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SPECTRUM, ASSOCIATE AND PREDICTORS OF PERCEPTUAL BODY IMAGE OF URBAN ADOLESCENT GIRLS: FINDINGS FOR A COMMUNITY BASED STUDY FROM NORTH INDIA

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ABSTRACT This community based cross sectional study was done to find out Spectrum, Associate and predictors of perceptual body image of urban adolescent girls; findings for a community based study from north India. After obtaining consent of parents and accent of subjects, data was collected from the subjects by interview technique using pre-designed and pretested Performa. Each study subject was specially interviewed for their perception about own body. In order to find out associate of PBI information about possible factors were obtained. Anthropometric measurements (weight and height) were done and their body mass was computed. Data management and statistical analysis: Analysis of data was done for infercial purpose logistic regration analysis was applied. Results: As much as 80.0% and 20% subjects had positive and negative perceptual body image respectively. Mother education, habit of news paper reading daily and sometimes plus ever, self esteem, representation through media , reorganization of westernized diet batter than traditional Indian diet were the significant pridictors of perceptive body image.

KEYWORDS : westernized diet ,perceptive body image,fast food

INTRODUCTION:
In this era of globalization significant changes has taken palace in technology, economy, market, political forces, legal framework, environment and society. Recently phenomenal transformation is being observed in human outlooks and values. This ideation' of body image has significant repercussions on human health in general and on the health of adolescents in particular. Body image it is a complex multidimensional, subjective and dynamic concept that encompasses person's perceptions, thought, feelings, actions about their body and Issues pertaining to corresponding dimensions are perceptive, affective, cognitive and behavioural body image. Body image is not limited to the aesthetic characteristics of a person. It takes into account his/her state of health, skill. One's mentalbody image is established by senses ideas and feelings which most of the time are unconscious. Extend to which and individual is content with their body size and shape, body confidents and body esteem has significant psychological impact which may propel for indicative to change.

Perceptual Body Image (PBI) is influenced by several factors(viz-socio-demographic, environmental factors, relationship with family and friends, exposure to different media, dietary practises, pattern, preferences and knowledge, menstrual practices etc).There is paucity of research on PBI particularly in urban adolescent girls With this background this study was conducted on urban adolescent girls of a district of India to assess extent , associate and predictors of perceptual body image in the study subjects.

METHODS
Setting, Study design, and subjects: This study was conducted in urban area of Varanasi, India. A community based cross-sectional study was conducted among adolescent's girls of age 10 -19 years. Taking prevalence positive perceptive body image as 60%,permissible level of error as 5% (absolute) the sample size worked out to be: 369; multiplying this by design effect(1.5) the sample size became 554.Giving due consideration to a dropout of 10% the final sample size became 615.

Sampling methods: The study sample was selected by adopting multistage sampling procedure.

Data Collection Methods: After obtaining consent of parents and accent of subjects, data was collected from the subjects by interview technique using pre-designed and pretested Performa. Each study subject was specially interviewed for their perception about own body. In order to find out associate of PBI information about possible factors were obtained. Anthropometric measurements (weight and height) were done and their body mass was computed. Data management and statistical analysis: Analysis of data was done using Personal Computer. SPSS 21 version software was used for data analysis in order to pinpoint predictors of PBI significant variables in the univariate analysis were put into the logistic model adjusted odds ratio and 95% confidence interval were computed information pertaining to urban adolescent girls. 2.5. Ethical Consideration: Ethical approval was obtained from Institutional Ethics Committee , of Banaras Hindu University, Varanasi, India

RESULTS AND DISCUSSION:
Extent ofperceptual Body Image:
As much as 80.0% and 20% subjects had positive and negative perceptual body image respectively; positive body image included responses look awe- some (12.5%), feel pretty (23.8%), look attractive (11.5%) and just fair (32.2%). Negative body image included conditions as fatty (41.2%, skinny (15.0% and hate their body (0.8%) (Table- 1).

Table 1: Distribution of subjects according to their perceptual body image

Particulars		No.	%
Positive	Look awesome	77	12.5
	Feel pretty	146	23.8
	Look attractive	71	11.5
	Just fair	198	32.2
Negative	Fatty	26	4.2
	Skinny	92	15
	Hate their body	5	0.8
Total	615	100.0	

Associates of perceptual body image:
Association of perceptual body image (PBI) with socio-demographic profile in given in table 2 .There existed no significant (p>0.05) association of PBI with age, religion, caste, family size, social class and father education. In case of 76.9% subjects from joint / third generation extended families PBI was positive (p<0.01). As much as 77.1%, 89.0%, 79.6% subjects with mother education as NA/ illiterate/ primary/ middle, high school and intermediate as well as graduate and post graduate degree had positive PBI (<0.05).

