused and attended comprehensively so that they can grow up themselves as the healthy citizens having belligerent mind and body. But unfortunately, almost 80% of the school going children in India are suffering from delirious impact of malnutrition leading to poor performance, malfunctioning, stunted growth, vulnerable to diseases and morbidity and so on.

Malnutrition is not only a biological phenomena, it is a synergy of biophysical as well as social process. Access to food, sufficient and nutritionally rich is also one of the discerning factors that impacts heavily on the nutritional aspects on the school children. The analysis of malnutrition this needs a complex framework gridding all the cognate factors like size of holding, parental education, food intake volume, energy intake, chronological age, ill behavior of agriculture, information seeking behavior, medical and health care and so on.

Mishelle Spence et. al. (2013) had concluded through a semi-structured discussion that elicited participant's perceptions of suggested serving size guidance and explored the influence of personal, social and environmental factors on their food portion size consumption. Seven significant barriers to healthy portion size control were apparent : (1) lack of clarity and irrelevance of suggested serving size guidance; (2) guiltless eating; (3) lack of self-control over food cues; (4) distracted eating; (5) social pressures; (6) emotional eating rewards and (7) quantification habits ingrained from childhood. Portion size control strategies should empower consumers to overcome these effects so that the consumption of appropriate food portion sizes becomes automatic and habitual.

In the year 2010, a study conducted by Neelu Saluja et. al. has concluded after doing a cross-sectional examining data over 800 school children aging between 5-11 leading to the view that 49.5% of them were found to be malnourished out of which Grade I malnutrition was most common (35.5%) followed by grade II (11.4%) and grade III (2.6%) malnutrition. The study has viewed that malnutrition can have serious impact over learning affecting thereby the educational process and the child's intellectual growth. And the effective measurement for preventing such tendency would be the qualitative and quantitative improvements on dietary habits (increased intake of energy, protein, micronutrients) through effective nutritional awareness.

F.C.Blank studied that shortage of important sources of major nutrients like protein, carbohydrate, fat, vitamins and fibers (cereals and cereal products, dairy products, poultry products, animal products, sea foods) in daily diet may result in serious malnutrition and health deterioration.

J. Budhiraja et. al. has also enlightened the major health problems among children in developing countries which has chiefly marked under-nutrition and malnutrition. Apart from food availability, socio-economic and cultural factors may lead to conditioned nutritional status of the people. The study has showed that while 65% of population of the developing countries suffers from malnutrition, women and children constitute bulk of it and that 60% of the girl child were found undernourished.

By using the method of personal interviews employing thereby questionnaires and 24-h dietary recall, Murugkar Dipika Agrahar has studied the nutritional status of *Khasi* girls with age groups of 6-12 in which severe stunting was viewed in all age groups. While most girls of 7-9 were suffering from grade I malnutrition, girls of age group 10-12 years had the highest example of moderate malnutrition. Average energy and protein consumption was found significantly lower than recommended dietary allowance in all the age groups. Implementation of sociologic community factors that require nutritional package with the availability of key nutrients are much required that could ensure the growth in children.

OBJECTIVE

- (1) To delineate the general status of health, nutrition and hygiene status of school going teenage girls living in the study area.
- (2) To identify and customize the perception about general hygiene followed by the target respondent.
- (3) To estimate the level, intensity, direction of interaction between dependent versus independent variable.

II. METHODOLOGY

- [A] **Total number of respondent** : 194 (at random selection)
- [B] **Study area** :North 24 Parganas, West Bengal
- [C] **Dependent Variable** : General Hygiene Perception [Y]measured against 10 point scale.
- [D] **'X' Set of Independent Variable** :

(1)	Age (X_1)	(15)	Waist to Hip Ratio (X_{15})
(2)	Education (X_2)	(16)	Systolic Blood Pressure (X_{16})
(3)	Father's Education (X_3)	(17)	Diastolic Blood Pressure(X_{17})
(4)	Mother's Education (X_4)	(18)	Pulse Rate (X_{18})
(5)	Family Members (X_5)	(19)	Haemoglobin (X_{19})
(6)	Monthly Total Family Income (X_6)	(20)	Serum Total Protein (X_{20})
(7)	Per Capita per month Income (X_7)	(21)	Serum Albumin (X_{21})
(8)	Distance (X_8)	(22)	Serum Globulin (X_{22})
(9)	Watching TV (X_9)	(23)	Serum Albumin-Globulin ratio (X_{23})
(10)	Weight (X_{10})	(24)	Serum Calcium (X_{24})
(11)	Height (X_{11})	(25)	Calorie in diet (X_{25})
(12)	BMI (X_{12})	(26)	Carbohydrate in diet (X_{26})
(13)	Waist Circumference (X_{13})	(27)	Protein in diet (X_{27})

