

Determinants of Anxiety in Amputees Owed to Traumatic & Non-Traumatic Causes in Quetta

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ABSTRACT

Objective: To find out the causes and factors of anxiety among amputees suffering from traumatic and non-traumatic causes.

Methodology: This descriptive cross-sectional study was conducted in Quetta from the month of May 2018 to July 2018. This study included those clients with amputations as a result of Traumatic & non-traumatic causes and the data was collected from them. This study involved a total of 54 participants. All amputees who visited the three Physical Rehabilitation Centre were included during data collection process. A structured adopted questionnaire using the Hospital Anxiety and Depression Scale (HADS) according to the inclusion & exclusion criteria & then tabularized and analyzed by applying Chi square test.

Results: This study involved a total of 54 participants of whom 7(13%) were females and 47(87%) males. Among amputees 36(66.7%), amputations were due to Traumatic injuries and 18(33.3%) were due to non-traumatic amputations. In traumatic, the majority was due to RTA with 25(46.3%) and in non-traumatic causes diabetes stood first with 13(24.1%) amputation. Traumatic are more anxious than non-traumatic. There is a significant relationship between marital status and anxiety level (p-value 0.047). Statistically significant relationships between amputation and anxiety level were noticed, p value=0.049.

Conclusion: Amputation has a significant association with anxiety level. Traumatic experiences make people feel more anxious than non-traumatic ones. Socio-demographics has association with levels of anxiety. It is recommended to do regular or annual screening of these patients following amputation.

Keywords: Amputees, Anxiety, Depression, Trauma.

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Introduction

Amputation is "the removal of a limb or a part of it from the body because of medical reasons." Amputation is compulsory only when an ailment of a limb could not be cured or treated or whenever there is a life-threatening condition.¹ 82% of all amputations happen due to diabetes, peripheral vascular disease or any trauma.²

Nowadays, the number of individuals living with depression and anxiety, are rapidly increasing, and especially diseased people, survivors of road traffic accidents, and victims of wars, are largely getting affected by it. The deteriorated law and order situations and waging wars round the globe and nationally, has not only wreaked havoc but also increased the overall number of casualties among masses.³ Moreover, road traffic accidents are also among the causes of increasing

number of trauma related injuries (including the injuries of head & neck region), approximately, 1.25 million individuals succumb to road traffic accidents annually. And about 20 and 50 million become seriously injured as a result of accidents and experience a serious form of disability for the rest of their lives.⁴

According to World Health Organization, around the globe there are as many as 300 million people are affected by depression and other psychiatric conditions. Because of depression people are unable to live their daily life in a normal way. It has become amongst the common health condition worldwide. Adults belonging to age group 15 to 49 are more prone to become depressive. Annually, nearly 800 thousand people lost their lives by committing suicides.⁵

Disabled people can easily be affected by depression and anxiety and are also more vulnerable to get other chronic diseases, show risky behaviors even die as a young. There are nearly more than 1 billion people who are considered disabled around the globe. A lot of physical functional limitations are being faced by them in their daily lives. 3.8% of the age group is more than 15 years old, which makes numbers as high as 190 million individuals. 2.2% of the age group is less than 15 years old, which equals to 110 million individuals suffers from various physical functional limitations. About 15% of people are disabled in this world. According to the 1998 census, Pakistan accounts for 2.54% of the total.⁶

According to research, approximately 20 to 60% of disabled people who seek treatment for their illnesses are found to be depressed and anxious.¹ The occurrence of psychiatric ailments is 32% to 84%, one of the highest occurrence rates among Indian people so far.⁷ Several studies contend that anxiety and depression are the ultimate outcomes of anyone who has lost any part of their body and is permanently disabled.^{3,6} Moreover, there are no adequate health facilities are present and there are nearly 4% chances that they are being treated in an uncordial manner by health professionals.