Table-2:Association of perceptual body image with socio-demographic profile.

Parameter		Perceptual Body Image				Total
		Positive		Negative		
		No.	%	No.	%	No.
Age	<15	249	81.1	58	18.9	307
	16-17	159	79.1	42	20.9	201
	18-19	84	78.5	23	21.5	107
	χ2=0.486; df=2; p=0.784					
Religion	Hindu	474	80.6	114	19.4	588
	Muslim	18	66.7	9	33.3	27
	χ2=3.13; df=1; p=0.096					
Caste	SC/ST	110	74.8	37	25.2	147
	OBC	256	83.4	51	16.6	307
	Others	126	78.3	35	21.7	151
	χ2=4.96; df=2; p=0.084					
Family Size	<5	272	78.6	74	21.4	346
	5-8	171	82.2	37	17.8	208
	≥8	49	80.3	12	19.7	61
	χ2=1.05; df=2; p=0.590					
Type of Family	Nuclear	306	76.9	92	23.1	398
	Joint/Third gen/Extended	186	85.7	31	14.3	217
	χ2=6.84; df=1; p=0.005					
Social class	26-29/16-25	194	79.2	51	20.8	245
	11-15	158	84.9	28	15.1	186
	5-10/<5	140	76.1	44	23.9	184
	χ2=4.70; df=2; p=0.095					
Mother education	NA/Illiterate/Primary/Middle	270	77.1	80	22.9	350
	High School	105	89.0	13	11.0	118
	Intermediate, Bachelor Degree, Post Graduate	117	79.6	30	20.4	147
	χ2=7.75; df=2; p=0.021					
Father education	NA/Illiterate/primary/middle	158	77.1	47	22.9	205
	High school	98	83.1	20	16.9	118
	Intermediate, Bachelor & Post Graduate degree	236	80.8	56	19.2	292
	χ2= 1.90; df= 2; p= 0.385					

Association of perceptual body image (PBI) with environmental factors (viz dwelling ownership, place of kitchen and type of fuel used for cooking) was not statistically significant. There existed no significant (p>0.05) association of perceptual body image with relationship of subjects with father, mother, brother, sister, peers and in sharing heartfelt feeling with mother/sisters and others. There existed significant association of perceptual body image (PBI) with habit of news paper reading and watching TV and media representation of positive self esteem. As much as 70.7%, 84.9% and 81.3% subjectswit habit of newspaper reading 3-4 day per week, 3-4 days per month and sometimes/ never had positive PBI. In case of 82.3% subjects with habit of watching TV daily their perceptive body image was positive, corresponding value for habit of watching TV 3-4 days per week and 3 to 4 days per months and sometimes/ never were 76.6% and 69.8%. As much as 84.6% and 71.0% with media representation of positive and negative self-esteem their PBI and positive and negative, respectively. Association of PBI with exposure of media, health image to follow, was feeling about one self. Comparing with others was not statistically significant (Table- 3).

Table 3: Association of perceptual body image with exposure to different media

Parameter		Perceptual Body Image				Total
		Positive		Negative		
		No.	%	No.	%	No.
Habit of Newspaper						
Habit of News Paper reading	Daily	94	70.7	39	29.3	133
	3-4 days/one week/month	146	84.9	26	15.1	172
	Sometimes/never	252	81.3	58	18.7	310
	χ2=10.11; df=2; p=0.006					
Habit of watching TV	Daily	363	82.3	78	17.7	441
	3-4 days/one week/month	85	76.6	26	23.4	111
	Sometimes/never	44	69.8	19	30.2	63
	χ2=6.35; df=2; p=0.042					
Exposure to Different Media						
News paper	Expose to other media	103	80.5	25	19.5	128
	Expose only News paper	389	79.9	98	20.1	487
	χ2=0.022; df=1; p=0.496					
Computer	Expose to other media	209	82.6	44	17.4	253
	Expose only Computer	283	78.2	79	21.8	362
	χ2=1.82; df=1; p=0.105					
Television	Expose to other media	64	82.1	14	17.9	78
	Expose only Television	428	79.7	109	20.3	537
	χ2=0.235; df=1; p=0.377					
Mobile	Expose to other media	351	81.4	80	18.6	431
	Expose only Mobile	141	76.6	43	23.4	184
	χ2=1.86; df=1; p=0.106					
Influence of media	Yes	342	81.8	76	18.2	418
	No	150	76.1	47	23.9	197
	χ2=2.69; df=1; p=0.064					
Healthy image to follow	Yes	331	80.0	83	20.0	414
	No	161	80.1	40	19.9	201
	χ2=0.002; df=1; p=0.529					
Feeling about oneself	Good	379	80.3	93	19.7	472
	Indifferent/Frustrated/NA	113	79.0	30	21.0	143
	χ2=0.112; df=1; p=0.410					
Media representation of positive self esteem	Yes	345	84.6	63	15.4	408
	No	147	71.0	60	29.0	207
	χ2=15.7; df=1; p=0.000					
Comparing with others	Yes	375	80.6	90	19.4	465
	No	117	78.0	33	22.0	150
	χ2=496; df=1; p=0.276					

