

## ORIGINAL RESEARCH

### Comparative analysis of emotional intelligence in hypertensive adults and normal adults

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#### ABSTRACT:

**Background:** Hypertension is an important public health challenge worldwide. It contributes to the onset of heart diseases, strokes, kidney failure, premature mortality, and disability. The etiology of hypertension remains poorly understood. Genetic and behavioral factors known to be involved leave a substantial portion of variability in outcomes unexplained, and a large body of literature has accumulated evaluating psychosocial stress as another possible risk factor. **Aim of the study:** To compare emotional intelligence in hypertensive adults and normal adults. **Materials and methods:** For the study, we selected sample of 200 subjects, 100 had hypertension and had heart disease and 100 subjects were normal healthy adults. The emotional intelligence of the subjects was measured using Indian version of Emotional Intelligence Scale given by Thingusum and Ram in 2000. **Results:** In the present study, a total of 200 patients were included. 100 patients were hypertensives and other 100 patients were normal subjects. The mean emotional intelligence score of Hypertensive subjects was 96.68 and of normal subjects was 126.85. **Conclusion:** Within the limitations of the present study, it can be concluded that the emotional intelligence of hypertensive subjects is significantly lower than normal healthy subjects. This indicates that emotional well being has a significant effect on the hypertensive patients.

**Keywords:** hypertension, emotional intelligence, stress

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#### INTRODUCTION:

Hypertension is an important public health challenge worldwide. It contributes to the onset of heart diseases, strokes, kidney failure, premature mortality, and disability.<sup>1</sup> Hypertension and related complications are responsible for approximately 9.4 million deaths worldwide every year. The number of hypertensive patients is expected to rise to 1.56 billion by 2025.<sup>2</sup> The etiology of hypertension remains poorly understood. Genetic and behavioral factors known to be involved leave a substantial portion of variability in outcomes unexplained, and a large body of literature has accumulated evaluating psychosocial stress as another possible risk factor. Broadly speaking, stress is conceptualized as the perception of environmental demands that are believed to exceed one's resources for adapting to the situation.<sup>3</sup> The intensity and duration of exposure are presumed to be important determinants of risk; effects of acute stressors on blood pressure (BP) have been demonstrated, but ongoing exposure to stress may be more plausibly linked to sustained BP elevations and hypertension incidence.<sup>4</sup> The effects of chronic stress in a number of domains are being investigated, including work-related stress, relationship

stress, low socioeconomic status (SES), and more recently, race-related discrimination.<sup>5, 6</sup> Hence, the present study was conducted to compare emotional intelligence in hypertensive adults and normal adults.

#### MATERIALS AND METHODS:

The present study was conducted in the Department of Psychiatry. The ethical clearance for the study was approved from the ethical committee of the hospital. For the study, we selected sample of 200 subjects, 100 had hypertension and had heart disease and 100 subjects were normal healthy adults. The subjects were selected randomly from the population. The demographic data and information about the subject were collected using personal data sheet. The emotional intelligence of the subjects was measured using Indian version of Emotional Intelligence Scale given by Thingusum and Ram in 2000. This scale is a modification of Emotional Intelligence Scale developed by Schutte(1988). 33 items were included in the questionnaire in which patient had to mark their response from 1 (strongly agree) to 5 (strongly disagree). The reliability rate of 0.90 was given by Schutte. The questionnaire was given to all the subjects and was asked to fill the

questionnaire. The complete protocol to fill the questionnaire was explained to the subjects. The scoring of different patients was recorded and statistically analyzed using SPSS software for windows. Student's t-test and Chi-square test were used to analyze the significance of data. A p-value of 0.05 was predefined to be statistically significant.