Social support of disabled people and understanding their problems will play an important role in order to face daily life challenges in a better way and also improve their quality of life.⁸ There is a dire need of such kind of intervention that timely physical and psychological help can enable them to overcome depressive and anxiety disorders effectively.⁹

Fractures, including maxillofacial fractures, are commonest globally because of the increased incidence of the RTA's, inter-personal assaults, and fall from any height and sports injuries. Those injuries might result in loss of function, a disfiguration, psychological problems or issues, disability and even death. Esmer et al. confirmed that approximately twenty-five percent of all severely injured patients are also suffering from maxillofacial injuries. These injuries could be minor, such as injuries to the teeth or soft tissue, or life-threatening, such as bleeding from the major arteries.¹⁰⁻¹²

Depression and anxiety are serious disabling condition that may affect recovery and independence. Trauma and other main causes of amputation are very common in our territory; there is a need to have an understanding of the level of depression and anxiety.

Traumatic or surgeries that finish up with loss of an appendage achieve numerous mental reactions. Numerous examinations have been centered on removals from a mental perspective and how to adapt to post-removal mental condition. Various components were observed to be compelling: type and dimension of removal, social help, sexual orientation, age, salary, phantom limb pain, fulfilment with the prosthesis. Despite the fact that medicinal medications are improving, removal rates don't appear to be declining. Prosthetic alteration, social distress, melancholy and self-perception tension are four potential proportions of psychosocial change in accordance with removal.^{13,14}

The aim and objective of this study was to find out factors of anxiety among amputees suffering from traumatic and non-traumatic causes.

Methodology

This descriptive cross-sectional study was conducted in Quetta city from the month of May 2018 to July 2018. Three main physical rehabilitation centers of Baluchistan were included in the study. One was Public center, based under Social welfare department and the other two were NGOs based. These were the only rehabilitation centers in the province based in the capital city of province, Quetta. This study included those clients with amputations as a result of Traumatic & non-traumatic causes and the data was collected from them. This study involved a total of 54 participants. All amputees who visited the three Physical Rehabilitation Centre were included during data collection process. Inclusion Criteria was "upper and lower limb unilateral amputees, newly

amputees to 10 years' time since amputation, Amputees with non-psychiatric history and background. Exclusion Criteria was Amputees from Afghanistan, Amputees with bilateral Amputation & Amputation due to congenital malformation.

The data collection tool was obtained by the use of a questionnaire. Data was collected through a structured adopted questionnaire using the Hospital Anxiety and Depression Scale (HADS), which is a commonly used self-rating scale established to assess psychological distress. Trained data collectors along with principal investigator were engaged. The quantitative tool was respondent centered and assisted with any query and questions regarding the care of amputees. SPSS version 20 was used. The collected data was tabularized and analyzed by applying Chi square test.

Results

This study involved a total of 54 participants of whom 7(13%) were females and 47(87%) males. 81.5 % respondents were married. Majority of the participants were uneducated 26(48.1%). 20.4% got primary education. 18.5% were matriculate. 1.9 % did graduation or masters. While talking about the no of dependents per participants, 31.5% participants had the no of dependents between 9-12. 24% participants had 2-4 no of dependents. 18.5% participants had 5-8 no of dependents. 13, 13% participants had dependents 13-16 or 16 & above. Table I summarizes the socio-demographic characteristics of the study population.

Among amputees 36(66.7%) amputations were due to Traumatic injuries and 18(33.3%) were due to non-Traumatic amputation.

In Traumatic, majority was due to RTA (including maxillofacial injures) with 25(46.3 %) and in non-traumatic causes diabetes stood first with 13(24.1%) amputation.3 (6%) amputations were with electric shock and vascular diseases respectively. Gunshot and mine were responsible for 3(5%) of the amputation. Tumor and fall came with the least responsible of the amputation with only 2(4%) contribution. Distribution of the causes

is shown in the Pie chart below (Figure 1)

Based on Hospital Anxiety and Depression Scale (HADS), the results showed that among the 54 amputees 55.6% (n=30) were normal and 44.4% (n=24) had anxiety

Table I: Socio-Demographic Characteristics of the Study Population

Socio-demographic category	Frequency	Percentage
Sex		
Female	7	13%
Male	47	87%
Marital status		
Married	44	81.5 %
Single	10	18.5%
Education		
Uneducated	26	48.1%
Primary	11	20.4%
Matric	10	18.5%
Graduation & higher	1	1.9 %
Madrasa, religious studies	6	11.1 %
No of dependents		
2-4	13	24.0%
5-8	10	18.5%
9-12	17	31.5%
13-16	7	13%
16 and above	7	13%

