STUDY ON ANXIETY AND SELECTED PHYSIOLOGICAL VARIABLES OF AGED SCHOOL-TEACHERS

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Abstract

Introduction:Anxiety is the natural response of our body against chronic stress It is normal to feel anxious at some moments. But people with anxiety disorder feel the same type of feelings all the time. The purpose of the study was to find out the relation of anxiety level and some selected physiological factors of aged school-teachers.

Materials and Methods: For the present study the researcher randomly selected 80 school teachers. Among them 40 were male(Average 50.725 years) and 40 were female (Average 51.125 years). The Anxiety level was measured by a standardized set of questionnaire. The physiological variables were blood glucose level-PP(mg/dl), heart rate(b/m), systolic blood pressure (mmHg), diastolic blood pressure (mmHg)and BMI (Kg/M2).Coefficient of correlation of physiological variables with Stress level was calculated at 0.05 level of significance.

Results and Discussion:The result showed the coefficient of correlation ofBlood Glucose Level, Heart Rate, Systolic Blood Pressure, Diastolic Blood Pressure and BMI with Anxiety was 0.313, 0.198, 0.467, 0.307 and 0.398in case of male teachers and 0.344, 0.338, 0.310, 0.423 and 0.369 in case of female teachers subsequently.In the present study it was found that all the variables showed a positive coefficient of correlation with anxiety level of the aged school-teachers.

Conclusion:From the above discussion it may be concluded that persons with high anxiety level have high Blood Glucose Level, Heart Rate, Blood Pressure and BMI; and persons with less anxietylevel have low Blood Glucose Level, Heart Rate, Blood Pressure and BMI.

Keywords: Stress, Blood Glucose Level, Heart Rate,Blood Pressure and BMI.

INTRODUCTION

Anxiety is the natural response of our body against chronic stress. It is like a kind of fear of the forthcoming future. It is normal to feel anxious at some moments. But people with anxiety disorder feel the same type of feelings all the time. Surely it is a mental state or sometime mental disorder. Anxiety is the result of stress in human mind.

Blood glucose is the amount of glucose present in our blood in a particular point of time. We need energy to do every works every day. This energy majorly comes from the glucose. Glucose is the simplest form of every type of carbohydrates that we have. The amount of glucose present in our blood is regulated by a mixed gland, named pancreas by Insulin hormone.

Heart rate is the number of complete cardiac cycle that a heart completes in a minute. This is measured by beats per minutes. Heart beat in resting phase denotes the physical fitness level of a person in healthy condition. Generally for common people the normal resting heart rate ranges between 72 and 75 beats per minute. If a healthy person in resting condition have less than 60 beats per minute is known as Bradycardia.

Blood pressure is the amount of pressure created by the blood on the walls of the arteries and vain. Generally this depends on the girth of the blood vessels. The narrower the blood vessels are the more pressure will be created by the blood and on the other hand the broader the blood vessels are the less pressure will be created by the blood. This is of two types – systolic and diastolic blood pressure.

BMI is known as Body Mass Index. It is a index that denotes the level of obesity that a person have. It basically the value of Weight in kilogram divided by the square value of height of a person in meter. The unit by which it is measured is Kg/m2.

Objective of the study:

1.   The objective of the study was to find out if there is any relation between anxiety level and blood glucose level, heart rate, systolic and diastolic blood pressure and BMI.

METHODOLOGY

Selection of the subjects:

The researcher selected 80 school teachers of age 45 years and above as subjects. Among the subjects 40 were male (Average 50.725 years age) and 40 were female (Average 51.125 years age). Those who were selected as subjects were teachers of different subjects of different schools of a block named Bhagwanpur – II, in Purba Medinipur district of west Bengal. Those persons who were selected as subjects were state government employee of West Bengal.

Selection of the Variables:

The variables selected for the study are –

I) Personal Data:

A: Age: Date of the subjects were asked, from which the age was calculated.

B: Height: Stadiometer was used to measure the height of the subjects.

C: Weight: Weight of the subjects was measures in Kg by using weighing machine.

II) Anxiety Level: A standardized set of questionnaire prepared by Pallavi Bhatnagar(2018) was used to measure the anxiety level of the subjects. The questionnaire was distributed among them and they were directed as "We all experience stress in our lives. I will be asking you few questions regarding everyday stress that you feel. If you experience them often then answer in 'Yes'. Your answers will be kept confidential, so be honest and truthful." As soon as they were done with the questionnaire it was collected from them and the raw score were converted into standard score using the questionnaire manual.

III) Blood Glucose Level: AccuCheck Instant S glucometer was used to measure the blood glucose level(BGL) in mg/dL.