(14)	Hip Circumference (X ₁₄)	(28)	Fat in diet (X ₂₈)
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III. RESULT & DISCUSSION:

3.1 Coefficient of Correlation (r) : General Hygiene Perception (Y) vs. 28 Independent Variables (X₁-X₂₈)

1. It has been found from **Table (1)** that the variables, viz., Age (X₁), Education (X₂), Father's Education (X₃), Mother's Education (X₄), Total Monthly Family Income (X₆), Per Capita per month Income (X₇), Distance from Home to School (X₈), Height (X₁₁), BMI (X₁₂), Haemoglobin (X₁₉), Serum Albumin/Globulin ratio (X₂₃), Serum Calcium (X₂₄), Calorie from diet (X₂₅), Carbohydrate present in diet (X₂₆), Protein present in diet (X₂₇) and Fat present in diet (X₂₈) have recorded positive and significant correlation with the dependent variable general hygiene perception (Y).

2. So, these variables have got significant correlation with general hygiene perception (Y) for these selected respondents.

3.2 Regression Analysis : General Hygiene Perception (Y)-vs.-28 Independent Variables (X₁-X₂₈)

In the **Table (2)**, it shows that the variables, viz., Education (X₂), Distance (X₈) and Weight (X₁₀) have recorded substantive regression effect on hygiene perception (Y²). Parental education helps generate better hygiene perception of the respondents.

3.3 Stepwise Regression Analysis :General Hygiene Perception (Y)-Vs.-03 Independent Variables (X₂,X₈,X₁₀)

Table (3) suggests that the three variables retained at the last step are education (X₂), Distance from home to school (X₈) and Body weight (X₁₀) which have explained together 51.37 per cent of variance embedded with the consequent variable, General Hygiene Perception (Y).

1. Distance of school from the home of respondent has uniquely contributed to the General Hygiene Perception (Y₂). Those who are spending more time while travelling to school may have less time to take care of health and hygiene.

2. The respondents having better body weight are also having better hygiene perception.

Table (1) :Coefficient of Correlation (r) : General Hygiene Perception (Y) vs. 28 Independent Variables (X₁- X₂₈)

SL.	VARIABLES	'r' Value	Remarks	SL.	VARIABLES	'r' Value	Remarks
1	AGE (X ₁)	0.55	**	15	WAIST TO HIP RATIO (X ₁₅)	0.02	
2	EDUCATION (X ₂)	0.58	**	16	SYSTOLIC BLOOD PRESSURE (X ₁₆)	0.13	
3	FATHER'S EDUCATION (X ₃)	0.39	**	17	DIASTOLIC BLOOD PRESSURE (X ₁₇)	-0.18	
4	MOTHER EDUCATION (X ₄)	0.42	**	18	PULSE RATE (X ₁₈)	-0.19	
5	FAMILY MEMBERS (X ₅)	-0.13		19	HAEMOGLOBIN (X ₁₉)	0.16	*
6	TOTAL MONTHLY FAMILY INCOME (X ₆)	0.43	**	20	SERUM TOTAL PROTEIN (X ₂₀)	0.13	
7	PER CAPITA PER MONTH INCOME (X ₇)	0.45	**	21	SERUM ALBUMIN (X ₂₁)	0.01	
8	DISTANCE FROM HOME TO SCHOOL (X ₈)	0.52	**	22	SERUM GLOBULIN (X ₂₂)	0.11	
9	WATCHING TV (X ₉)	-0.05		23	SERUM AL/GL RATIO (X ₂₃)	0.63	**
10	BODY WEIGHT (X ₁₀)	0.58	**	24	SERUM CALCIUM (X ₂₄)	1.00	**
11	HEIGHT (X ₁₁)	0.39	**	25	CALORIE IN DIET (X ₂₅)	0.77	**
12	BMI (X ₁₂)	0.29	**	26	CARBOHYDRATE IN DIET (X ₂₆)	0.32	**

13	WAIST CIRCUMFERENCE (X₁₃)	-0.08		27	TOTAL PROTEIN IN DIET (X₂₇)	0.29	**
14	HIP CIRCUMFERENCE (X₁₄)	0.07		28	FAT IN DIET (X₂₈)	0.66	**

(**) denotes significant at the 0.01 level & (*) denotes significant at the 0.05 level.

