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A study on the relationship between essential hypertension, anger & mood states in wrestlers with EHT

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Abstract
The purpose of the study was to investigate the significance of nature and degree of relationship of Anger with Essential Hypertension (EHT) in Wrestlers with EHT and to investigate the significance of nature and degree of relationship of Mood States – Anxiety, Stress, Depression, Regression, Fatigue, Guilt, Extraversion and Arousal with Essential Hypertension (EHT) in Wrestlers with EHT.40 wrestlers with essential EHT were selected as the subjects for the study. Anger Expression Scale (Ax-Scale) (Spielberger, 1976), Eight State Questionnaire (8 SQ) (Cattell & Barton, 1972) and Sphygmomanometer were used as criterion measures. Mean, Standard deviation and Pearson product moment correlation were used to analyse the data. There was significant nature and degree of relationship of Anger with Essential Hypertension in Wrestlers with EHT.

Keywords: Essential hypertension, anger, mood states

Introduction

Burgeoning literature on the subject reports that control of hypertension disease in India has partial success (Jafar, Chaturvedi, & Pappas, 2006) [1]. Inadequate data is on hands regarding anger as a risk factor of hypertension within the indigenous population. Information obtained from some researches carried out on indigenous population is restricted to stress, anxiety, depression, and hostility as risk factors of hypertension (Mushtaq & Najam, 2014) [2] or biological factors only (Vaillant & Gerber, 1996) [3]. Additionally, it is a matter of concern for researchers that established risk factors in many cases do not completely determine hypertension. Notwithstanding, the reality that hypertension was diagnosed many years earlier in South Asia, no study was conducted to identify the risk factors associated with hypertension. In India, studies have hardly thrown light on the early onset of hypertension. Furthermore, the awareness of threatening factors of hypertension has been greatly derived from data provided by developed countries; nevertheless, the expression or suppression of anger may vary from country to country due to cultural factors. Investigators are doubtful about the findings obtained from European societies and their application in rest of the world is questionable. In India, especially, this phenomenon has rarely been studied and researches conducted in this area are based upon the data drawn from lower masses only (Jafar *et al.*, 2006) [1]. Regardless of its significance, psychological aspects of hypertension have been ignored by researchers. Hereditary and biological factors of hypertension have always been over-emphasized by physicians and medical specialists, but the role of anger as a psychological risk factor have been ignored in Pakistan. Therefore, the current research would be the first and unique one to investigate the relationship between components of anger and hypertension among wrestlers.

Purpose of the study

The purpose of the study was to investigate the significance of nature and degree of relationship of Anger with Essential Hypertension (EHT) in Wrestlers with EHT and to investigate the significance of nature and degree of relationship of Mood States – Anxiety, Stress, Depression, Regression, Fatigue, Guilt, Extraversion and Arousal with Essential Hypertension (EHT) in Wrestlers with EHT.

Methodology

40 wrestlers with essential hypertension of 60-75 kg in the academic year of 2015-16 were

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selected as the subjects for the study. Anger Expression Scale (Ax-Scale) (Spielberger, 1976), Eight State Questionnaire (8 SQ) (Cattell & Barton, 1972) and Sphygmomanometer were used as criterion measures.

Findings

To investigate the significance of nature and degree of relationship of Anger with Essential Hypertension (EHT) in Wrestlers with EHT and to investigate the significance of nature and degree of relationship of Mood States – Anxiety, Stress, Depression, Regression, Fatigue, Guilt, Extraversion and Arousal with Essential Hypertension (EHT) in Wrestlers with EHT Mean, Standard deviation and Pearson product Moment correlation were used.

Table 1: Descriptive statistics for wrestlers with eht with respect to essential hypertension, anger & mood states–anxiety, stress, depression, regression, fatigue, guilt, extraversion & arousal

S. No.	Variables	Mean	S.D.
1.	Essential Hypertension (EHT)	135.47	7.56
2.	Anger (An)	60.18	6.13
3.	Mood Sates–Anxiety (Ax)	59.75	5.22
4.	Mood States–Stress (St)	28.07	4.22
5.	Mood States–Depression (Dp)	27.55	2.55
6.	Mood States–Regression (Rg)	21.50	3.86
7.	Mood States–Fatigue (Ft)	21.88	3.79
8.	Mood States–Guilt (Gt)	25.18	3.21
9.	Mood States–Extraversion (Ex)	18.43	1.66
10.	Mood States–Arousal (Ar)	18.30	4.39

The Table 1 depicts Descriptive Statistics - Mean () & Standard Deviation (SD) for Wrestlers with EHT with respect to the variables Essential Hypertension, Anger & Mood States dimensions – Anxiety, Stress, Depression, Regression, Fatigue, Guilt, Extraversion and Arousal. It can be observed that the obtained Mean () and Standard Deviation (SD) values for the variable Essential Hypertension (EHT) are = 135.47 and SD = 7.56 respectively. It can also be observed that the obtained Mean () and Standard Deviation (SD) values for the variable Anger (An) are = 60.18 and SD = 6.13 respectively.

