



COMPARATIVE STUDY ON BODY COMPOSITION AND HEALTH FACTORS STATUS OF FEMALE PRIMARY TEACHERS OF KENDRIYA VIDYALAYA SANGATHAN SCHOOLS

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ABSTRACT

The objective of the study was to assess the status of various body composition and health factors of Primary Teachers of KVS Schools in Delhi-NCR. In KVS Schools, Primary Teachers look after the physical education activities for students upto 5th standard. The research scholar was intended to compare their health status factors with standardized values. InBody Composition Analyzer Machine was used to collect body composition data from 599 Female Primary Teachers from Kendriya Vidyalaya Sangathan Schools in Delhi-NCR. The study was conducted on selected variables i.e., Body Fat %, BMI and WHR. Sample t-test was applied to make comparison of selected variables with standardized values and the obtained result proved that female teachers are possessing significantly higher body fat%, BMI and WHR. It is obvious that higher obtained values of selected variables making teachers more vulnerable to various diseases.

Keywords: BMI, WHR, BMR and Health Factors.

INTRODUCTION

Teacher stress impacts teacher health and well-being, work attitudes (e.g. job satisfaction), and turnover. Teacher stress is linked to teaching performance and student

academic outcomes. Over the past years, teaching has become increasingly stressful. Today, teaching is one of the most stressful occupations. High stress levels are causing teachers to leave their profession, which causes instability among staff, students, and the community 'Teachers professional activities are usually formed of physical activities based upon repetition and monotony. Connected to these activities' energy consumption falls down, increase of weight occurs and it becomes difficult to keep the body composition. In accordance with body weight percentage women have more tendencies to get on weight when compared with men (Wing, 1995). So as to keep an ideal body composition, there is a necessity of not only adequate and well-balanced nourishment, but also a life style maintained by regular exercise habituation. Healthy life-style behaviour aren't oriented on prevention of any of an illness or discomfort but have purpose to improve general health and well-being circumstances of individuals (Pender, 1987; Redland and Stuijbergen, 1993). At the present day it's mentioned that most of the health problems result from inactive life style and the reality of the fact that there isn't an attitude and behavior corresponding to health (Pender, 1987; Redland and Stuijbergen,



1993). The extensive researches had done on large resident communities gives us opinion on that inactive life styles cause peoples' various chronic diseases (Costanzo et al, 2006; Lees and Booth, 2005). The countries falling outside normal body weight limitations, not only weakness but also obesity presents dissimilarities in both developed and developing countries. On one hand weakness is seen as an important health problem in countries which has general scarcity of food on the other hand obesity is a health problem in the front rank in developed and developing countries. Obesity is a community health problem at global dimension and at same time is an economical problem and the prevalence rates are increasing correspondingly all over the world (Bjorntorp, 2001). Anyway, profession of teaching attained professional occupation peculiar to itself demands specialization in a definite field, academic study, occupations training education and university diploma. It's also observed that such as the other individuals of the public, educators (teachers) encounter health problems body composition variation, excessive weight and obesity health problems result from our daily immobile and unhealthy life styles.

Keeping the purpose of the study, it was also hypothesized that there would be significant difference between the status selected health variables of female primary teachers with their respective ideal values for selected variables. The present study was delimited to 1) teachers belonging to Primary teaching only, 2) female teachers belonging to K.V.S Schools of Delhi-NCR region only, 3) teachers aged between 25-60 years of age. The findings of this study had to be seen in light of some limitations which are as follows: 1) Lifestyle of the teachers and 2) Diet & Nutrition status of

teachers. The study would profile the lifestyle and health behaviors of Primary teachers. The study would provide relevant information of health status of teachers and would-be eye opener for society or health experts regarding the prevailing trend of individual behavior and its health consequences. The assessment of selected variables would help to know about the health status and lifestyle patterns of Teachers will be of high significance. The study would enable better policy framing health promotion measures in general and for teachers in specific. The study will provide guideline to Primary teachers investigate Body Mass Index and Body Composition. The study will serve as a motivational force to the Teachers to minimize the problems related to obesity. This study may assist Primary teachers Grading and classifying the Body Mass Index. The result of the study will be helpful for the women's which are related to the other field. The Study would provide relevant data for comparative survey of similar nature on wider population.

METHODOLOGY

Female Primary teachers of the Kendriya Vidyalaya Sangathan Schools were randomly selected for the study. The age of subject was between 25-55 years. Variable selected were Body Composition, Height, Weight (kg), Body Mass Index, Percent Body Fat and Waist-Hip ratio.

The reliability of data was established following the instrument's reliability and tester competency. Estimation of Body composition variables was done with the help of Body Composition Analyser- Machine. All the instruments such Analyzer machine is of high quality, manufactured by reputed companies and the results showed excellent accuracy.



The testing procedure was started after establishing the instruments reliability.