MODEL : 1
COEFFICIENT OF CORRELATION (R) :
GENERAL HYGIENE PERCEPTION (Y) VS. 28 INDEPENDENT VARIABLES (X₁-X₂₈)

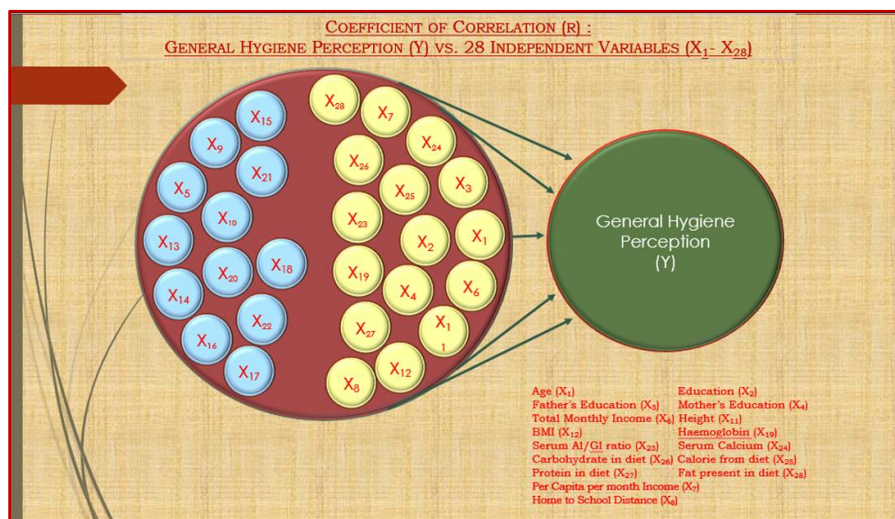


Table (2) : Regression Analysis : General Hygiene Perception (Y)-vs.-28 Independent Variables (X₁-X₂₈)

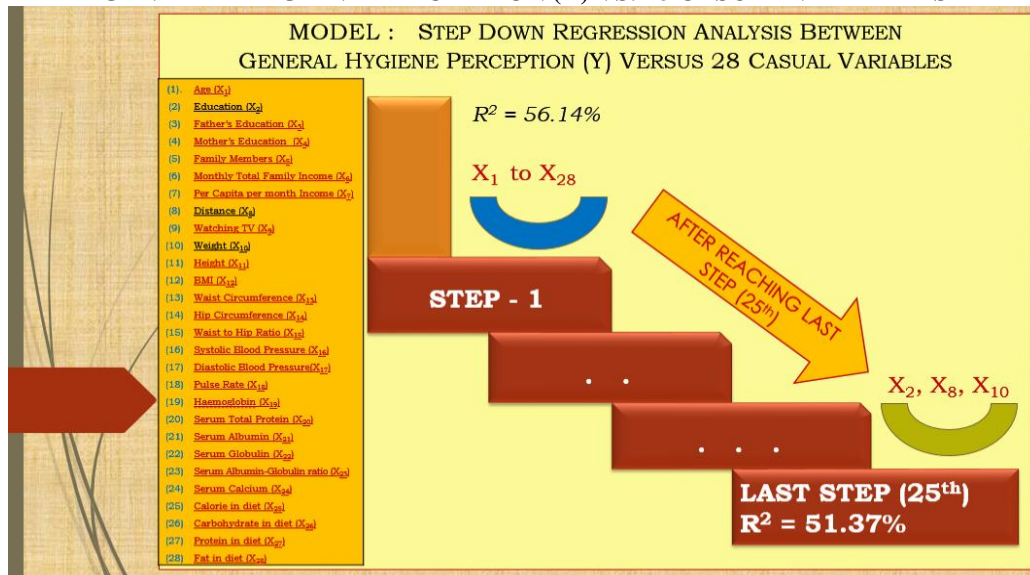
SL.	VARIABLES	BETA	BETA x R (%)	REG. COFF. B	S.E. OF B	T VALUE E
1	Age (X ₁)	-0.118	-11.637	-0.068	0.070	0.974
2	Education (X ₂)	0.480	49.834	0.380	0.095	4.020
3	Father's Education (X ₃)	-0.088	-6.083	-0.024	0.030	0.826
4	Mother Education (X ₄)	0.028	2.053	0.008	0.031	0.259
5	Family Members (X ₅)	-0.075	1.763	-0.092	0.105	0.882
6	Total Monthly Family Income (X ₆)	0.191	14.746	0.000	0.000	0.858
7	Per Capita per month Income (X ₇)	-0.152	-12.266	0.000	0.000	0.667
8	Distance from Home to School (X ₈)	0.320	29.414	0.000	0.000	4.741
9	Watching TV (X ₉)	0.061	-0.557	0.001	0.001	1.029
10	Body Weight (X ₁₀)	0.230	23.862	0.028	0.019	1.476
11	Height (X ₁₁)	0.090	6.223	0.019	0.015	1.225
12	BMI (X ₁₂)	0.018	0.936	0.002	0.006	0.307
13	Waist Circumference (X ₁₃)	-0.147	-11.693	-0.023	0.033	0.710
14	Hip Circumference (X ₁₄)	0.099	8.045	0.014	0.034	0.422
15	Waist to Hip Ratio (X ₁₅)	0.171	3.288	2.500	2.341	1.068
16	Systolic Blood Pressure (X ₁₆)	-0.002	-0.083	0.000	0.005	0.037
17	Diastolic Blood Pressure (X ₁₇)	-0.010	-0.228	-0.001	0.006	0.171
18	Pulse Rate (X ₁₈)	0.057	-0.315	0.006	0.006	0.980
19	Haemoglobin (X ₁₉)	-0.058	0.826	-0.059	0.056	1.042