Association of perceptual body image (PBI) with dietary practices pattern, preference and knowledge is given in table (4.4.1-F) extent of positive PBI was significantly more P<0.05 in subjects not agreeing with statement westernized diet is better than traditional Indian diet than in those (83.2%) with positive view. As much as (83.5%) and (69.1%) subjects with preference and non-preference for traditional Indian diet had positive perception body image (p<0.01). As much as 84.5% subjects strongly agreed/agreed with the statement branding affects choice of fast food had positive PBI corresponding value for subject disagreed on the statement had 67.6% and 72.1% had positive PBI. As much as 77.5% and 86.1% subjects with protein intake <100% RDA and >100% of RDA had positive

perception body image, corresponding value for energy intake were 77.9% and 84.2%. There existed no significant (p>0.05) association of PBI prices influence choice of fast food, ingredient present in fast food will affect your body, disease from taking fast food frequently mental health, number of time a week you consume fast food, RDA fat, vitamin A, vitamin C, Calcium and BMI (Table-4).

Table 4: Association of perceptual body image with dietary practices , pattern, preferences and knowledge

Parameter		Perceptual Body Image				Total
		Positive		Negative		
		No.	%	No.	%	No.
Nature of Diet	Vegetarian	168	84.4	31	15.6	199
	Non-Vegetarian/ Eggetarian	135	77.6	39	22.4	174
	Occasional non vegetarian	189	78.1	53	21.9	242
	χ2=3.61; df=2; p=0.164					
Awareness about fast food	Never	97	78.2	27	21.8	124
	Sometime	314	81.1	73	18.9	387
	Always	81	77.9	23	22.1	104
	χ2=0.847; df=2; p=0.655					
Westernized diet is better than traditional Indian diet	Yes	199	75.7	64	24.3	263
	No	293	83.2	59	16.8	352
	χ2=5.39; df=1; p=0.013					
Prefer traditional Indian food	Yes	389	83.5	77	16.5	466
	No	103	69.1	46	30.9	149
	χ2=14.52; df=1; p=0.000					
Branding affects chose of fast foods	Strongly Agree/agree	354	84.5	65	15.5	419
	Neutral	50	67.6	24	32.4	74
	Disagree/ strongly disagree	88	72.1	34	27.9	122
	χ2=17.1; df=2; p=0.000					
Prices influence choice of foods	Strongly Agree/ agree	312	81.3	72	18.8	384
	Neutral	67	77.9	19	22.1	85
	Disagree/ strongly disagree	113	77.9	32	22.1	145
	χ2=0.998; df=2; p=0.607					
Fast food restaurant or home delivery	Burger/Fries/ Pizza/Fried Chicken	284	82.1	62	17.9	345
	Sandwich/ Ice cream/ Others/ Na	208	77.3	61	22.7	269
	χ2=2.14; df=1; p=0.087					
Ingredient will affect your body	Know-ledgeable	170	82.1	37	17.9	207
	Not Know-ledgeable	322	78.9	86	21.1	408
	χ2=0.881; df=1; p=0.203					
Disease from taking fast food frequently	Know-ledgeable	333	80.4	81	19.6	414
	Not Know-ledgeable	159	79.1	42	20.9	201
	χ2=0.150; df=1; p=0.387					
Mental Health	Know-ledgeable	181	81.9	40	18.1	221
	Not Know-ledgeable	311	78.9	83	21.1	394
	χ2=0.779; df=1; p=0.219					
Number of times a week you consume fast food	NA/1-2 times	339	79.8	86	20.2	425
	3-4 times/>5	153	80.5	37	19.5	190
	χ2=0.48; df=1; p=0.460					
RDA Protein	<100	337	77.5	98	22.5	435
	>100	145	86.1	25	13.9	180
	χ2=5.940; df=1; p=0.009					
RDA Fat	<100	457	80.5	111	19.5	568
	>100	35	74.5	12	25.5	47
	χ2=0.973; df=1; p=0.209					
RDA Calories	<100	321	77.9	91	22.1	212
	>100	171	84.2	32	15.8	203
	χ2=3.39; df=1; p=0.040					
RDA Iron	<60	26	72.2		27.8	36
	60.1-80	438	79.9	110	20.1	548
	80.1-100	28	90.3	3	9.7	31
	χ2=3.427; df=2; p=0.180					
RDA Vitamin A	<100	140	78.2	39	21.8	179
	>100	352	80.7	84	19.3	436
	χ2=0.504; df=1; p=0.273					
RDA Vitamin C	<100	491	80.0	123	20	614
	>100	1	100	0	0	1
	χ2=0.250; df=1; p=0.800					
RDA Calcium	<100	307	79.1	81	20.9	388
	>100	185	81.5	42	18.5	227
	χ2=0.504; df=1; p=0.274					
BMI	Under weight	147	78.6	40	21.4	187
	Healthy range	305	81.6	69	18.4	374
	Overweight/ obese	40	74.1	14	25.9	54
	χ2=1.97; df=2; p=0.373					

