Study of Nature of Score Distribution for Stress, Mental Health, Home Environment and Emotional Intelligence

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Abstract

The present study aims to see the nature of score distribution. Therefore, it was thought appropriate to describe the nature of score distribution for stress, mental health, home environment and emotional intelligence of teacher trainees to justify the application of various statistical techniques for testing various hypotheses. For this purpose 600 teacher trainees were selected from various educational institutions of four districts of Punjab state, i.e., Moga, Ludhiana, Sangrur and Bathinda. The data was again divided into rural/urban and male/female category. In order to test the normality of distribution the value of mean, median, mode, standard deviation, skewness and kurtosis were worked out for stress, mental health, home environment and emotional intelligence. To provide the mean, median, mode, S.D, skewness, kurtosis analytically and conveniently, these descriptive statistics were represented in tabular form for the total sample of teacher trainees. The frequency polygon for the variables stress, mental health, home environment and emotional intelligence is drawn on the basis of score distribution.

KEYWORDS: Stress, Mental health, Home Environment, Emotional Intelligence, teacher trainees, emotions outburst, well-being, self-control, zeal, persistence, etc.

Introduction

In our daily life, many times emotions outburst, mental health decreases, nervous breakdown and stress usually occur. But these emotional outbursts are to be controlled, mental health to be improved and stress to be vanished so that appropriate adjustments can be made possible and congenial home environment to be created for maximum achievement. The fast developing technology, rich information system, explosion of knowledge has brought a corresponding change in the life and work of people. With complexity of life, stress is likely to increase day by day in different fields. Radical changes have been taken place in the individual as he emerges from childhood into maturity. According to **World Wide Encyclopedia (2004)** "Stress is that which cause a deformation in a body. Tensile stress tends to stretch a body, bulk stress tends to compress it; and shear stress tends to twist it." Some psychologists believe that stress has marked debilitating effect upon the heart and circulatory system. Thus stress is caused by lack of control over mind that becomes susceptible to sense and impulse. It has usually been used to devote a set of change that people undergo in situation that are appraised as threatening to their well-being.

Mental health has been defined by World Health Organization as physical, mental and social well-being. But mostly, it is the physical aspect of health that is emphasized and discussed while mental and emotional health is not recognized at all. However,

whether children learn to read, spell or understand, depends on whether he 'wants' to learn or feels a 'need' to learn. The emotional needs of children should be met before effective learning could take place. **Verma (1996)** defined "Mental health is defined as the full and harmonious functioning of the total personality, realizing one's full potential in the world of work, with satisfaction and contentment to oneself and benefit to the society." Psychologists believe that there are some fundamental psychological recognition, acceptance etc. Thus we can conclude that mental health plays an important role in the development of overall personality of the learners. It is, thus, a balance between the demands of society and the desires of the individual; maturity in the absence of infantile and childish patterns of behavior; adequate functioning of the ability to surmount severe threats and frustrating situations and compromise between the inner desires of the individual and the demands of the society.

It is often said that home is the first institution of education and mother is the first teacher of the child. A child sees the light of the day in home. It is here that mental, cultural and social development of an individual takes place. Now with the spread of education all around, people are becoming more and more educated. An educated parent is able to have a better family and a better home. In ***Webster's Encyclopedic Unabridged Dictionary of the English Language (1989)*** "Home is the place in which one's domestic affairs are centered."

Emotional intelligence is a popular psychological concept that has captured the imagination of educationists. This concept has relatively recent origin, which is linked to personal and social competence, academic and social success and individual as well as team effectiveness in organizations. Emotional intelligence is not being nice, it does not mean giving free reason to feelings, nor it is fixed genetically; nor allowing one's emotions and prejudices to get the better out of one's judgment. Infect, it is a new yardstick, which is increasingly applied to judge a person to find out how far on one excels in life. **Goleman (1999)** opined "Emotional intelligence is the ability which includes self-control, zeal, persistence and the ability to motivate oneself."

