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A Cross-sectional Study of Psychiatric Morbidity in Adult Amputees in a Tertiary Health Care Institute

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Abstract

Background: Amputation has an impact on quality of life of the individual due to immediate limitation in the physical activities. There are significant repercussions on occupational, economical and social functioning, contributing to psychiatric morbidity. **Aims and Objective:** To study socio-demographic profile and evaluate the psychiatric morbidity in amputees of age between 18-60 years. **Material and Methods:** Descriptive cross-sectional study was carried out on Consecutive 70 new and follow-up cases of amputees who were being treated by Surgery or Orthopedics department of a tertiary health care centre. **Results:** Out of 70 patients Psychiatric morbidity was found in 32 (45.71%) of amputees. 25 (35.71%) were diagnosed with major depressive disorder, 5 (7.14%) had panic disorder and 2(2.86%) had post-traumatic stress disorder. There was significant association between psychiatric morbidity and patients living in nuclear family, patients in the age group 31 to 40 years, had amputation on dominant side, and had neuropathic pain after amputation and phantom limb experience after amputation. **Conclusion:** Psychiatric morbidity was found in 45.71% of amputees. The most common psychiatric morbidity in amputees was Major depressive disorder.

Keywords: Amputation, Psychiatric Morbidity

1. Introduction

Amputation is the removal of one or more parts of body[1]. The only absolute indication for amputation is irreversible ischemia in diseased or traumatized limb[2]. Amputation can occur as a result of accidents, terrorism, natural disaster, or can be carried out due to medical or surgical reasons with a motive to save the life of the patient.

Amputation brings about a significant and drastic change in the life of amputees. Amputation is described as being a triple insult, as it brings a loss of function, loss of sensation, and loss or change of body image[3]. This has a dramatic impact on quality of life of the individual due to immediate limitation in the physical activities. There are significant repercussions on occupational, economical and social functioning, contributing to psychiatric morbidity[4].

Most of the attention has been focused on the incidence of Major Depressive Disorder (MDD) and Posttraumatic Stress Disorder (PTSD) after amputation. The prevalence of MDD after amputation in various studies has been quoted as 38%[4], 66.66%[5], 63%[6]. Rates of PTSD after amputation have been reported to be 26.8%[4], 20%[6]. The prevalence of phobic anxiety disorder is 15.5%[4] and phantom limb is 14%[4].

Early and continued attention to psychosocial aspects of the patient's life can facilitate positive psychological adaptation to the challenges of traumatic injury, loss of functioning, and permanent change of body image.

2. Material and Methods

2.1 Study Design

Descriptive cross-sectional study.

2.2 Study Site

The study was undertaken in the department of Psychiatry, Surgery and Orthopedics of a tertiary health care centre with an attached medical college after approval from the institutional ethics committee.

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2.3 Sample

The sample consisted of 70 new and follow-up cases of amputees who were being treated by Surgery or Orthopedics department of a tertiary health care centre.

2.4 Inclusion Criteria

- Age between 18-60 years irrespective of gender.
- Patients giving written informed consent.
- Minimal Interval of 20 days between amputation and interview of patient.
- An absence of disabling medical or neurological condition.

2.5 Exclusion Criteria

- Unconscious patients.
- Mental incapacity to provide information.
- Pre-existing mental or psychological illness excluded by history.

The following materials were used for assessment of selected individuals.

- A patient proforma (Annexure-1) was prepared to collect the following data
  - Demographic details.
  - History of patient.
  - Significant physical examination findings.
  - Mental status examination and clinical impression.

- Mini-International Neuropsychiatry Interview English Version 6.0.0. (Annexure-2).
- The S-LANSS PAIN SCORE (ANNEXURE-3).
- Limb deficiency and phantom limb questionnaire (Annexure-4).

Then the clinical diagnosis was confirmed by two qualified psychiatrists from the Department of Psychiatry and necessary advice was given to the patients. The data obtained was pooled, tabulated and subjected to statistical analysis.

2.6 Statistical Analysis

Statistical analysis was done using the SPSS Version 19. Qualitative data was represented in form of frequency and percentage.