It can again be observed that that the Mean () and Standard Deviation (SD) values for the various dimensions of the variable Mood States *viz.* Anxiety (An) are = 59.75 and SD = 5.22, Stress (St) are = 28.07 and SD = 4.22, Depression (Dp) are = 27.55 and SD = 2.55, Regression (Rg) are = 21.50 and SD = 3.86, Fatigue (Ft) are = 21.88 and SD = 3.79, Guilt (Gt) are = 25.18 and SD = 3.21, Extraversion (Ex) are = 18.43 and SD = 1.66 & Arousal (Ar) are = 18.30 and SD = 4.39 respectively.

Table 2: Correlation matrix for essential hypertension, anger & mood states-anxiety, stress, depression, regression, fatigue, guilt, extraversion and arousal in wrestlers with EHT

	EHT	Anger	Mood States							
	EHT(HG)	An	Ax	St	Dp	Rg	Ft	Gt	Ex	Ar
EHT(HG)	1									
Anger	.990**	1								
Anxiety	.933**	.905**	1							
Stress	.972**	.955**	.973**	1						
Depression	-.211	-.213	-.196	-.192	1					
Regression	.102	.113	.111	.102	-.081	1				
Fatigue	-.251	-.259	-.206	-.247	.047	-.127	1			
Guilt	.953**	.929**	.978**	.979**	-.200	.065	-.225	1		
Extraversion	-.076	-.058	.063	-.027	.294	-.034	-.089	-.009	1	
Arousal	.988**	.977**	.957**	.982**	-.214	.105	-.247	.974**	-.039	1

**. Correlation is significant at the 0.01 level (2-tailed).

In order to investigate the significant of nature and degree of relationship of Essential Hypertension (EHT), Anger & Mood States dimensions – Anxiety, Stress, Depression, Regression, Fatigue, Guilt, Extraversion and Arousal in Wrestlers with EHT, the Pearson Product-moment Correlation was computed through SPSS-17.0 software. The Correlation Matrix 4.3 depicts inter-correlations among Essential Hypertension, Anger & Mood States dimensions – Anxiety, Stress, Depression, Regression, Fatigue, Guilt, Extraversion and Arousal in Wrestlers with EHT. It can be observed that Anger is significantly positively correlated with Essential Hypertension (r = .990; p = 0.01). Mood States dimension – Anxiety is significantly positively correlated with Essential Hypertension (r = .933; p = 0.01) and Anger (r = .905; p = 0.01). Mood States dimension – Stress is significantly

positively correlated with Essential Hypertension (r = .972; p = 0.01), Anger (r = .955; p = 0.01) and Anxiety (r = .973; p = 0.01). Mood States dimension – Depression is not significantly correlated with Essential Hypertension (r = -.211), Anger (r = -.213), Anxiety (r = -.196) and Stress (r = -.192). Mood States dimension – Regression is not significantly correlated with Essential Hypertension (r = .102), Anger (r = .113), Anxiety (r = .111), Stress (r = .102) and Depression (r = -.081). Mood States dimension – Fatigue is not significantly correlated with Essential Hypertension (r = -.251), Anger (r = -.259), Anxiety (r = -.206), Stress (r = -.247), Depression (r = .047), Regression (r = -.127). Mood States dimension – Guilt is significantly positively correlated with Essential Hypertension (r = .953; p = 0.01), Anger (r = .929; p = 0.01), Anxiety (r = .978; p = 0.01) and Stress (r =

.979; = 0.01). Mood States dimension – Guilt is not significantly correlated with Depression (r = -.200), Regression (r = .065) and Fatigue (r = -.225). Mood States dimension – Extraversion is not significantly correlated with Essential Hypertension (r = -.076), Anger (r = -.058), Anxiety (r = .063), Stress (r = -.027), Depression (r = .294), Regression (r = -.034), Fatigue (r = -.089) and Guilt (r = -.009). Mood States dimension – Arousal is significantly positively correlated with Essential Hypertension (r = .988; p = 0.01), Anger (r = .977; p = 0.01), Anxiety (r = .957; p = 0.01), Stress (r = .982; p = 0.01) and Guilt (r = .974; p = 0.01). Mood States dimension – Arousal is not significantly correlated with Depression (r = -.214), Regression (r = .105), Fatigue (r =-.247) and Extraversion (r =-.039).

There was a significant nature and degree of relationship of Anger with Essential Hypertension in Wrestlers with EHT. There was a significant nature and degree of relationship of Mood States - Anxiety, Stress, Depression, Regression, Fatigue, Guilt, Extraversion and Arousal with Essential Hypertension (EHT) in Wrestlers with EHT.

Conclusions

1. Significant nature and degree of relationship of Anger with Essential Hypertension in Wrestlers with EHT was found.
2. Significant nature and degree of relationship of Mood States - Anxiety, Stress, Depression, Regression, Fatigue, Guilt, Extraversion and Arousal with Essential Hypertension (EHT) in Wrestlers with EHT was found.

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