Before presenting the actual analysis of data and discussion of results pertaining to hypotheses, it was desirable to see the nature of score distribution. Therefore, it was thought appropriate to describe the nature of score distribution for stress, mental health, home environment and emotional intelligence of teacher trainees to justify the application of various statistical techniques for testing various hypotheses.

In order to test the normality of distribution the value of mean, median, mode, standard deviation, skewness and kurtosis were worked out for stress, mental health, home environment and emotional intelligence. To provide the mean, median, mode, S.D, skewness, kurtosis analytically and conveniently, these descriptive statistics were represented in tabular form for the total sample of teacher trainees. The frequency polygon for the variables stress, mental health, home environment and emotional intelligence is drawn on the basis of score distribution.

In the normal distribution curve the mean, median and mode all coincide and there is a perfect balance between the right and left halves of the bell shaped figure. This is because the normal curve is bilaterally symmetrical; all the measures of central tendency must coincide at the centre of the distribution. A distribution is said to be "Skewed" when the mean and median fall at different points in the distribution and the balance is

shifted to one side or the other i.e. to the left or right.

Trends of scores on stress of teacher trainees are described below in the form of table 1and fig. 1.

Table 1 Showing frequency distribution scores of teacher trainees on the variable of stress (N= 600)

S. No.	Class Interval	Mid-Point	Frequency
1.	0 - 500	250	0
2.	500-1000	750	50
3.	1000-1500	1250	249
4.	1500-2000	1750	288
5.	2000-2500	2250	13
	Total		600

Mean	Median	Mode	S.D.	Skewness	Kurtosis
1442.7	1507	1516	332.45	-0.413	-0.374

Showing frequency polygon of scores of teacher trainees on the variable of stress (N= 600)
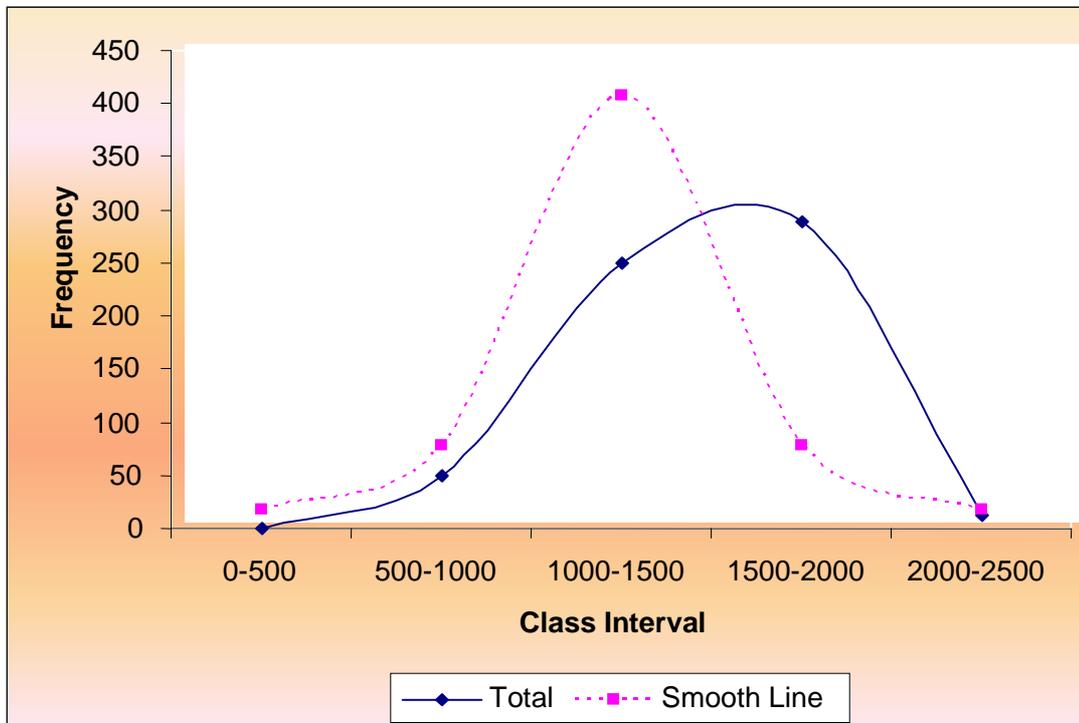
Fig. 1