Association between qualitative variables was assessed by Chi-Square test with Continuity Correction for all 2 X 2 tables and Fisher's exact test for all 2 X 2 tables where p-value of Chi-Square test was not valid due to small counts. Adjacent row and or column data of more than 2X2 tables was pooled and Chi-Square test reapplied in case more than 20.0% cells having expected count less than 5.

Results were graphically represented where deemed necessary.

3. Results

Out of 70 patients, 32 (45.71%) were diagnosed with one or more psychiatric morbidity. 38 (54.29%) had no significant psychiatric morbidity. (Table 1)

Table 1. Amputation and Psychiatric morbidity

Psychiatric Morbidity	Number of patients	Percentage
Present	32	45.71%
Absent	38	54.29%
Total	**70**	**100.00%**

Table 2. Amputation and Psychiatric disorders

Psychiatric Morbidity	Number of patients	Percentage
Major Depressive Episode	25	35.71%
Panic Disorder	5	7.14%
Post-Traumatic Stress Disorder	2	2.86%
No Active Psychiatric Illness	38	54.29%
Total	**70**	**100.00%**

Among the 70 patients assessed, 25 (35.71%) were diagnosed with major depressive disorder, 5 (7.14%) had panic disorder and 2(2.86%) had post-traumatic stress disorder. A total of 32 patients (45.71%) had psychiatric morbidity. (Table 2)

In Chi square test P value = 0.006 shows significant association between Age and Psychiatric morbidity

Out of 70 patients assessed, 19 were from the age group 18 to 30 years. In those 19 patients, 9 (47.4%) had psychiatric morbidity whereas 10 (52.6%) did not have any psychiatric morbidity.

Out of 70 patients assessed, 16 patients were from the age group 31 to 40 years. In those 16 patients, 12 (75.0%) had psychiatric morbidity whereas 4 (25.0%) did not have any psychiatric morbidity.

Out of 70 patients assessed, 16 patients were from the age group 41 to 50 years. In those 16 patients, 8 (50%) had psychiatric morbidity whereas 8 (50%) did not have any psychiatric morbidity.

Out of 70 patients assessed, 19 patients were from the age group 51 to 60 years. In those 19 patients, 3 (15.8%) had psychiatric morbidity whereas 16 (84.2%) did not

Table 3. Age group and Psychiatric morbidity among amputees

Age		Diagnosis					Total
		Psychiatric Morbidity Present				Psychiatric Morbidity Absent$	
		Major Depressive Episode	Panic Disorder	Post- Traumatic Stress Disorder	Total psychiatric morbidity	No Active Psychiatric Illness	
18-30	No.	7	1	1	9	10	19
	%	36.84%	5.26%	5.26%	47.37%	52.63%	100.00%
31-40	No.	9	2	1	12	4	16
	%	56.25%	12.50%	6.25%	75%	25.00%	100.00%
41-50	No.	7	1	0	8	8	16
	%	43.75%	6.25%	0.00%	50.00%	50.00%	100.00%
51-60	No.	2	1	0	3	16	19
	%	10.53%	5.26%	0.00%	15.79%	84.21%	100.00%
Total	**No.**	**25**	**5**	**2**	**32**	**38**	**70**
	%	**35.71%**	**7.14%**	**2.86%**	**45.71%**	**54.29%**	**100.00%**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.53	3	0.006
N of Valid Cases	70		
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.31.			

Table 4. Gender and Psychiatric morbidity among amputees

Sex		Diagnosis					Total
		Psychiatric Morbidity Present				Psychiatric Morbidity Absent	
		Major Depressive Episode	Panic Disorder	Post-Traumatic Stress Disorder	Total psychiatric morbidity	No Active Psychiatric Illness	
Male	No.	22	5	2	29	32	61
	%	36.07%	8.20%	3.28%	47.54%	52.46%	100.00%
Female	No.	3	0	0	3	6	9
	%	33.33%	0.00%	0.00%	33.33%	66.67%	100.00%
Total	**No.**	**25**	**5**	**2**	**32**	**38**	**70**
	%	**35.71%**	**7.14%**	**2.86%**	**45.7**	**54.29%**	**100.00%**

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	0.638	1	0.424	
Continuity Correction b	0.194	1	0.66	
Fisher's Exact Test				0.494
a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 4.11.				

have any psychiatric morbidity. (Table 3)

P value = 0.494 **No significant association**

Among the 70 patients, 61 were male and 9 were female.

