NUTRITIONAL STATUS OF ADULT SLUM DWELLERS OF MIDNAPORE TOWN, WEST BENGAL, INDIA

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SUMMARY OF THE Ph.D. THESIS SUBMITTED TO VIDYASAGAR UNIVERSITY FOR THE AWARD OF DOCTOR OF PHILOSOPHY (SCIENCE) DEGREE IN ANTHROPOLOGY

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SUMMARY OF THE Ph.D. THESIS

OBJECTIVE: The primary purpose of the present study was to investigate the interrelations of socio-demographic variables with anthropometric and body composition characteristics and nutritional status among the adult slum dwellers. The present study also attempted to evaluate age and sex variations in nutritional status of the subjects.

DESIGN: Fieldwork based cross-sectional study.

SETTING: The survey was carried out among the adult male and female slum dwellers in seven slums of Midnapore town. The administrative location of the field area falls within the Midnapore town in the district of Paschim Medinipore, West Bengal, India.

SUBJECTS: Total 1000 adult male and female slum dwellers (males=494, females=506, aged 18-81 years (males=mean 34.75 years, SD ± 14.72 years and females=mean 37.05 years, SD ± 14.24 years) were studied. Most of the subjects are engaged in so called jobs of low socio-economic status, such as Municipality sweeper, rickshaw-puller, day-labourers, maid servent etc.

METHODS: Relevant qualitative data were collected through personal interview. Authentication of age, sex and ethnicity were cross-checked from their voter card. Total 14 anthropometric measurements (height, weight, sitting height, height acromion, 4 circumferences and 6 skinfolds) were taken on each subject following standard protocol. Additionally, 14 derivative variables on different aspects were incorporated for final analyses following the objectives of the study. The subjects were classified into five age groups: 18-29.9 years (n = males 238, females 186), 30-39.9 (n = males105, females 119), 40-49.9 (n =males 61, females 98), 50-59.9 (n =males 46, females 55) and 60 and above (n = males 44, females 48). Anthropometry, body composition and nutritional status have been assessed using anthropometric measurements. Socio-demographic data collected using standard questionnaire. Intra-observer technical errors of measurements were taken into consideration. Necessary statistical tests were performed as per requirements.

RESULTS: The percentages of manual and non manual occupation of males and females were 55.06%, 37.94% and 44.94%, 62.06% respectively. The slum dwellers are high proportion of literate and very lower rate of higher education. The male slum dwellers have higher MFI and MPCI than female slum dwellers. The maximum slum dwellers of the present studies lives in their own house. The percentage of brick walled house of male and female slum dwellers are higher than other wall categories. 34.62% of males and 21.34% of females had separate toilet and 52.22% of males and 68.98%of females had common toilet. 13.16% of males and 9.68% of females had no toilet at all. The prevalence of self-reported morbidity of the subjects reported illness during last four weeks to one year prior to the day of anthropometric measurements, 24.49% of the males and 23.91% of females reported some kind of illness, whereas 75.51% of the males and 76.09% of the females had not any illness. There is significant occupation difference in wall type, roof type and sanitation type but there is no significant occupation difference in house type among male and female slum dwellers of present study. There is significant monthly family income group difference in wall type and roof type but there is no significant monthly family income group difference in house type among male and female slum dwellers of present study. However, there is significant MFIG difference in sanitation type of males but there is no significant MFIG difference in sanitation type of females.

The sex differences of all the anthropometric, adiposity and body composition variables except waist circumference and BMI of slum dwellers are statistically significant at the 0.05 level. The mean differences of HT, WT, SHT, HTAC, WC, SUBSF and SUPSF between age groups of males are statistically significant at the level 0.05 but the mean differences of MUAC, CC, HC, TSF, BSF, MCSF and ATSF between age groups of males are not statistically significant at the level 0.05. The mean differences of HT, SHT, WC, HC, MCSF and ATSF between age groups of females are statistically significant at the level 0.05 but the mean differences of WT, HTAC, MUAC, CC, TSF, BSF, SUBSF and SUPSF between age groups of females are not statistically significant at the level 0.05. The mean differences of WHR, WHTR, CI, SumSFT and SumSFUEX between age groups of males are statistically significant at the level 0.05 but the mean differences of BMI, SumALSF, SumSFEX and SumSFLEX between age groups of males are not statistically significant at the level 0.05. The mean differences of WHTR, CI, SumSFEX and SumSFLEX between age

groups of females are statistically significant at the level 0.05 but the mean differences of BMI, WHR, SumALSF, SumSFT and SumSFUEX between age groups of females are not statistically significant at the level 0.05. The mean differences of FFM between age groups of males are statistically significant at the level 0.05 but the mean differences of PBF, FM, FMI and FFMI between age groups of males are not statistically significant at the level 0.05. The mean differences of FFM and FFMI between age groups of females are statistically significant at the level 0.05 but the mean differences of PBF, FM and FMI between age groups of females are not statistically significant at the level 0.05.

The overall percentage of CED (based on BMI) of males and females are 20.85% and 24.31% respectively. The overall percentages of undernutrition (based on MUAC) of males are 40.49 % and females are 51.78% respectively. There is significant age group differences in nutritional status based on BMI of adult male slum dwellers but there is no significant age group differences in nutritional status based on BMI of adult female slum dwellers. There is no significant occupation and education difference in nutritional status among slum dwellers of Midnapore town.

CONCLUSIONS: The findings of the present research investigation constitute the most comprehensive and extensive socio-demographic and anthropometric information of the adult male and female slum dwellers to date. These would be useful as a comparative database for other population studies in India. The present research provides some important findings on adiposity, subcutaneous fat patterning and body composition of the adult male and females slum dwellers. Based on WHO classification, the prevalence of CED among this population was high (20-39%) and thus, the situation is serious in both sexes. These rates were, in general, lower than the recently reported studies.