IV) Blood Pressure: Digital Sphygmomanometer was used to measure the Systolic Blood Pressure (SBP) and Diastolic Blood Pressure (SBP) and it was measured in mmHg.

V) Heart Rate: Digital sphygmomanometer was used to count the number of beats per minute of heart (HR).

Design of the Study:

Firstly the researcher went to different schools and met with the Headmaster / Headmistress and gets the permission from them to collect data. Then the researcher asked the headmaster about the total number of teachers who were 45 and above aged. After that the researcher met with the teachers and distributed the questionnaire among them and instructed them how to fill that up. The subjects took almost 15 to 20 minute to fill up the questionnaire and then the BGL and SBP & DBP was measured. Then the height and weight was measured using stadiometer and weighing machine. Then after completing the data collection the researcher went for statistical procedure.

Statistical Procedure:

After collecting the data the researcher calculated mean and standard deviation of all the variables. Then the researcher used Pearson Coefficient of correlation to calculate the relation of anxiety with the SBP, DBP, BGL, HR and BMI at 0.05 level of significance.

RESULT AND DISCUSSION

Table no–1: Mean & SD of SBP, DBP, BGL, HR, BMI and anxietyof female teachers.

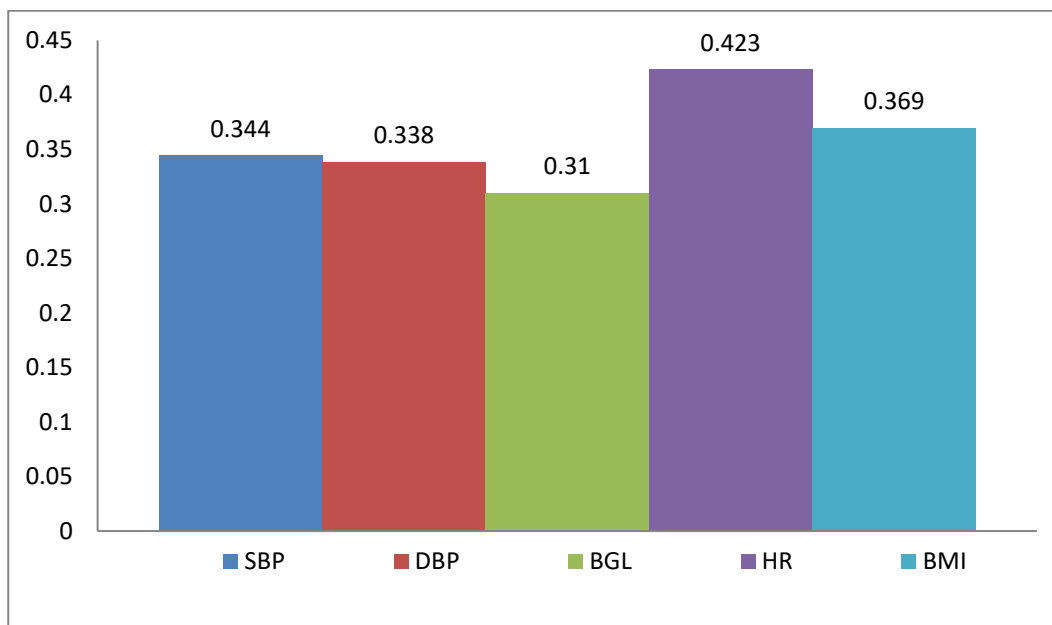| Variables	SBP mmHg	DBP mmHg	BGL mg/dL	HR Beat per minute	BMI Kg/m²	Anxiety points
Mean	127.125	80.300	127.875	81.250	25.837	6.900
SD ±	16.418	12.052	25.930	8.854	5.020	3.365

In table-1 the means and standard deviations has been stated.It can be seen that the mean and standard deviation of SBP, DBP, BGL, HR, BMI and Anxiety of female teachers are 129.65 ± 10.058, 81.33 ± 8.577, 126 ± 18.7, 81.15 ± 9.945, 25.69 ± 4.31 & 6.65 ± 2.905 subsequently.

Table no-2: "r" values of SBP, DBP. BGL, HR and BMI with Anxiety of female teachers

Variables	Anxiety				
	SBP	DBP	BGL	HR	BMI
"r" value	0.344*	0.338*	0.310*	0.423*	0.369*

*Significant at table value of 0.304 at 0.05 level of confidence.

Table-2 represents the coefficient of correlation of SBP, DBP, BGL, HR and BMI with Anxiety of female teachers. The correlation values of SBP, DBP, BGL, HR and BMI with Anxiety are 0.344, 0.338,0.31, 0.423and 0.369subsequently. All of the variables showed a positive correlation with Anxiety and all of itis significant.