Mean, median, mode in variable stress were 1442.7, 1507 and 1516 respectively which are in close proximity to each other. The skewness for stress was -0.413 showing the distribution as negatively skewed and the value of kurtosis -0.374 showing the curve as leptokurtic. The distortions in both the values from normal value (0.00 for skewness and 0.263 for kurtosis) were negligible. Therefore, the distribution can be treated as normal.
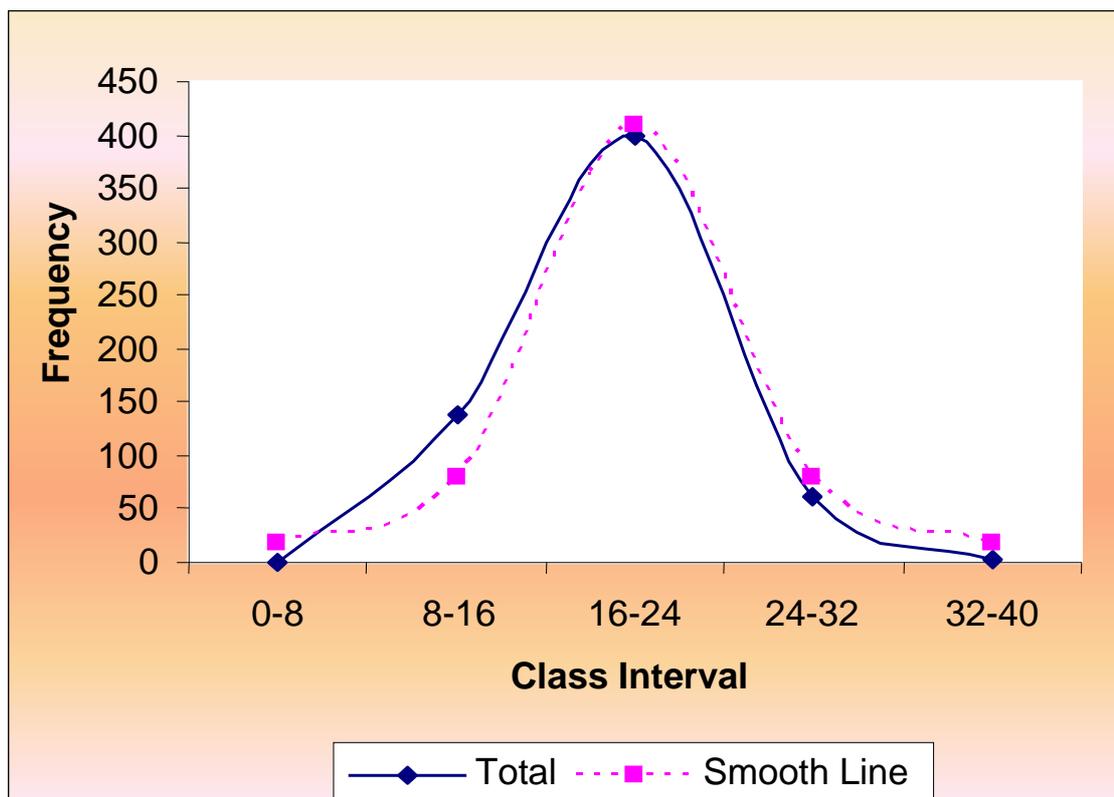
Trends of scores of mental health of teacher trainees are described below in the form of table 2 and fig. 2.

Table 2 Showing frequency distribution scores of teacher trainees on the variable of mental health (N= 600)

S. No.	Class Interval	Mid-Point	Frequency
1.	0 - 8	4	0
2.	8 -16	12	138
3.	16 - 24	20	398
4.	24 - 32	28	61
5.	32 - 40	36	3
	Total		600

Mean	Median	Mode	S.D.	Skewness	Kurtosis
18.3640	18	17	4.06869	-0.75182	-0.658976

Showing frequency polygon of scores of teacher trainees on the variable of mental health (N= 600)

Fig. 2

Mean, median, mode in variable mental health were 18.36, 18 and 17 respectively which are in close proximity to each other. The skewness for mental health was -0.75182 showing the distribution as negatively skewed and the value of kurtosis -0.658976 showing the curve as leptokurtic. The distortions in both the values from normal value (0.00 for skewness and 0.263 for kurtosis) were negligible. Therefore, the distribution can be treated as normal.