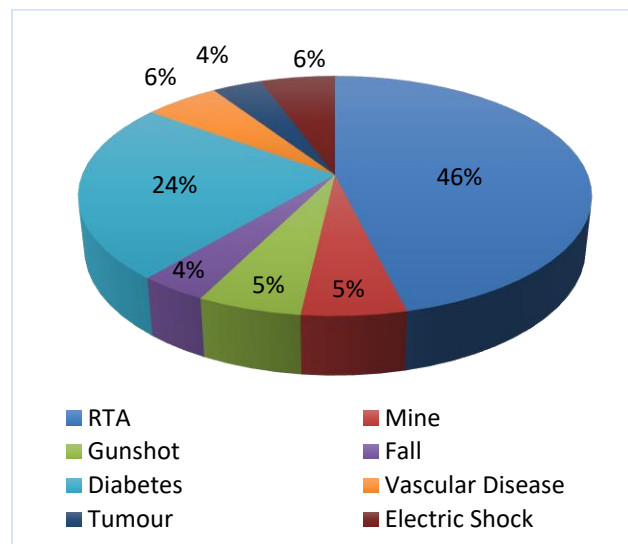


Figure 1. Cause of Amputation Traumatic or non-Traumatic.

Table II: Level of Anxiety in Traumatic or non-traumatic

Traumatic and non-Traumatic	Normal	Moderate	Severe	Total	Anxiety Level	P value
Traumatic	19 52.77%	06 16.66%	11 30.55%	36 66.7%	17(47%)	0.049
Non-Traumatic	11 61.11%	03 16.66%	4 22.22%	18 33.3%	7(38%)	
Total	30 55.55	09 16.66%	15 27.77%	54 100%		

Table III: Levels of anxiety in relation to socio-demographic characteristics.

Category	Level of Anxiety N (%)			Total	p-value
	Normal	Moderate	Severe		
Sex					
Female	04(13.3%)	0(0)	3(20%)	7(13%)	0.42
Male	26(86.7%)	09(100%)	12(80%)	47(87%)	
Marital status					
Married	23(76.66%)	09(100%)	12(80%)	44(81.48%)	0.047
Single	7(23.33%)	0(0)	3(20%)	10(18.52%)	
Education					
Uneducated	14(46.7%)	5(55.6%)	7(46.7%)	26(48.1%)	0.84
Primary	6(20.0%)	1(11.1%)	4(26.7%)	(20%)	
Matric	5(16.7%)	3(33.3%)	2(13.3%)	10(18%)	
Graduation and higher	1(3.31%)	0(0%)	0(0%)	1(2%)	
Madrassa, religious studies	4(13.3%)	0(0%)	2(13.3%)	6(11%)	

Among traumatic and non- traumatic, traumatic are more anxious as compared to non-traumatic with 17 (47%) and 7 (38%) respectively

Statistically significant relationship of amputation with anxiety level was reported (p-value=0.049). As shown in table II.

There is a significant relationship of marital status with level of Anxiety (p-value 0.047). There is no other significant relationship of anxiety level reported with other socio demographic factors. As shown in table III

Discussion

Amputation is considered to be as one of the important health issues and public health concerns as it increases the burden on medical services and society as well.⁵ Research has demonstrated that a noteworthy number of amputees are stood up to with mental modification issues. It is evaluated that roughly one out of three hundred individuals in western nations experience real removal thus mental alteration issues inside the amputee populace might be seen as a noteworthy medical issue.¹⁵ Trauma accounts for sixteen percent of the total load of ailment in the world.⁸

In this research, 66.7% amputations were because of traumatic injuries, and 18(33.3%) were due to non-Traumatic. This is similar to the results expressed by Barth et al where Traumatic amputations happened in 73.4%.¹⁶ In 2017, 57.7 million people were living with limb amputation due to traumatic causes worldwide. Leading traumatic causes of limb amputation were falls (36.2%), road injuries (15.7%), other transportation injuries (11.2%), and mechanical forces (10.4%).¹⁷