None of the menstruation and BMI practices (viz type of pad, mode of disposal of pads and matter avoided to male person) were significantly associated with perceptual body image of subjects. Importance given to appearance did not significantly (p>0.05) influence perceptual body image of the subjects .

Predictors of body image :
Perceptual body image of the several, significant variable univariate analysis affect of type of family, habit of watching TV and RDA calories got eliminated. Taking mother's education high school as reference it was found that subjects with mother's education as middle or less had significantly higher. AOR (2.58, CI 1.32- 5.04).for adverse perceptive body image. Significantly higher AORs, for negative perceptive body image was found for subjects with habit of reading newspapers daily (2.89; CI 1.4- 5.60) and sometimes plus ever (2.08; CI 1.22- 3.55). When self esteam representation through media as Yes was taken as reference (AOR 2.46; CI 1.54-3.93). After taking "westernized diet" is better than traditional India diet as reference AOR was 2.06 (CI 1.32 – 3.20) for Yes category. Negative perceptive body image in subjects. When strongly agree / agree was taken reference for "Branding affects choice food" AOR for negative PBI was 3.0 (CI 1.62- 5.53) for subjects with neutral response. AOR for negative perceptive body image was 2.06 (95% CI 1.05 – 4.02) in subjects with protein intake less than <100 of RDA.

Table- 5: Logistic Regression for perceptual body image.

Particulars		β	SE	P value	AOR	95% CI	
						Lower	Upper
Type of Family	Nuclear	0.47	0.29	0.57	1.60	0.98	2.61
	Joint/ Third	---	---	---	---	---	---

	generation (R)						
Mother Education	Middle or Less	0.95	0.34	0.005	2.58	1.32	5.04
	Intermediate & above	0.45	0.28	0.107	.57	0.91	2.71
	High School (R)	---	---	---	---	---	---
Habit of reading News-paper	Daily	1.06	0.34	0.002	2.89	1.49	5.60
	Sometimes plus ever	0.73	0.27	0.007	2.08	1.22	3.55
	3-4 days/ week + 3-4 days per month	---	---	---	---	---	---
Habit of waiting TV	3-4 days/week + 3-4 days per	0.58	0.34	0.095	1.78	0.90	3.50
	Sometimes and ever	0.22	0.42	0.608	1.24	0.54	2.83
	Daily	---	---	---	---	---	---
Self esteem represen-tation through media	No	0.90	0.24	0.000	2.46	1.54	3.93
	Yes (R)	---	---	---	---	---	---
Wester-nized diet better than Tradi-tional Indian diet	Yes	0.72	0.23	0.001	2.06	1.32	3.20
	No	---	---	---	---	---	---
Prefer Tradition al Indian diet	No	0.68	0.24	0.006	1.97	1.22	3.17
	Yes	---	---	---	---	---	---
Branding affect choice of food	Neutral	1.10	0.31	0.000	3.00	1.62	5.53
	Disagree/ Strongly disagree	---	---	202	1.57	0.78	3.14
	Strongly disagree/ agree	---	---	---	---	---	---
RDA Protein	<100	0.72	0.34	0.034	2.06	1.05	4.02
	>100	---	---	---	---	---	---
RDA Calories	<100	0.27	0.31	0.389	1.31	0.710	2.41
	>100	---	---	---	---	---	---

CONCLUSION:

Findings of the study provides significant input for strategies planning to improve perceptual body image taking into consideration its various predictors. Approaches to upscale perceptive body image must focus on primary secondary tertiary [1]. There is need and scope for adopting healthy dietary practices. Consumption of fast food and westernized food culture in college and university setup need to be curbed [2]. Tackling fast food means is need of the hour in all age groups in general and in adolescent girls in particular[3,4].

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