Psychological Health and People Perceptions about Dengue

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ABSTRACT

Aim: To assess the effects of dengue fever on mental health.. Patients were taken from the Ganga Ram Hospital Lahore. Both men and women of age between 17 - 87 years were included in the study.

Methodology: Patients were divided into three groups i.e. patients who suffered from dengue, recovered from dengue fever and were afraid of that they might have the disease but undiagnosed .

Results: There was a significant difference on the level of depression among all three groups and comparison showed significant level of depression in the undiagnosed patients but afraid of being diagnosed as dengue when comparing with recovered and diagnosed subjects. A highly significant difference on the scores of anxiety among patients of three groups. Patients who were not diagnosed with dengue were higher on the anxiety scores than the other two groups. Among the other two groups, recovered cases were higher on anxiety than the diagnosed cases.

Key words: Dengue, Depression, Anxiety

INTRODUCTION

Dengue is a rapidly growing health problem in tropical and subtropical countries where the world's population mostly resides and increases rapidly. Dengue fever is an acute illness of sudden onset that follows a benign course with symptoms such as headache, fever, exhaustion, severe muscle and joint pain, swollen glands and rash. The presence of fever, rash, headache is particularly characteristic of dengue. Other signs of dengue fever include bleeding gums, severe pain behind the eyes, and red palms and soles[1].

The dengue virus causes a painful ailment that exists in four known strains or serotypes. It is especially dangerous to children, who generally have one infection, but if bitten again, it can get a more serious infection that develops hemorrhagic fever (DHF). DHF causes severe internal bleeding, shock, and circulatory collapse, and is usually fatal to children[2].

Depression is described as feeling sad, unhappy, miserable, or down in the dumps. Most of us feel this way at one time or another for shorter period of times. Beck cognitive theory of depression from its observation of depressed patients' descriptions of their thought content through verbalization. Cognitive distortions in the absence of any life stressor are more important for this theory[3]. Anxiety is an unpleasant emotion consists of vague, unspecified harm. Fear can cause a state of physical disturbance. Many theories have been presented which discuss about the causes of anxiety in our routine lives[4,5].

One study was conducted to assess the psychological effects of dengue fever and a total of 157 patients, properly diagnosed with dengue fever were included in the study. Results suggested that during the acute phase of dengue fever, significant %age (> 90%) of patients developed intense fear of death. About 60% developed severe anxiety and panic attacks because of phobia. A significant %age

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also suffered from insect phobia. About 5% of the whole group developed a depressive illness which was mostly induced by the stress caused by other psychological symptoms like death phobia[7].

METHODOLOGY

A total of 480 patients were selected from Ganga Ram Hospital, Lahore. Patients were divided into three groups i.e. subjects diagnosed with dengue, recovered phase, and the persons undiagnosed but having fear that they developed dengue. Age was between 16 to 87 years for both sexes. Patients who had previous H/o psychiatric illness were not included. Following measuring instruments were used for the study.

1. Beck Depression Inventory (BDI) This is the revised version of BDI which was developed in response the changes in criteria of depression made by American psychiatric association.
2. Beck Anxiety Inventory (BAI). Beck Anxiety Inventory consists of 21questions expressed as general symptoms of anxiety i.e. numbness, tingling, sweating not due to heat, and fear of the worst happening. This is a psychometrically sound test.

RESULTS

The detail of results is given in tables 1, 2, 3, 4, 5, 6. Post hoc analysis showed that the difference between diagnosed and not diagnosed cases was significant on the level of depression and anxiety both. In the same way, the scores of recovered and not diagnosed group on the depression scale differ significantly. Diagnosed and recovered cases showed highly significant difference on the level of anxiety.

Table 1: Age distribution

Age (Yrs)	Males	Females
17---21	107	28
22---60	250	66
>61	23	06
Total Subjects	380	100

Table 2: Sex distribution

Gender	n
Males	380
Females	100
Total subjects	480

Table 3: Distribution according to disease

Categories	Males	Females
Diagnosed	155	41
Recovered	73	19
Not diagnosed	152	40
Total	380	100

Table 4: Post hoc analysis of the Data

95% confidence interval				
Sources	Mean Difference	Std	Lower Boundary	Upper Boundary
BDI				
Diagnosed VS ND	-5.99	.93	-8.187	-3.808
Recovered VS ND	-7.802	1.162	-10.53	-5.068
BAI				
Diagnosed VS Recovered	-3.087	.943	-5.306	-8.684
Diagnosed VS ND	-4.380	.758	-6.163	-2.597

ND = Not diagnosed cases

Table 5: Level of Depression and dengue Fever

Diagnosis	Depression level			χ^2	Φ
	Mild	Moderate	Severe		
Diagnosed	30	56	110		
Recovered cases	17	29	46	57.70*	.347
Not diagnosed	0	30	162		

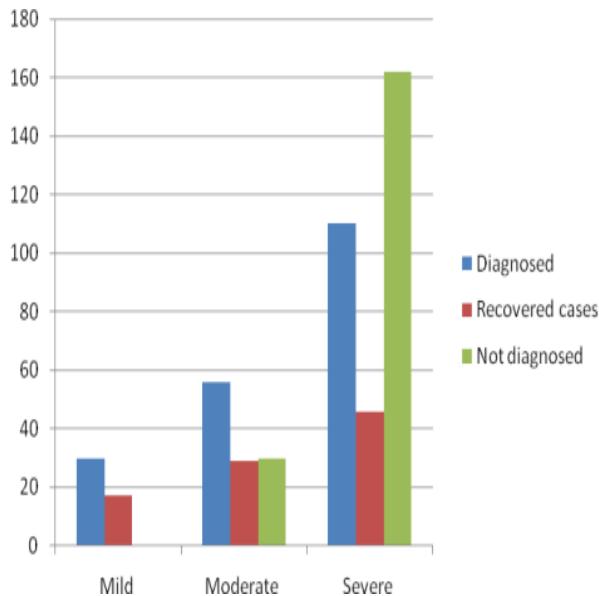*$P < 0.05$

Graph 1: Level of Depression among patients

Table shows that there was a significant difference among three categories of diagnosis on level of depression with mostly fall in severe depression. Similarly, Significant ratio was seen in the group not diagnosed with mostly show severe level of depression.

Table 6: Level of anxiety and dengue fever

Diagnosis	Depression level			χ^2	Φ
	Mild	Moderate	Severe		
Diagnosed	42	107	47		
Recovered cases	9	60	23	36.48*	.28
Not diagnosed	4	129	59		

*$P < 0.05$

DISCUSSION

In this study, patients who were undiagnosed with dengue fever were higher on the level of anxiety when comparing with the subjects who were fully diagnosed with the disease. The diagnosed patients were treated and thus aware of their platelets count. While the patients who were undiagnosed mostly afraid of the treatment whether they would be diagnosed in the last stage and if they would be able to recover at that time.

Another study was done to see the impact of dengue and the results suggested that the impact on mental health was related to the stress produced by the clinical, social, and economic consequences of the outbreak for females[4] Costello (2012) also concluded after research that dengue infection may present an increased risk of depression in the year following acute illness[5]. Ahmed et al (2011) conducted a study and found that the people who suffered from dengue, ultimately developed insect phobia and stress as main symptoms. Anxiety is clearly linked with the dengue fever. Being anxious before diagnosis is a natural process and people have apprehensions on the basis of their knowledge about disease and its outcomes[6].

CONCLUSION

Significant ratio of depression and anxiety among the subjects who were afraid of but not completely diagnosed with dengue.

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