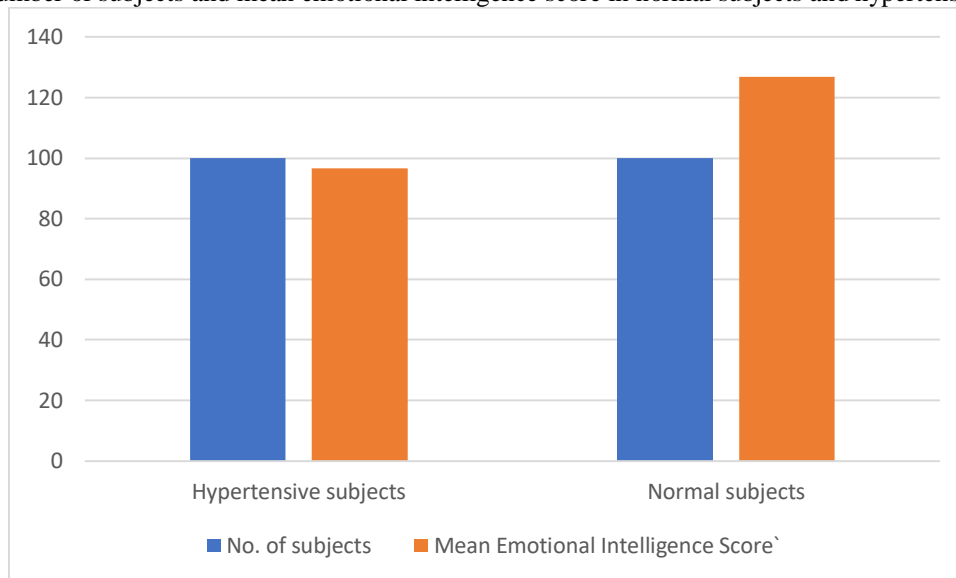
**RESULTS:**

In the present study, a total of 200 patients were included. Table 1 shows the mean Emotional Intelligence score of Hypertensive and normal subjects. 100 patients were hypertensives and other 100 patients were normal subjects. The mean emotional intelligence score of Hypertensive subjects was 96.68 and of normal subjects was 126.85. On comparing both score, the difference was observed to be significant with p- value <0.05 [Fig 1].

**Table 1:** Mean Emotional Intelligence score of Hypertensive and Normal subjects

Variables	No. of subjects	Mean Emotional Intelligence Score`	t-value
Hypertensive subjects	100	96.68	0.005
Normal subjects	100	126.85	

**Figure 1:** Number of subjects and mean emotional intelligence score in normal subjects and hypertensive subjects



**DISCUSSION:**

In the present study, we observed that the mean emotional intelligence score was higher in normal adult patients as compared to hypertensive patients. The results on comparison were found to be statistically significant. The results were compared with previous studies from the literature and were found to be consistent. Hasan M et al <sup>7</sup> studied the prevalence and associated risk factors of hypertension among adult men and women aged >30 years residing in selected urban and rural areas of Dhaka division, Bangladesh. A total of 4856 male and female participants were included in the final analysis, of whom 2340 (48.2%) were from urban and 2516 (51.8%) were from rural areas. Hypertension was the dependent variable for this study and was operationally defined as systolic blood pressure >140 mm of Hg and/or diastolic blood pressure >90 mm of Hg, and/or persons with already diagnosed

hypertension. The overall prevalence of hypertension was 31.0%, and the prevalence was higher among urban participants (urban: 36.9%, rural: 30.6%). Age, female, higher educational status, inadequate physical activity and overweight/obesity were associated with hypertension in both urban and rural areas. Women who were not currently married during the survey had higher odds of hypertension only in the rural areas, and respondents who were not working during the survey had higher odds of hypertension only in the urban areas. They concluded that the prevalence of hypertension was high in urban and rural areas. Menawi W et al <sup>8</sup> investigated the self-rated psychological health of hypertensive patients in Palestine. A stratified random sample of 502 hypertensive patients (aged ≥ 18 years) was asked to complete a validated Arabic version of the General Health Questionnaire (GHQ-28). After collection, the data were analyzed using descriptive

statistics, Mann–Whitney U test and logistic regression. In this study, it was found the mean scores for GHQ were statistically higher for females than males. The females were found to be 1.701 times more at risk of psychological disorders compared to males. In conclusion, improvement of social determinants of hypertensive patients can make a difference in their psychological/mental health.

Ostir GV et al<sup>9</sup> tested the hypothesis that high positive emotion would be associated with lower blood pressure in older adults. The study included 2564 Mexican Americans aged 65 or older living in one of 5 southwestern states. Primary measures included blood pressure and positive emotion score. The average age was 72.5 years, 52.8% were women and 32.8% were on anti-hypertensive medication. For individuals not on anti-hypertensive medication, increasing positive emotion score was significantly associated with lower systolic and diastolic blood pressure after adjusting for relevant risk factors; for those on anti-hypertensive medication, increasing positive emotion score was significantly associated with lower diastolic blood pressure, but not systolic blood pressure. Positive emotion was significantly associated with a 4-level joint blood pressure variable. Each 1-point increase in positive emotion score was associated with a 3% and 9% decreased odds of being in a higher blood pressure category for those on and not on anti-hypertensive medication, respectively. They concluded that association between high positive emotion and lower blood pressure among older Mexican Americans. Targeting the emotional health of older adults might be considered as part of non-pharmacologic hypertension treatment programs or as part of adjunctive therapy for those on anti-hypertensive medication. Vlachaki C et al<sup>10</sup> examined the relation between different dimensions of Emotional Intelligence and coronary heart disease. A total of 300 participants were studied during a 3-year period in an attempt to partially replicate and further expand a previous study conducted in Greece among CHD patients, which indicated a strong association between certain dimensions of Emotional Intelligence and the incidence of CHD. All participants completed a self-report questionnaire, assessing several aspects of Emotional Intelligence. The results showed that there is a link between the regulation of emotions and the occurrence of CHD. They concluded that EI plays a significant role in the occurrence of CHD.

#### CONCLUSION:

Within the limitations of the present study, it can be concluded that the emotional intelligence of

hypertensive subjects is significantly lower than normal healthy subjects. This indicates that emotional well being has a significant effect on the hypertensive patients.

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