Trends of scores on home environment of teacher trainees are described below in the form of table 3 and fig. 3.

Table 3 Showing frequency distribution scores of teacher trainees on the variable of home environment (N= 600)

S. No.	Class Interval	Mid-Point	Frequency
1.	0 - 70	35	2
2.	70-140	105	112
3.	140-210	175	152
4.	210-280	245	298
5.	280- 350	315	36
	Total		600

Mean	Median	Mode	S.D.	Skewness	Kurtosis
203.617	213.5	275	60.9554	-0.44988	-0.62142

Showing frequency polygon of scores of teacher trainees on the variable of home environment (N= 600)
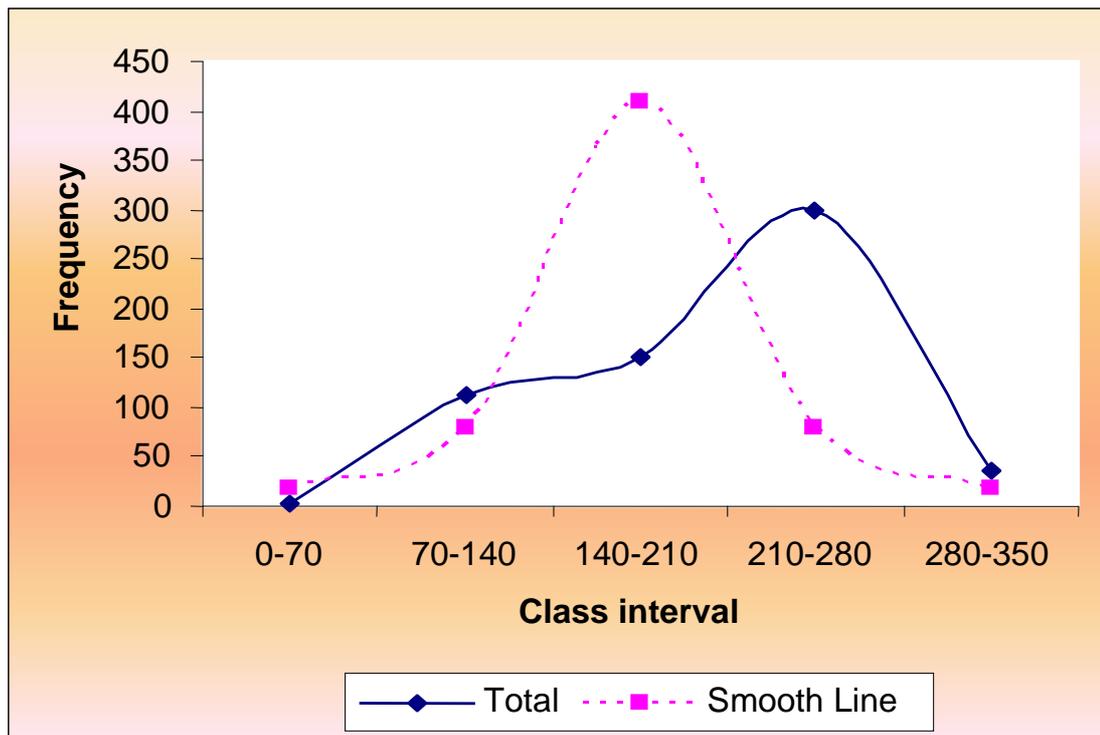

Fig. 3

Mean, median, mode in variable home environment were 203.617, 213.5 and 275 respectively which are in close proximity to each other. The skewness for home environment was -0.44988 showing the distribution as negatively skewed and the value of kurtosis -0.62142 showing the curve as leptokurtic. The distortions in both the values from normal value (0.00 for skewness and 0.263 for kurtosis) were negligible. Therefore, the distribution can be treated as normal.

