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PSYCHOLOGICAL COMPLAINTS AMONG AMPUTEES IN SELECTED HOSPITALS PESHAWAR

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ABSTRACT

Background: Amputation is a life-altering surgical intervention performed to prevent severe complications from conditions such as trauma, vascular disorders, infections, or malignancy. It not only results in permanent physical disability but also imposes profound psychological challenges, including stress, anxiety, and depression. Globally, approximately 1.7 million people are living with limb loss in the United States alone. In Pakistan, data remain scarce despite the rising prevalence of amputations due to diabetes, trauma, and war-related injuries. Understanding the psychological complaints of amputees is crucial for designing effective rehabilitation and support strategies

Objectives: The main aim of this study was to assess psychological complaints of amputees in the selected hospitals of Peshawar.

Methods: A descriptive cross-sectional study was conducted on 128 amputee patients recruited through purposive sampling from Hayatabad Medical Complex, Lady Reading Hospital, Khyber Teaching Hospital, and the Pakistan Institute of Prosthetic and Orthotic Sciences. Data were collected using the Depression, Anxiety, and Stress Scale (DASS-42). SPSS version 22 was used for statistical analysis.

Results: A Total of 128 participants, 90% were male, and the mean age was 40.6 ± 15.2 years. Most participants (89.8%) had unilateral lower-limb amputations, with bomb blasts (25%), road traffic accidents (22.7%), and diabetes mellitus (21%) identified as the leading causes. Findings revealed that 50.7% of amputees experienced stress, 44.5%

reported anxiety, and 40.6% suffered from depression. Significant associations were observed between gender and both anxiety (p=0.00) and depression (p=0.01), whereas other demographic variables showed no significant correlation.

Conclusion: It is concluded that Amputees in Peshawar experience a high prevalence of psychological complaints, particularly stress, anxiety, and depression. The findings underscore the urgent need for integrated psychosocial support and multidisciplinary rehabilitation programs. Nurses and healthcare professionals play a pivotal role in identifying and addressing these psychological needs to improve the overall quality of life for amputees.

INTRODUCTION:

Amputation is one such type of permanent disability when the body parts is surgically removed due to congenital abnormality, traumatic accident, or any other vascular or pathological problems specifically to the limb (1). Amputation is a surgical procedure that is performed to prevent possible life complications. In addition, it is also important to have amputation in cases like gangrene and cancer to prevent the body from further damage (2). Amputation of the limb not only affects physical health but also influences mental health. An amputee has problems such as stress, anxiety, depression, low self-esteem, and hopelessness. The total life pattern of an individual is disturbed (3). Psychological support and readjustment in the environment, and regaining independence, play a vital role in the lives of amputated people.[3] There are a lot of people living in the world who have amputations. Around 1.7 million people of the United States have amputations; 1 out of 200 individuals lose their limb, and it is expected that it will double at the end of 2050 (4,5). Surgical removal of a limb is a very traumatic event that leads a person to physical disability as well as psychological complaints, including depression and anxiety. Depression is a common psychological condition in which a person feels unhappiness, loss of interest or desire, decreased level of energy, and does not fully enjoy their daily routine, and becomes troubled. Amputation affects people in all communities all over the world (6). Many diseases, events, and conditions result to limb loss or amputation. The most common cause of amputation in the United States is vascular problems resulting from Diabetes (7). The second most common cause of amputation is trauma, and the common causes of traumatic amputation are bomb blasts and land mines. The war in Iraq, Afghanistan, Syria, and Yemen has also increased the number of limb losses, both in civilians and soldiers, and around 15000 people have lost their limbs. Other conditions, such as car accidents, industrial accidents, disease, and congenital abnormalities, are the causes of amputation (8).