Among the 61 male patients, 29 (47.5%) had psychiatric morbidity whereas 32 (52.5%) did not have any psychiatric morbidity.

Among the 9 female patients, 3 (33.3%) had psychiatric morbidity whereas 9 (66.7%) did not have any psychiatric morbidity. (Table 4)

Table 5. Marital status and Psychiatric morbidity among amputees

Marital status		Diagnosis					Total
		Psychiatric Morbidity Present				Psychiatric Morbidity Absent	
		Major Depressive Episode	Panic Disorder	Post-Traumatic Stress Disorder	Total psychiatric morbidity	No Active Psychiatric Illness	
Married	No.	19	5	2	26	32	58
	%	32.75%	8.62%	3.44%	44.8%	55.2%	100.00%
Never married	No.	6	0	0	6	6	12
	%	50.0%	0.00%	0.00%	50.0%	50.0%	100.00%
Total	**No.**	**25**	**5**	**2**	**32**	**38**	**70**
	%	**35.71%**	**7.14%**	**2.86%**	**45.7**	**54.29%**	**100.00%**

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	0.107	1	0.743	
Continuity Correction	0	1	0.993	
Fisher's Exact Test				0.761
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.49.				

P value = 0.743 **No significant association**

Out of 70 patients, 58 had ever been married whereas 12 had never been married.

Out of the 58 patients who had ever married, 26 (44.8%) had some psychiatric morbidity, whereas 32 (55.2%) did not have any psychiatric morbidity.

Out of the 12 patients who had never married, 6 (50.0%) had some psychiatric morbidity, whereas 6 (50.0%) did not have any psychiatric morbidity. (Table 5)

P value = 0.032 **Significant association**

Out of 70 patients, 34 had nuclear family and 36 had joint family.

Out of the 34 patients who had nuclear family, 20 (58.8%) had some psychiatric morbidity, whereas 14 (41.2%) did not have any psychiatric morbidity.

Out of the 36 patients who had joint family, 12 (33.3%) had some psychiatric morbidity, whereas 24 (66.7%) did

Table 6. Type of Family and Psychiatric morbidity among amputees

Type of Family		Diagnosis					Total
		Psychiatric Morbidity Present				Psychiatric Morbidity Absent	
		Major Depressive Episode	Panic Disorder	Post-Traumatic Stress Disorder	Total psychiatric morbidity	No Active Psychiatric Illness	
Joint	No.	9	2	1	12	24	36
	%	25.00%	5.56%	2.78%	33.3%	66.67%	100.00%
Nuclear	No.	16	3	1	20	14	34
	%	47.06%	8.82%	2.94%	58.8%	41.18%	100.00%
Total	**No.**	**25**	**5**	**2**	**32**	**38**	**70**
	%	**35.71%**	**7.14%**	**2.86%**	**45.72%**	**54.29%**	**100.00%**

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	4.578	1	0.032	
Continuity Correction	3.609	1	0.057	
Fisher's Exact Test				0.054
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.54.				
b. Computed only for a 2x2 table				

Table 7. Site of amputation and Psychiatric morbidity among amputees

Site of Amputation		Diagnosis					Total
		Psychiatric Morbidity Present				Psychiatric Morbidity Absent	
		Major Depressive Episode	Panic Disorder	Post-Traumatic Stress Disorder	Total psychiatric morbidity	No Active Psychiatric Illness	
Upper Limb	No.	3	0	0	3	9	12
	%	25.00%	0.00%	0.00%	25.0%	75.0%	100.0%
Lower Limb	No.	22	5	2	29	29	58
	%	37.93%	8.62%	3.45%	50.0%	50.00%	100.00%
Total	**No.**	**25**	**5**	**2**	**32**	**38**	**70**
	%	**35.71%**	**7.14%**	**2.86%**	**45.7%**	**54.29%**	**100.00%**

