

## SELF-ESTEEM AS A PREDICTOR OF PSYCHOLOGICAL ADJUSTMENT TO LIMB LOSS: A CASE STUDY OF ACQUIRED LIMB AMPUTATION

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### **ABSTRACT:**

#### **OBJECTIVES:**

*To examine the psychological issues following acquired limb amputation and examine the significance of positive self-esteem in the psychological adjustment of amputation.*

#### **METHODOLOGY:**

*This case study was conducted in the surgical and orthopedic units of different government and private hospitals of Peshawar district. The study includes a sample of 100 acquired limb amputees, both adult males and females admitted in different hospitals of Peshawar. Patients with congenital limb loss or with preexisting psychological issues were excluded from the study. Psychological adjustment scale developed by Sabir (1999) and Self-Esteem scale developed by Rifai's (1999) was used to determine the amputee's level of psychological adjustment and self-esteem.*

#### **RESULTS:**

*Results revealed that amputation leads to number of psychological issues. It was found that males had lowered self-esteem and severe adjustment issues than females while young amputees exhibit greater signs of maladjustment as compared to older amputees. Regression analysis for self-esteem predicting psychological adjustment also displayed pronounced differences in the level of psychological adjustment due changing level of self-esteem. The model suggested a strong positive relation between self-esteem and psychological adjustment ( $r=0.880$ ,  $B=0.867$ ,  $t=18.37$ ,  $p<.001$ ) and 77.5% of the variance in the dependent variable (psychological adjustment) was caused by predictor variable i.e. self-esteem ( $R^2=0.775$ ,  $F(98)=337.6$ ,  $p<.001$ ).*

#### **CONCLUSION:**

*Amputation badly disturbs the psychological state of an amputee and an amputee's self-esteem is an important coping tool and has a direct relation with better psychological adjustment to limb loss.*

**KEYWORDS:** *Amputation, Acquired, Psychological, Self-Esteem, Psychosocial, Adjustment, Depression, Anxiety*

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**INTRODUCTION:**

Amputation or loss of body parts is a traumatic life changing experience and such surgeries are usually done as a treatment strategy for the diseased or injured limb. Even though this surgery is usually performed as a life-saving measure, but still it is a highly devastating and horrible experience in a person's life<sup>1</sup>. Research revealed that amputation has proven to have alarming psychosocial consequences. It not only causes major disfigurement of body and restricts physical movements but also leads to various psychological issues as well<sup>2</sup>. In many cases the imagination of being amputated is even worse<sup>3</sup>. It not only undermines the self-confidence of an individual but also badly affects his quality of life. The feeling of being handicapped severely hurts the self-esteem of an amputee, leading to feeling of perceived pettiness and worthlessness<sup>4</sup>. Moreover, it also results in self-pity, helplessness, problems with body image and reduced self-esteem. It can rightly said that amputation leaves permanent scars on the body and mind of amputees, which cannot be removed easily for the whole life<sup>5</sup>. In such cases diagnosis and close monitoring is essential, as some amputees may show suicidal tendencies<sup>6</sup>. As far as the psychological adjustment to amputation is concerned, studies revealed that an individual response

to some disability including amputation is intently related to their pre-existing psychosomatic reserves<sup>3, 6</sup>. Rather than developing low feelings, an amputee should consider it as a useful step towards the betterment and stabilization of physical health. People who are unable to deal with life problems or had low self-esteem would not be able to cope up with the traumatic incidence of limb loss<sup>6, 7</sup>. In similar context, another study found that in case of amputation, self-esteem might serve as a basic coping tool. People with high self-esteem successfully incorporated the incidence of amputation and may discover another aspect of their being<sup>8</sup>. It is observed that almost all the research studies on amputation mainly emphasized the causative and treatment aspects of amputation and little attention was given to the eventual psychosocial problems faced by these people after limb loss<sup>9-11</sup>. The preset study accentuated that the psychological aspect is an equally critical aspect of this catastrophic event with multifaceted affects<sup>12</sup>. It aims to evaluate the psychological reaction of patients after this traumatic event and attempted to find out the nature of psychological issues faced by these sufferers. Further, the study also examined the role of positive self-esteem in the successful psychological adjustment to amputation, which eventually leads to effective dealing with this tragedy. The prime motive behind present inquiry is to put exertions for the rehabilitation of amputees and provide best support system to them.