Pakistan has been in a state of war against terrorism since 9/11; Soldiers and civilians were disabled due to bombings and explosions, and most of them lost their lower limbs. A study conducted (2007-2012) in Sindh, Pakistan, showed that 1115 patients had amputated limb; In these, 47.4% had lower limb amputation (9). There are certain factors attributed to the physical complaints among amputees, including infection in the surgical site, long stay in the hospital, poor wound healing, and fitting of prosthetic devices, which further lead to certain psychological problems. These psychological complaints include stress, anxiety, and depression that affect the mental health of an individual extremely (10). According to the World Health Organization, there is 14.1% amputee patients had depression throughout the year. The ratio of depression in male patients was

5.8% and among females was 9.5%. The level of anxiety was greater in the age group 18 to 38 years, and depression was greater in older age (11,12). Other psychosocial complaints include anxiety, depression, low self-esteem, and hopelessness also face (13). Nurses are the backbone of the healthcare system, providing healthcare to people in hospitals and communities. Knowledge regarding psychological complaints of amputees improves quality of life. It is also preventing amputees from psychological complaints such as stress, anxiety, and depression (14). Health education regarding community restoration enables the amputee to adjust to the community.

The study aims to identify and explore psychological complaints of amputees in Peshawar City. This study would also be helpful for better health management in the future. There was no proper published data available on this topic in Pakistan, so the study will be helpful for research and better health management in the future. Statistical data and published articles available about amputation in Pakistan are limited; therefore, this study would be an addition in this regard. It would also help the healthcare worker to advance the knowledge regarding amputee patients to improve the quality of care. This study could open many channels for further specific research in the betterment of amputee people.

Methods:

Cross cross-sectional study design was used to collect data from three tertiary care hospitals and one orthotic and prosthetic care center of Khyber Pakhtunkhwa, including, Lady Reading Hospital (LRH), Khyber Teaching Hospital (KTH), Hayatabad Medical Complex (HMC), and Pakistan Institute of Prosthetic and Orthotic Science (PIPOS), Peshawar. According to the previous six months' record, the average number of patients attending the aforementioned hospitals per month is: 40 patients per month to attend LRH hospital for services, KTH 20/month, HMC 30/month, and PIPOS 100/month. A total of 190 amputated patients attended the above-mentioned hospitals per month for getting services. Sample size has been calculated by using Raosoft software with these parameters: margin of error 5%, confidence interval of 95%, population size of 190, and response rate of 50%. The proposed sample size was 128. Data was collected in two months after the approval of the Ethical Review Board of the Khyber Medical University, Peshawar, Pakistan. Departmental permeation was obtained from each study sitting. Written informed consent was taken before describing the study details e.g., aim, objective, risks, and benefits. The participants were assured of confidentiality, anonymity, privacy, and data protection. The study was completed in six months from July 2018 to December 2018. The purposive sampling technique was used to collect data from selected hospitals. The participants included those who had undergone amputation at least one month ago, while excluded from those study were children unwilling and those who had a previous history of psychological illness. DASS 42 Adopted questionnaires after permeation were used for data collection. Data was analyzed using SPSS version 22. Mean and standard deviation were calculated for continuous variables, while percentage and frequency were calculated for qualitative variables. Chi-Square test of independence was used to determine the association of the socio-demographic variables with stress, anxiety and depression.

Results:

There were total 128 participants, 115 were male and 13 were female tablet-(1) show the demographic variables of the study. The mean age of participants was 40.60 with standard deviation of ±15.19. The minimum age was 18 year and maximum were 70 year.

Table-1: Demographic Characteristics of the Study Participants

S/N	Variables	Attribute	Frequency	Percentage

1	Gender	Male Female	115 113	90% 10%
2	Qualification of the participants	Primary Middle Matric Above matric Non	18 17 12 22 59	14.06% 13.28.% 9.38% 17.19% 46.09%
3	Hospital	LRH KTH HMC PIPOS	30 14 14 70	23.44% 10.94% 10.94% 54.69%
4	Causes of amputation	Trauma Bomb blast DM RTA Other causes	21 32 27 29 19	16.41% 25.00% 21.09% 22.66% 14.84%
5	Type of amputation	Unilateral upper Unilateral lower Bilateral upper Bilateral lower Unilateral upper and lower	6 115 3 3 1	4.69% 89.84% 2.34% 2.34% 0.78%
6	Level of amputation	Above elbow Below elbow Above knee Below knee	3 7 25 93	2.34% 5.47% 19.53% 72.65%
7	Year lived with amputation	Below 1 year 1 to 5 year 6 to 10 year More than 10 year	26 43 31 29	20.31% 33.59% 24.22% 21.88%