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square[$]	2.504	1	0.114	
Continuity Correction[$]	1.598	1	0.206	
Fisher's Exact Test[$]				0.202
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.49.				

not have any psychiatric morbidity. (Table 6)

P value = 0.206 **No Significant association**

Out of 70 patients, 12 had upper limb amputation, 58 had lower limb amputation.

Out of the 12 upper limb amputation patients, 3 (25%) had psychiatric morbidity and 9 (75%) did not have psychiatric morbidity.

Out of the 58 lower limb amputation patients, 29 (50%) had psychiatric morbidity and 29 (50%) did not have psychiatric morbidity. (Table 7)

P value = 0.012 **Significant association**

Out of 70 patients, 46 had amputation on dominant limb, 24 had amputation on non-dominant limb. Out of 46 had amputation on dominant limb, 26(56.5%) had psychiatric morbidity and 20 (43.5%) did not have psychiatric morbidity.

Out of 24 had amputation on non-dominant limb, 6 (25%) had psychiatric morbidity and 18 (75%) did not

Table 8. Side of amputation and Psychiatric morbidity among amputees

Side of Amputation		Diagnosis					Total
		Psychiatric Morbidity Present				Psychiatric Morbidity Absent	
		Major Depressive Episode	Panic Disorder	Post-Traumatic Stress Disorder	Total psychiatric morbidity	No Active Psychiatric Illness	
Dominant	No.	20	4	2	26	20	46
	%	28.57%	5.71%	2.86%	56.5%	43.5%	100.0%
Non Dominant	No.	5	1	0	6	18	24
	%	7.14%	1.43%	0.00%	25%	75%	100.0%
Total	**No.**	**25**	**5**	**2**	**32**	**38**	**70**
	%	**35.71%**	**7.14%**	**2.86%**	**45.7%**	**54.29%**	**100.00%**

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.315	1	0.012
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.97.			

Table 9. Indication of amputation and Psychiatric morbidity among amputees

Indication for Amputation		Diagnosis					Total
		Psychiatric Morbidity Present				Psychiatric Morbidity Absent	
		Major Depressive Episode	Panic Disorder	Post-Traumatic Stress Disorder	Total psychiatric morbidity	No Active Psychiatric Illness	
Traumatic	No.	13	1	2	16	14	30
	%	43.33%	3.33%	6.66%	53.33%	46.66%	100.0%
Non-traumatic/ surgical	No.	12	4	0	16	24	40
	%	30.0%	10.0%	0.00%	40.0%	60.0%	100.00%
Total	**No.**	**25**	**5**	**2**	**32**	**38**	**70**
	%	**35.71%**	**7.14%**	**2.86%**	**45.7%**	**54.29%**	**100.00%**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.228	1	0.268
Continuity Correction	0.75	1	0.387
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.71.			

have psychiatric morbidity. (Table 8)

P value = 0.268 **no significant Association**

Out of 40 patients had amputation for surgical reason, 16 (40.00%) patients had psychiatric morbidity and 24 (60%) had no psychiatric morbidity.

30 patients had amputation because of traumatic injury. Out of these 30 patients, 16 (53.3%) had psychiatric morbidity and 14 (46.7%) did not have psychiatric morbidity. (Table 9)

P value = 0.011 **Significant association**

Out of 70 patients, 44 patients had no neuropathic pain after amputation. Out of these 44 patients, 15 (34.1%) had psychiatric morbidity and 29 (65.9%) did not have psychiatric morbidity.