Graph-1: "r" values of SBP, DBP, BGL, HR and BMI with Anxiety of female teachers.

Table no–3: Mean & SD of SBP, DBP, BGL, HR, BMI and Anxiety of male teachers.

| Variables	SBP mmHg	DBP mmHg	BGL mg/dL	HR Beat per minute	BMI Kg/m²	Anxiety points
Mean	129.65	81.33	126.00	81.15	25.69	6.65
SD ±	10.058	8.577	18.700	9.945	4.312	2.905

Table no-3 represent the mean and standard deviation of SBP, DBP, BGL, HR, BMI and Anxiety.The mean and standard deviation of SBP, DBP, BGL, HR, BMI and Anxiety of male teachers as found on the table are 129.65±10.058, 81.33±8.577, 126±18.7, 81.15±9.945, 25.69±4.312 and 6.65±2.905 subsequently.

Table no-4: "r" values of correlation of SBP, DBP, BGL, HR and BMI with Anxiety of male teachers

Variables	Anxiety				
	SBP	DBP	BGL	HR	BMI
"r" value	0.313*	0.198	0.467*	0.307*	0.398*

*Significant at table value of 0.304 at 0.05 level of confidence.

Table-4 represents the coefficient of correlation of SBP, DBP, BGL, HR and BMI with Anxiety of male teachers. The correlation values of SBP, DBP, BGL, HR and BMI with Anxiety are 0.313, 0.198, 0.467, 0.307and 0.398 subsequently. All of the variables showed a positive correlation with Anxietyand all of it except DBP is significant.
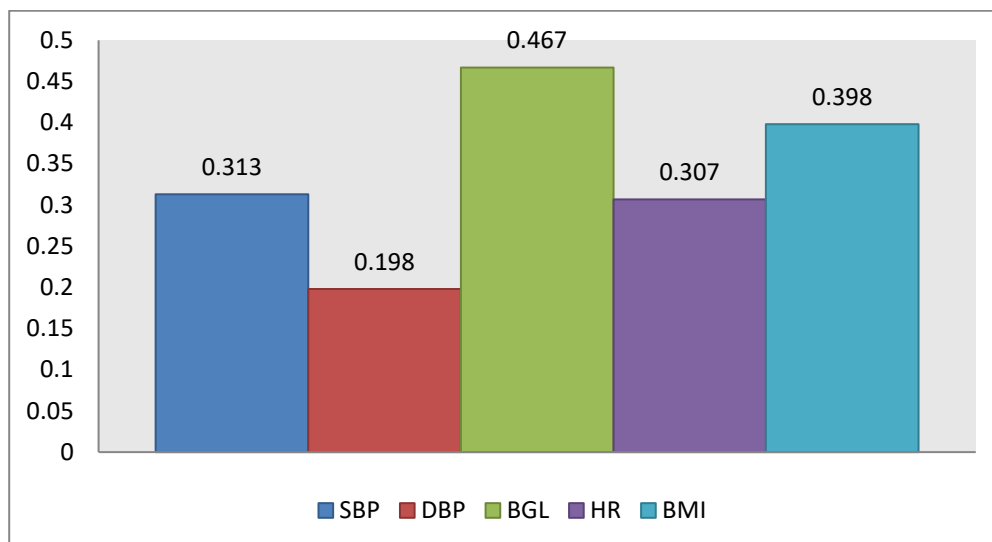
Graph-1: "r" values of SBP, DBP, BGL, HR and BMI with Anxiety of male teachers.

Discussion:

In the present study it was found that

i.   Body Mass Index is positively correlated with Anxiety level.

ii.   Blood Pressure is positively correlated with Anxiety level.

iii.   Blood glucose level is positively correlated with Anxiety level.

iv.   Heart rate is positively correlated with Anxiety level.

The researcher has found the DBP in both male and female teachers showed a positive correlation value but none of it is significant at 0.05 level of significance. The female subjects showed a higher mean value of anxiety level than the male teachers. Probably the female subjects are not as much connected with the outer world as the male teachers are. So, the female subjects do not get enough space to open up and release anxiety. Except that BMI of female teacher are higher than the male subjects which means the male subjects are more physically active. Physical activity is considered as the key to get rid of anxiety. This may be a reason of such high level of anxiety in female subjects.

Conclusion:

From the present study it may be concluded that the SBP, DBP, BGL, HR and BMI is higher in person with high Anxiety level and lower with low Anxiety level in both male and female.

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