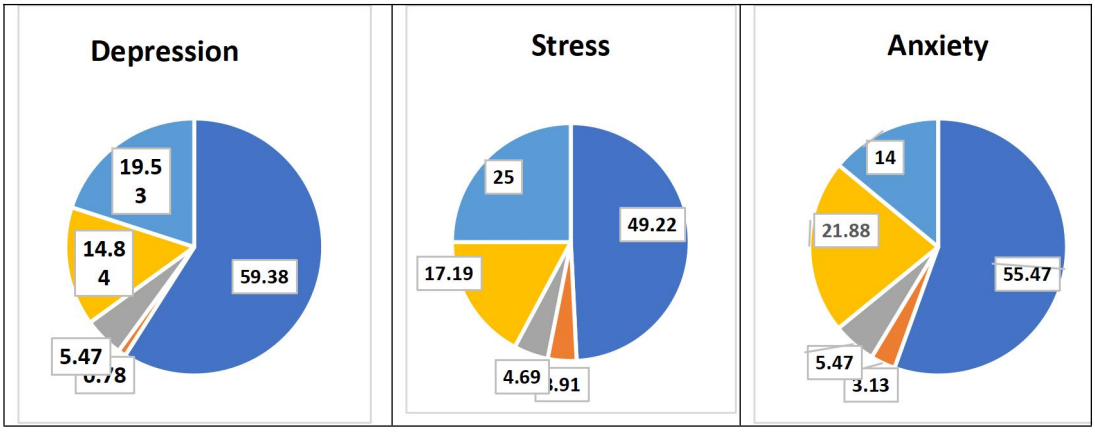

Fig 1. Levels of Depression, Stress and Anxiety

The above Fig-1 shows that 50.78% participants had stress, while the remaining 49.22% had no stress, Out of the 50.78% patients 3.91% had extremely severe stress. 4.69% had severe stress, 25% had moderate level of stress and 17.19% had mild stress. Also, it is shown in the Fig-1 that 55.47% of the participants has no anxiety, while 44.5% amputees had anxiety in which 3.13% had extreme level of anxiety, 5.47% had severe

form of anxiety, 21.88% had moderate level of anxiety while 14.06% with mild level anxiety. It was also figured out that 40.62% had depression in which 0.78% with extremely severe depression, 5.47% had severe depression, 19.53% had moderate level of depression while 14.84% had mild level of depression.

Table-2: Association of Psychological Complaints with Different Socio-Demographic Variables

Stress			Anxiety			Depression		
Variable	Chi Square $\chi 2$	P-value	Variable	Chi Square $\chi 2$	P-value	Variable	Chi Square $\chi 2$	P-value
Gender	5.12	0.27	Gender	21.58	**0.00**	Gender	12.20	**0.01**
Age	20.16	0.21	Age	13.13	0.66	Age	21.68	0.15
Type of amputation	11.40	0.78	Type of amputation	14.23	0.58	Type of amputation	8.69	0.92
Level of amputation	10.17	0.60	Level of amputation	9.02	0.70	Level of amputation	10.19	0.59
Time duration of amputation	13.69	0.32	Time duration of amputation	12.68	0.32	Time duration of amputation	13.14	0.35

Table-2 shows association of psychological complaints with different socio-demographic variables. The result showed that age, gender, type, level and time duration did not show a significant association. While, a significant association of anxiety and depression was found with gender with p value of 0.00 and 0.01 respectively.