20	Serum Total Protein (X_{20})	-0.080	-0.942	-0.081	0.075	1.076
21	Serum Albumin (X_{21})	0.017	0.056	0.082	0.289	0.283
22	Serum Globulin (X_{22})	0.082	1.893	0.132	0.203	0.648
23	Serum Al/Gl ratio (X_{23})	0.000	-0.013	0.001	0.372	0.003
24	Serum Calcium (X_{24})	0.014	-0.487	0.011	0.046	0.247
25	Calorie in diet (X_{25})	0.089	2.464	0.000	0.003	0.154
26	Carbohydrate in diet (X_{26})	0.039	0.917	0.110	0.012	0.087
27	Total Protein in diet (X_{27})	-0.112	-1.837	-0.011	0.013	0.868
28	Fat in diet (X_{28})	-0.009	-0.181	-0.002	0.030	0.057
$R^2 = 56.14$ per cent, S.E. = 3.85						

Table (3) : Stepwise Regression Analysis : General Hygiene Perception (Y)-Vs.-03 Independent Variables (X_2, X_8, X_{10})

SL. NO.	VARIABLES	BETA	BETA x R (%)	REG. COFF.B	S.E. OF B	T VALUE
1	Education (X_2)	0.341	38.700	0.270	0.048	5.677
2	Distance (X_8)	0.292	29.324	0.000	0.000	5.214
3	Weight (X_{10})	0.282	31.976	0.035	0.008	4.517
Multiple R-SQ = 51.37%, S.E. = 0.41						

**MODEL : 2
STEP DOWN REGRESSION ANALYSIS BETWEEN
GENERAL HYGIENE PERCEPTION (Y) VS. 28 CASUAL VARIABLES**



IV. SUMMARY & CONCLUSION

The health of a woman is the basic to the development of family, community and nation. The perception about health and hygiene followed by the school going girls is critical during adolescence period. This builds the foundation for general as well as reproductive health of woman.

Health, nutrition and hygiene is integrated to each other, the lapses in any of the component can generate a spillover effect on the other components.

The worsts of the problem and constraints in achieving sustainable health status are the inadequate wrong perception on health, hygiene and nutritional aspects of women.

It is well discerned that the variables, parental education, monthly family income, body weight, blood pressure, macro nutrients present in their diet, BMI, waist hip ratio, serum albumin/globulin ratio etc. are the most striking predictors of health and hygiene perception of the school going girls.

The proposed research has got huge policy implication that can be applied and implicated at the micro level. The entire study suggests that it is essential to generate perceptual learning on health and hygiene that one should go for practical applications at different practices and intervention.

We often commit a mistake in segregating health perception from clinical and medical practices. Health infrastructure is basically the knowledge and perceptual integration on mass people, enrooted deeper into the complex socio ecological function and interaction.

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