Trends of scores on emotional intelligence of teacher trainees are described below in table 4 and fig. 4.

Table 4 Showing frequency distribution scores of teacher trainees on the variable of emotional intelligence (N= 600)

S. No.	Class Interval	Mid-Point	Frequency
1.	0 - 5	2.5	0
2.	5 -10	7.5	3
3.	10 -15	12.5	97
4.	15 -20	17.5	396
5.	20 -25	22.5	144
	Total		600

Mean	Median	Mode	S.D.	Skewness	Kurtosis
17.259	17	17	2.7688	-0.2225	-0.07590

Showing frequency polygon of scores of teacher trainees on the variable of emotional intelligence (N= 600)
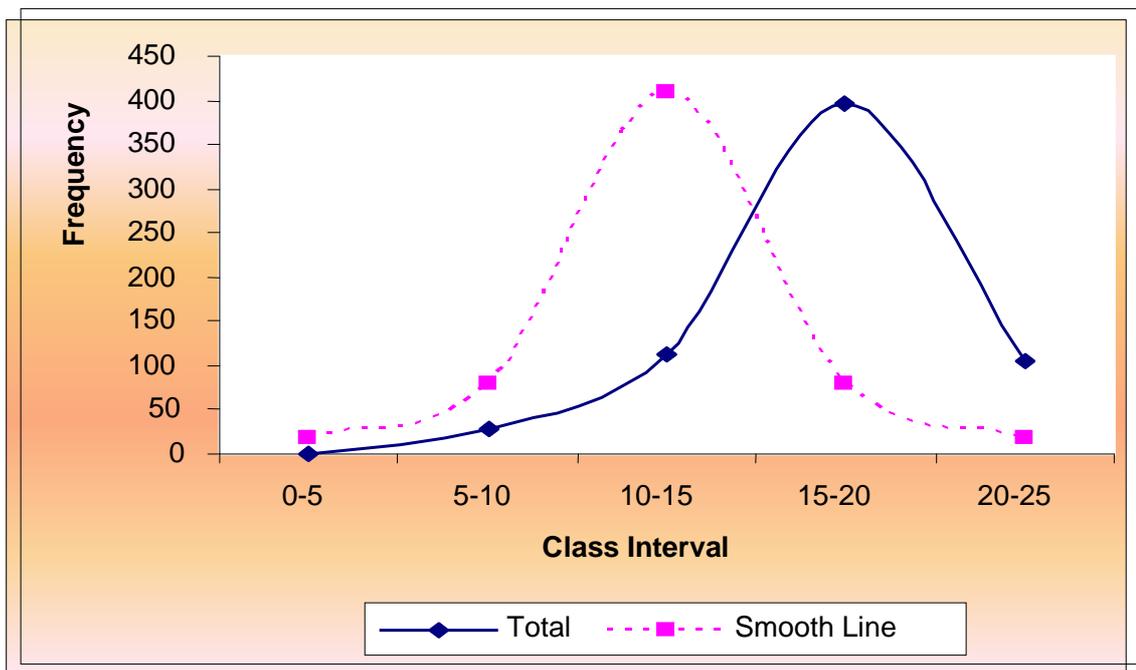
Fig. 4

Mean, median, mode in variable emotional intelligence were 17.259, 17 and 17 respectively which are in close proximity to each other. The skewness for emotional intelligence was -0.2225 showing the distribution as negatively skewed and the value of kurtosis -0.07590 showing the curve as leptokurtic. The distortions in both the values from normal value (0.00 for skewness and 0.263 for kurtosis) were negligible. Therefore,

the distribution can be treated as normal.

CONCLUSION

An overview of the above results suggests that the score distributions of all the variables can be treated as normal. Although, the distortions in both the values of skewness and kurtosis from normal value (0.00 for skewness, 0.263 for kurtosis), were negligible. Hence, the distribution can be treated as normal.

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