DEPRESSION, ANXIETY, STRESS AND THEIR EFFECT UPON THE SELF-EFFICACY IN DENGUE PATIENTS

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ABSTRACT

Objective: To explore the correlation of self-efficacy with depression, anxiety and stress in dengue patients.

Methodology: For this purpose a sample of 200 dengue patients (men = 132, women = 68) was employed from two different hospitals of Lahore by using purposive sampling technique of collect data. In order to measure self-efficacy of dengue patients General Self Efficacy Scale, and Depression, Anxiety and Stress Scale (DASS) was used to assess depression, anxiety and stress of dengue patients. Correlation and simple regression statistical techniques were used for data analyses.

Results: Results depicted that self-efficacy has significant negative relationship with depression ($r = -.42$, $p < .01$), anxiety ($r = -.49$, $p < .01$) and stress ($r = -.42$, $p < .01$) in dengue patients. Regression coefficients of depression ($\beta = -.32$), anxiety ($\beta = -.24$) stress ($\beta = -.14$) and overall combine effect of DASS ($\beta = -.45$) have negatively predicted self-efficacy of dengue patients.

Conclusion: Self-efficacy has negative correlation with depression, anxiety and stress in dengue patients. Self-efficacy cannot be obtained in the presence of depression, anxiety and stress. These negative states (DASS) weaken self-efficacy of an individual.

Key Words: Depression, Anxiety, Stress, Self-efficacy

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INTRODUCTION

The prevalence of dengue fever (DF) has risen noticeably around the world in recent years. Dengue fever is also recognized as break bone fever and is an acute febrile infectious illness[1] caused by dengue virus[2]. Generally the main symptoms are vomiting, joint and muscle pains, restlessness, headache and petechial rash. Hemorrhage and shock fever, happens in less than 5% cases[3,4]. Additionally the symptoms of cerebral edema like an altered state of consciousness and seizures also occur in almost 1% of cases.

Dengue fever is one of the major infectious diseases and a serious public sector health concern [5]. Almost 2.5 billion people are at a threat of spread of dengue fever and 50 million people are infected every year; thus making it a major cause of sickness and death in tropics and subtropics[6]. DF is rapidly pervasive in Pakistan especially during monsoon weather from July to October every year. In recent years commonly reported fever in Pakistan is dengue fever and has become an epidemic during the last four years[7].

Physical condition of individuals greatly affects their psychological health. Patients suffering from different diseases also start suffering from emotional problems like depression, anxiety, stress and other psychiatric conditions [8]. In a research conducted by Khan et[9] al anxiety and depression prevalence in dengue patients was reported. Patients suffering from dengue fever also develop psychiatric and serious psychological conditions like phobias and post-traumatic stress disorder. They see huge death toll around them and develop the fear of death.

Dengue shocked syndrome is more severe condition of dengue and is associated with depression which occurs during infection in dengue fever patients. Similarly, anxiety makes harder to work for a patient to think about anything except dengue fever because it takes up a lot of mental power[10]. The role of depression, anxiety and stress in dengue haemorrhagic fever is vital. Dengue patients show irritability, anxiety and stress during their illness and this also affects their mental health status and other personality traits.

Stoppler[11] concludes that stress is a force, which influences the external and internal state of the individual. It can arise from any event which pressurizes the individual to difficult, angry or nervous situation. Stress effects on our immune system and our consciousness.

Frequent stressful situations lead to disturbance in our physiological system and further complicated the already existing disease. Stress has a significant role in the deteriorating the psychological health of patients as well as increases the fever in the patient's body[12].

Self-efficacy is a belief in one's ability to succeed in difficult situations[13]. Self-efficacy consists of a person's cognitive abilities, attitudes and skills. Self-efficacy plays an important role to achieve targets and to face the challenging tasks[14]. The construct of self-efficacy has become an area of increasing research interest in recent years. Research evidence has supported that depression; anxiety and stress greatly affect the patients' state of perception about their lives[15]. These negative states lead them to lose their self-efficacy, confidence and hope for survival.

Dengue is one of the diseases which have recently become epidemic and most challenging issue in the health sector of Pakistan. Usually the doctors emphasize the physical aspects of the disease but the emotional features and personality traits are often neglected which greatly affect the mental health of the patients[15]. Therefore, the present research was conducted to explore the relationship of depression, anxiety and stress with self-efficacy of dengue patients.

METHODOLOGY

It was a cross-sectional study and correlational research design was used for data analysis in this research. Sample of the study was consisted of (N = 200; male = 132, female = 68) dengue patients. Data was collected from 2 public hospitals of Lahore city by using convenient non-probability sampling technique.

All the demographic variables were based on literature review like gender, age, education, marital status, their number of children, new in city, occupation, type of job, monthly or daily income, their working hours etc. and participants also reported their personal information on this form. Depression Anxiety and Stress Scale (DASS) by Lovibond and Lovibond (1995) was used to assess depression, anxiety and stress of participants [16]. General Self efficacy Scale (GSES) by Schwarzer and Jerusalem (1995) was used to measure the self-efficacy of participants[17]. Initially permission was obtained from hospital authorities regarding data collection. Then, participants were briefed about the purpose of research. They were assured about the confidentiality of the information obtained from them. All questionnaires were individually administered in a sequence.

The following hypotheses were generated from the literature review.

1. There is likely to be negative relationship between depression, anxiety, stress and self-efficacy in dengue patients.
2. Depression, anxiety and stress will negatively predict self-efficacy among dengue patients.
3. There will be difference of depression, anxiety, stress and self-efficacy among patients with different types of dengue.