26 patients had neuropathic pain after amputation. Out of these 26 patients,17 (65.4%) had psychiatric morbidity and 9 (34.6%) did not have psychiatric morbidity. (Table

Table 10. Neuropathic Pain and Psychiatric morbidity among amputees

Neuropathic Pain (Total Scores)		Diagnosis					Total
		Psychiatric Morbidity Present				Psychiatric Morbidity Absent	
		Major Depressive Episode	Panic Disorder	Post-Traumatic Stress Disorder	Total psychiatric morbidity	No Active Psychiatric Illness	
Absent(<12)	No.	10	3	2	15	29	44
	%	22.7%	6.81%	4.54%	34.1%	65.9%	100.0%
Present(>=12)	No.	15	2	0	17	9	26
	%	57.69%	7.69%	0.00%	65.4%	34.6%	100.00%
Total	**No.**	**25**	**5**	**2**	**32**	**38**	**70**
	%	**35.71%**	**7.14%**	**2.86%**	**45.7%**	**54.29%**	**100.00%**

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	6.449	1	0.011	
Continuity Correction	5.25	1	0.022	
Fisher's Exact Test				0.014
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.89.				
b. Computed only for a 2x2 table				

Table 11. Phantom limb experience and Psychiatric morbidity among amputees

Phantom limb experiences		Diagnosis					Total[$]
		Psychiatric Morbidity Present				Psychiatric Morbidity Absent	
		Major Depressive Episode	Panic Disorder	Post-Traumatic Stress Disorder	Total psychiatric morbidity	No Active Psychiatric Illness	
Present	No.	8	4	1	13	5	18
	%	44.44%	22.22%	5.56%	72.22%	27.78%	100.00%
Absent	No.	17	1	1	19	33	52
	%	32.69%	1.92%	1.92%	35.54%	63.46%	100.00%
Total	No.	25	5	2	32	38	70
	%	35.71%	7.14%	2.86%	45.71%	54.29%	100.00%

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	6.861	1	0.009	
Continuity Correction	5.498	1	0.019	
Fisher's Exact Test				0.013
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.23.				

10)

P value = 0.009 **Significant Association**

Out of 70 patients, 18 patients had phantom limb experience after amputation. Out of these 18 patients, 13 (72.2%) had psychiatric morbidity and 5 (27.8%) did not have psychiatric morbidity.

52 patients had no phantom limb experience after amputation. Out of these 52 patients, 19 (36.5%) had psychiatric morbidity and 33 (63.5%) did not have psychiatric morbidity. (Table 11)

4. Discussion

Psychiatric morbidity in the present study was found to be 45.71%.This is in accordance with other Indian studies, which reported prevalence of psychiatric morbidity range from 37.9% to 84%. Malik et al[4] and Muzaffar et al[6] studies showed higher prevalence i.e., 67.6% and 84% respectively, Trivedi et al.,[7] showed lower prevalence of 37.9%.

Most common psychiatric morbidity was depression in this study. This is in accordance with studies by Muzaffar et al.,[6] Malik et al.,[4] Trivedi et al[7]. 3(4.29%) had major depressive disorder and suicidality.

- Depressive disorder was found to be the most prevalent (i.e. 35.71%) psychiatric morbidity in the current study. Similar findings have also been reported by Malik et al.,[4] where they reported 38% of patients had depression, Kashani et al.,[8] also reported similar findings.
- Panic disorder was present in 7.14% of the patients in the current study. It was the second most common psychiatric morbidity in patients. This was in accordance with Muzaffar et al.,[6] who reported panic disorder in 6% of patients.
- Post-traumatic stress disorder: In the current study, post-traumatic stress disorder was found in 2.86% of the patients. It was the third most common psychiatric morbidity in patients. This was not in accordance with Malik et al.,[4] and Muzaffar et al.,[6] who found higher prevalence of Post-traumatic stress disorder 26.8% and 20% in their respective studies. This is because amputation resulting from accidental injury leads to higher prevalence of PTSD, in part because of the emotional stress surrounding the accident[6]. While in the present study most of the patients had amputation for surgical reasons.
- Suicidality: In the current study suicidality was reported by 4.29% of the patients. Friersonet al[9] reported suicidal thought were one of the common symptoms in amputees. Malik et al.,[4] reported 7% had severe depressive disorder.