The researcher was explaining the study to the subjects & asked for their support & sincere participation in the study. Necessary instructions were given before Body Composition Test and Anthropometric Measurement. The subjects were ensured of confidentiality of their data and responses (if any). After making sure the subjects have understood the instructions, the test was administered. Weight, Body Mass Index and Body Fat% were obtained from the test conducted by InBody Body Composition Analyser machine and Anthropometric measurement of hip and waist from Anthropometric tape as well.

The status of health condition of primary teachers, descriptive statistics (mean, standard deviation) was calculated. In order to conduct the comparison between selected variables with the standardized value, sample t-test was executed using SPSS version 16 software. In all the cases of inferential statistics, 0.05 level of significance will be fixed to test the hypothesis.

RESULT OF THE STUDY AND DISCUSSION ON FINDINGS

In order to make a better understanding on the topic, not only data was surveyed among Primary Teachers of KVS Schools (Delhi-NCR) on selected variables i.e., Body Fat %, BMI and WHR. Rather, there were many appropriate statistical techniques applied to analyze raw data and many objectives were fulfilled. The objectives of the research were as follows: 1) To assess the health status of Female Primary teachers on selected variables i.e. Body Fat %, BMI and WHR, 2) To compare the health status of female primary teachers with standard recommended

values. There were 600 female primary teachers participated in this research. The minimum age of the teachers was 25 years and maximum age for the same was 60 years. Mean and standard deviation value for the age of male teachers was 38.91 ± 9.879 and the mean value for height and weight of the same subjects were found to be 155.76 ± 5.576 and 66.070 ± 11.05 respectively.

TABLE 1
DESCRIPTIVE STATISTICS FOR HEALTH VARIABLES OF
PRIMARY TEACHERS FROM KVS SCHOOLS

	Age	Height	Weight	BMI	Fat%	WHR
Mean	38.91	155.76	66.070	27.254	41.988	.936
SD	9.879	5.576	11.0500	4.4565	6.0563	.0576
Min.	25	134	36.9	17.2	18.1	.7
Max	60	173	104.1	45.3	55.7	1.2

As far as health status of female primary teachers was concerned, the mean value for BMI, Fat% and WHR were found to be 27.254 ± 4.4565 , 41.988 ± 6.0563 and 0.936 ± 0.0576 . Data normality assessment proved that there is divergency in normality of data distribution. Therefore, data transformation was performed to establish the randomness of the data before conducting inferential statistics further. Data transformation helped in fixing the non-normality in data distribution with reliable skewness and kurtosis values. Shapiro-Wilk test of normality was also found insignificant to develop randomized data. This helped researchers to fulfil all the assumptions of performing comparative statistics for further analysis.



TABLE 2
ONE SAMPLE T-TEST RESULT FOR SELECTED HEALTH
STATUS VARIABLES

	t	df	Sig. (2-tailed)	Mean Difference
BMI_F	24.951	598	.000	4.50420
Fat%_F	81.466	598	.000	19.98790
WHR_F	58.458	598	.000	.13601

Thereafter, health status of Female Primary Teachers was assessed by applying One sample t-test. In this case, only BMI, Fat% and WHR were considered for comparison testing. The obtained result depicted both the genders having significantly more BMI, Fat% and WHR. Ultimately, the result here proved that the female primary teachers of KVS Schools (Delhi-NCR) manifested unhealthy status.

CONCLUSIONS

On the basis of objectives of the study and result obtained after statistical application, the following conclusions were drawn - In case of female primary teachers, it was concluded that most of the teachers (more than 68% of total) are above normal range of BMI. Around 96% of total female primary teachers possess extremely high fat percentage (more than 32% of total body weight). Therefore, it may conclude that female teachers are highly susceptible to various medical condition associated with obesity. It was also concluded that majority of female primary teachers are not into a good body shape and they are into increased high-risk zone. It was concluded that all the health variables of female primary teachers also are not associated with each other. It was also concluded that majority of female primary teachers are into the higher categories than recommended standard values on health status indicator i.e. BMI, Fat Percentage and WHR. Hence, they are into the higher risk of developing various diseases.

Above mentioned conclusions and finding has revealed many facts and filled the gap in information available regarding relationship of various health status indicators of Primary Teachers from KVS Schools (Delhi-NCR). Now, following recommendations are made with future research perspective: Female primary teachers are in worst condition. Therefore, it was highly recommended to mandatorily adopt good health practices on a constant basis. Similar study can be taken on other professionals as well. It was recommended that similar study can be carried out on teachers of other organisations as well. Similar study can also be conducted on a bigger population size. A study can be conducted with including more health and body composition variables. Further, a prediction research can be conducted to identify the health variables that should be stressed for better health condition. Similarly, a research on factor analysis can be conducted to identify the health variables contributing the most to our health condition.

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