Facial trauma is mainly caused by RTA. In addition to the skeletal fractures, trauma of face may also involve

serious soft tissue damage or amputation with the subsequent functional and aesthetic problems. Prominent anatomic structures, like the nose, the lips, and ears, are mostly involved. Besides their aesthetic importance, the lips are also vital for swallowing and speaking. Reconstruction of the facial parts after any traumatic amputation is of a special interest owing to functional and psychological implications such accidents have on a patient.¹⁸

When we talk about the traumatic causes, majority were owing to RTA with 25(46.3%) while in non-traumatic causes diabetes stood 1st with 13(24.1%) amputation. 3 (6%) amputations were with electric shock and vascular diseases respectively. Gunshot and mine were responsible for 3(5%) of the amputation. Tumor and fall came with the least responsible of the amputation with only 2(4%) contribution.

The percentage of diabetes was 55% in the study of Perales S et al, which is far greater than our study¹⁹. In this study 6% amputations were due to vascular diseases. This is not consistent with the findings reported by Yilmaz M where the reasons for amputation were vascular disease in 77 (57 %) cases.²⁰ This figure is far smaller than that (23.9%) reported by Khoshmohabat H et al for gunshot.²¹

Post traumatic amputees are more prone to get anxiety disorders. If an individual has experienced any traumatic amputation, remembrances of that incident could cause them to undergo/suffer from the PTSD (post-traumatic stress disorder) or another similar psychological situation. Symptoms may include nightmares; depression; flashbacks; insomnia; anger outbursts, avoidance; and many other challenging behaviors. It is more likely that an individual who has suffered from traumatic amputation will sense the psychological & emotional impact of their state more severely than individual who

has undertaken a planned surgical amputation since they had no time to prepare for the damage of a limb.

Moreover, numerous Socioeconomic, psychosocial and multiple physical conditions can occur in individuals having amputation due to trauma or accidents.^{22,23} Similar findings were reported by a research study which endorsed that psychosocial problems are the end result of amputations the author, Machado Vaz concluded a research study at, Physical and Rehabilitation Medicine department of central Portuguese hospital, and patients showed higher depression and anxiety conditions with amputations. Henceforth, there health seeking behavior and overall rehabilitation process become disrupted due to psychiatric problems, so, it is really important to diagnose amputees for the presence of depressive or anxiety conditions before the beginning of the rehabilitation.²⁴

Post-traumatic stress, and anxiety are among the forecasters/predictors of poor quality of life (QOL).⁸ In an Indian study Sahu A, supported the fact that, post traumatic disorders can develop in the patients who got an amputation due to accident or any other trauma. Due to this physical cutting of any of their body part various psychological effects will occur. Socially, they become less confident as feelings of losing body parts cause them to be self-conscious about their appearance; as a result, they are unable to face this new reality in their lives.⁷

Among traumatic and non- traumatic, traumatic are more anxious as compared to non-traumatic with 17 (47%) and 7 (38%) respectively. This is comparable with the results expressed by Salari N et al where anxiety level was reported in 31.9% individuals.²⁵

In this study, there is a significant relationship of marital status (socio-demographics) with level of anxiety (p-value 0.047). Iqbal MM et al in his study (p-value <0.01) also reported the significant association with being single i.e. marital status.²⁶ This is similar to that described by Faraj IM where researchers anticipated that some of socio-demographic factors would have a relation with a psychiatric comorbidity.²⁷

Limitations: Small sample size. It was difficult to get trust of most participants because of the specific time for their rehabilitation at the Physical Rehabilitation Centre. Duration since amputation was not included in this study. Difficulty in collecting data because of social problems as most women avoid talking or expressing

their feelings because of their cultural values at that area.

Conclusion

Amputation has a significant association with anxiety level. This study provides an insight to healthcare providers that anxiety do exist at any time surrounding amputation and many factors can significantly influence the various levels of anxiety in amputees, particularly due to traumatic causes. It is recommended to do regular or annual screening of depression and anxiety following amputation.

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