In the current study, out of the 32 patients with psychiatric morbidity, majority i.e., 12(37.5%) were in the age group of 31 to 40 years. Even, maximum psychiatric morbidity (75%) was also seen in age group 31 to 40 years. Similar findings have also been reported by Frank et al.,[10] where they reported Younger amputees had increased

psychological symptoms and increased rate of depression.

Males had more psychiatric morbidity i.e., 29 (47.5%) while only 3 (33.3%) females had psychiatry morbidity. Other studies reported similar findings[4–7,11]. This may be attributed to the higher prevalence of amputation in males.

In the current study, out of the 32 patients with psychiatric morbidity, majority i.e., 26 (81.25%) were married. But, maximum psychiatric morbidity (50%) was seen in unmarried. 50% of unmarried patients had psychiatric morbidity while 44.8% of married patients had psychiatric morbidity. This in accordance with Parkes et al.,[12] and Kohl[13] who concluded that presence of a supportive partner is helpful in the adjustment of the adult amputee who assumes a flexible approach, takes over functions when needed, but at all times maintains the amputee's self-esteem. Muzaffar et al.,[6] concluded that patients living with good family support that included spouses, parents, siblings and other near relations had less psychiatric morbidity.

In the current study, out of the 32 patients with psychiatric morbidity, majority i.e., 20 (62.5%) were living in nuclear family. Even, maximum psychiatric morbidity (58.8%) was also seen in nuclear family. There was significant association between psychiatric morbidity and family type in this study. This is in accordance with Muzaffar et al.,[6] where they concluded that patients living in joint families with good family support had less psychiatric morbidity. This is also in accordance with studies by Hawamdeh et al.,[14] where they concluded that single patients and patients with no social support had experienced more psychiatric morbidity.

In the current study, out of the 32 patients with psychiatric morbidity, majority i.e., 29 (90.6%) had lower limb amputation. Even maximum psychiatric morbidity (50.0%) was also seen in patients who had lower limb amputation. This is not in accordance with findings by Trivediet al[7]. Where they reported patients with upper limb amputation had higher psychiatric morbidity than patients with lower limb amputation.

In the current study, out of the 32 patients with psychiatric morbidity, majority i.e., 26(81.2%) had amputation on dominant side. Even, maximum psychiatric morbidity (56.5%) was also seen in patients who had amputation on dominant side. There was significant association between psychiatric morbidity and side of amputation. This was in accordance with Trivedi et al.,[7] where they reported psychiatric morbidity is more common in patients who had amputation on right limb.

In the current study, majority (40 patients) of patients had amputation for surgical reasons. But, maximum (16 out of 30 i.e., 53.3%) psychiatric morbidity was found in patients had traumatic amputation.

This is in accordance with Hawamdeh et al.,[14] concluded that traumatic amputees had higher levels of depression and anxiety compared with those who had their amputation because of disease.

In the current study, out of the 32 patients with psychiatric morbidity, majority i.e., 17(53.1%) had neuropathic pain after amputation. Even, psychiatric morbidity was more common (65.4%) in this group. There was significant association between psychiatric morbidity and neuropathic pain after amputation. There is no study which compared the association between psychiatric morbidity and neuropathic pain after amputation although many studies compared association between psychiatric morbidity and phantom limb.

In the current study, out of the 32 patients with psychiatric morbidity, 13(40.6%) had phantom limb experience after amputation. But, psychiatric morbidity was more common (72.2%) in patients had phantom limb experience after amputation. There was significant association between psychiatric morbidity and phantom limb experience after amputation. This is accordance with other studies[6,7].

5. Conclusion

Important observations made from the study were that psychiatric morbidity was present in 45.71% of the study population. Depressive disorder was the most common psychiatric morbidity found (35.71%) followed by panic disorder (7.14%) and post-traumatic stress disorder (2.86%).

- There was significant association between psychiatric morbidity and patients living in nuclear family, patients in the age group 31 to 40 years, had amputation on dominant side, and had neuropathic pain after amputation and phantom limb experience after amputation.

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