Discussion:

Amputation is the permanent disability and irreversible condition of an individual. An amputee faces physical challenges as well as psychological complaints, most commonly Stress, Anxiety and Depression. The objective of this study was to assess the psychological complaints in terms level of Stress, Anxiety and Depression among amputees, and the obtained results were compared with literature. Looking into the findings of demographic variables in the current study including age, gender, qualification and the level of stress, anxiety and depression are parallel with some of the previous results. According to current study findings 51% of the participants had stress, 45% had anxiety and 41% participants were found suffering from depression. These results were found relatively consistent with the results of study conducted by WHO which shows that

around 14% of the participants had depression[10]. Another study stated that 27% of amputees had been reported with depression while it has been found that around 25% of the participants had anxiety.[13]

Furthermore 18% of the amputees had both anxiety and depression.[14] A research study conducted in Jordanian stated that 35% of the amputees have depressive disorder [15] while the similar reports have been given by a study conducted in Jordan stating that participant have anxiety and depression 37% and 20% respectively while living with amputation.[16] Furthermore, studies conducted in Turkey in 2010 showed that around 36% of participants had traumatic stress after amputation that is quite changed with the current study findings because having differences in the context.[17] According to current study findings there are most of the participants 89.84% have unilateral lower limb amputation. The incidence of lower limb amputation varies significant across the world fluctuating from 5.8 to 31 per 100,000.[18] Furthermore study conducted in Sindh Pakistan from (2007 to 2012) found 47% participant have lower limb amputation.[19] The existing study participants were categorized according to cause of amputation. 25% Participants have amputation due to bomb blasts. 22.66% participant have amputation due Road Traffic Accident (RTA), amputation caused by Diabetes Mellites (DM) is 21%. Participants who have amputation due to trauma are 16%. Participants who had other causes of amputation like infection, congenital abnormality and cancer etc. was 14.8%. the gotten consequences were compared with study conducted in Nigeria from (2005 to 2010) stated that 52% participant have amputation due to diabetic foot ulcer and 76% participants have amputation related to trauma.[20] Outcome compared with other study conducted in Giana it is specified that14% participant have amputation others causes like infection congenital abnormality and cancer.[21] The current study illustrations that 2.3% participants had amputation above elbow and 5.4% had below elbow amputation. 19.53% participants have above knee and 72.66% participants have below knee amputation. This result was compared with study conducted in 2008 in Kenya that stated 61% participants had above knee amputation while 19% of the participants had below knee amputation.[22]

Study conducted in Pakistan from (2014 to 2015) itemized that the most common level of amputation was transtibial which is 69.2%.[4] Participant were characterized according to their duration with amputation (fig 2) those who have amputation for less than 1 year were 20%, 1 to 5 year 33.59%, 6 to 10 year 24.22% and more than 10 year is 21.88%. Its mean majority of participant have amputation from 1 to 5 year. This study assess association between anxiety level and socio-demographic variables; only gender has significant association with anxiety with p value is 0.00. And there is no significant association between level of anxiety and selected demographic variables. Literature confirmations that there is no significant association of stress level with age, gender, type, level and time duration of amputation.[23] Another study conducted by Durgawale et. al. (2005) in India which showed significant association of anxiety with gender.[24] This study also evaluate association between depression level and different socio-demographic variables which revealed that gender has significant association with depression and its p value is 0.01, and there is no significant association of depression with age, gender type, level and time duration of amputation which were compare with the results of study conducted by Bhandari, M et.al (2004) that show there was significant association between depression and sociodemographic variables.[25]

Conclusion:

It is concluded that amputee patients face psychological complaints in the sense

of stress, anxiety, and depression. It is indicated in the study that 50.78% participants had stress, 44.53% had anxiety,d and 40.62% were suffering from depression. The most significant factor that determines an individual's anxiety and depression among the post-amputee patients was gender, and it was shown that female gender were more anxious and depressed than male post-amputee patients. Therefore, the significant factors must be given more consideration while dealing with post-amputation patients.

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