RESULTS

out of 100 patients with dengue fever, 57% were simple dengue patients, 31% dengue hemorrhagic patients and 12% were suffering from dengue shocked syndrome. The age of the sample ranged from 12 to 70 years (mean 32.32 ±10.52).

The findings of the present research reveal that self-efficacy is negatively and significantly correlated with depression ($r = -.42$, $p < .01$), anxiety ($r = -.49$, $p < .01$), stress ($r = -.42$, $p < .01$) and DASS ($r = -.46$, $p < .01$) among dengue patients. (table 1)

Table 2 indicates that depression, anxiety and stress negatively predict self-efficacy of dengue patients. Regression coefficients of depression ($\beta = -.32$), anxiety ($\beta = -.24$) and stress ($\beta = -.14$) and overall combine effect of DASS ($\beta = -.45$) have significant negative effect on self- efficacy of dengue patients.

The mean score of patients with simple dengue fever on depression, anxiety and stress is less than the patients with DHF and DSS, whereas, the scores of self-efficacy are more in simple dengue fever and less in DHF and DSS.

DISCUSSION

Results of the present study indicated a significantly negative relationship of self-efficacy with depression, anxiety and stress among dengue patients. Similarly depression, anxiety and stress predicted negatively to self-efficacy among them. The results also indicated that as dengue becomes chronic the self-efficacy of the patients is reduced and depression, anxiety and stress are increased.

The result of the first hypothesis showed that there is a significant negative relationship between depression, anxiety, stress and self-efficacy in dengue patients. The finding of the present research is consistent with the studies who have also reported negative correlation between depression and self efficacy [9, 14, 18, 19]. When depression increases the self-efficacy of dengue patient would decrease. Good physical health boosts the psychological health of a person. There is negatively significant relationship between illness and self-efficacy [18]. The data of the existing research was taken from public sector hospitals where patients are in masses. When these dengue patients see other patients dying due to dengue fever they become depressed.

Table 1: Correlation between self-efficacy and (DASS) depression, anxiety and stress among dengue patients

Variables	SE	DASS	Dep.	Anxiety	Stress	M	SD
Self-efficacy	-	-.467**	-.42**	-.49**	-.42**	22.13	5.41
DASS		-	.79**	.87**	.80**	98.23	24.12
Depression			-	.73**	.61**	31.11	8.20
Anxiety				-	.67**	31.04	8.19
Stress					-	34.97	8.14

Note: SE = self-efficacy, Dep. = depression, **p< .01, M = Arithmetic mean of variables, SD = Standard Deviation.

Table 2: Effect of depression, anxiety and stress on self-efficacy

Variables	β	SE	t	P
Constant	33.78			
Depression	-.32	.24	-1.7	.04
Anxiety	-.24	.14	-1.5	.04
Stress	-.14	.90	-2.0	.03
DASS	-.45	.31	-5.5	.02

Note; R2 = 62.74; B = coefficients

Table 3: Differences in psychological conditions and self-efficacy reported by the dengue fever, dengue hemorrhagic fever and dengue shocked syndrome patients (n = 200)

Types of dengue	N	Depression	Anxiety	Stress	Self-efficacy	P
		M (SD)	M (SD)	M (SD)	M (SD)	
Simple dengue fever	110	10.42 (3.20)	20.25 (4.42)	30.14 (5.43)	35.12 (5.21)	.001
DHF	60	30.34 (9.18)	42.09 (7.43)	42.13 (7.23)	20.41 (6.20)	.001
DSS	30	45.10 (7.11)	55.11 (9.21)	50.12 (8.21)	10.55 (3.11)	.001

Note; DHF = Dengue hemorrhagic fever, DSS = Dengue shocked syndrome

Swatzky et al[19] showed that dengue patients experience depression and anxiety. Depression and anxiety were found negatively correlated with self-efficacy[14].

Additionally, stress in human life also effects on self-efficacy of the individual. The presence of stress and depression slows down and gradually finishes self-efficacy. Dengue patients do not feel confident regarding their capabilities in difficult situations[15]. Bandura explains that physical and affective states such as anxiety, stress, arousal, and depressed mood states change self-efficacy beliefs of individuals[20]. These negative states significantly effect upon people's judgments of their personal efficacy. People who are anxious have a low sense of efficacy; think about their failure setups and are occupied with the fear of further failures.

The results of 2nd hypothesis showed that DASS significantly but negatively predicted self-efficacy of dengue patients is consistent with the researches conducted on dengue patients[21-24]. In the light of previous research acute illness is negatively correlated with self-efficacy[18]. Self-efficacy becomes low in acute illness. Bandura also supported the current findings that mood affects people's judgments of their personal efficacy[25]. Positive mood enhances perceived self-efficacy whereas unhappy mood is likely to weaken the self-efficacy. Physiological indicators are considered as important sources of self-efficacy information.

Limitations

Sample size was limited especially for the dengue patients which must have limited the generality of our research.

Conclusion

Depression, anxiety and stress are negatively correlated with self-efficacy in dengue patients. Dengue inculcates serious life threat among patients and badly affects their power of self-efficacy. Counseling of dengue patients should be mandatorily incorporated in all hospitals to prevent their feelings of insecurity.

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CONTRIBUTORS

MM supervised the study, analyzed the data, wrote discussion section and drafted the manuscript. MZ helped in acquisition of data and wrote introduction and methodology sections. All authors contributed significantly to the submitted manuscript.