**METHODOLOGY:**

This case study comprises of a sample of 100 participants both adult males and females admitted in different government and private hospitals of Peshawar district. Only patients with acquired limb amputation were included in the study. The study excludes all patients with congenital amputation, other physical disabilities or with pre-existing

psychological problems. The data was collected from the surgical and orthopedic units of various hospitals. The participants were approached through hospital directories and were briefed about the nature and purpose of the study. Standardized scale developed by Sabir,<sup>13</sup> was used to study the degree of patient's psychological adjustment, which consists of twenty-seven elements with five subscales. Furthermore, Rifai's Self-

Esteem scale,<sup>14</sup> was augmented with this scale to estimate the self-esteem level of amputees. This scale also has four subscales for measuring self-esteem along four dimensions. Demographic datasheet was also used to collect demographic data such as age, gender, socio-economic level, educational background, and description of the incidence happened.

## RESULTS:

**Table 1: Scores of Psychological Adjustment Scale, Self-Esteem Scale and Subscales (N=100)**

	Scale and Subscales	Range	Min	Max	Mean	SD	Var	Skew	Items	A
	<b>Psychological Adjustment</b>	67	59	126	96.7	18.1	329	-.01	27	.816
1	Perception of Reality	11	9	20	15.4	2.9	8.66	-.27	4	.639
2	Ability to Cope with Stress	16	12	28	20.3	4.2	17.87	.25	6	.934
3	Positive Self-Image	23	11	34	24.8	6.2	39.01	-.46	7	.789
4	Ability to Express Emotions	15	15	30	22.2	3.6	13.52	.07	6	.908
5	Interpersonal Relationships	11	9	20	15.3	2.8	8.03	-.19	4	.823
	<b>Self Esteem Scale</b>	80	16	96	69.78	14.40	207.4	-.34	29	.712
1	Self Acceptance	29	23	52	39.35	6.256	39.13	-.12	4	.707
2	Self Competence	24	2	26	15.36	4.945	24.45	-.80	11	.576
3	Social and Physical Self Acceptance	23	3	26	19.41	3.668	13.45	-.16	7	.612
4	Academic Self Competence	18	0	18	9.44	5.157	26.59	-1.7	6	.752

**Table 2: Mean, Standard Deviation and t-Value of Psychological Adjustment and Self Esteem**

Variable	Female n=20		Male n=80		t (98)	95% CI		Cohen's d
	Mean	SD	Mean	SD		LL	UL	
<b>SES</b>	86.2	4.99	62.4	17.43	-6.03***	-31.69	-16.00	1.8
<b>PAS</b>	121.2	3.54	90.6	14.85	-9.09***	-37.18	-23.86	2.85

\*\*\*p<.001

Table 3: Variance of Psychological Adjustment, Self-Esteem and Age Groups

Variable	Group 1 n=34 20-29 years		Group 2 n=36 30-40 years		Group 3 n=30 49-60 years		F (97)	i-j
	Mean	SD	Mean	SD	Mean	SD		
SES	54.73	16.06	66.86	17.61	81.63	9.64	25.35***	1<2<3
PAS	84.94	13.39	94.22	17.35	113.26	10.10	32.85***	1<2<3

\*\*\*p&lt;.001

Table 4: Regression Analysis for Self-Esteem Predicting Psychological Adjustment

Model	B	Std.Error	Beta	t	P
Constant	38.55	3.28		11.73***	.000
SES	0.867	0.047	0.880	18.37***	.000

R<sup>2</sup>=0.775, Adjusted R<sup>2</sup>=0.773, F (98)=337.6, p<.001

## DISCUSSION:

The rate of amputation has increased worldwide due to increasing road traffic accidents, vascular diseases, diabetes, gunshot injuries, terrorist attacks and earthquakes<sup>15, 16</sup>. Such events cause different types of disabilities including amputations<sup>17, 18</sup>. Thus keeping in view the mounting rate of limb losses or amputation, the researcher attempted to tackle this sensitive aspect of human life. Amputation or loss of any limb limits physical functions of body, which also disturbed the psychological state of a person, resulting in exhibition of unusual psychosocial symptoms<sup>7, 12, 18</sup>.

Results of our study revealed that nearly all the amputees showed symptoms of psychological maladjustment. It was found that the physical restriction of amputation and feeling of helplessness and dependency ultimately leads to the development of negative thoughts about one self<sup>19, 20</sup>. The person starts to feel useless, undeserving and miserable which consequently results in negative or low self-esteem. Previous studies on psychological aspect of amputation also showed similar findings<sup>21</sup>. Some common reactions found were severe anxiety, frustration, anger, helplessness, suicidal

tendency, low self-esteem and depression<sup>22-24</sup>. Gender is an important socio-demographic factor, which may influence adjustment to amputation. Literature stated that in case of acquired amputation, females displayed more severe psychological symptoms and have dropped level of self-esteem as equated to males<sup>25</sup>. In this respect, results of our study revealed that males scored less than females on both scales of self-esteem and psychological adjustment. Age at the onset of limb loss is also an important demographic factor in the process of adjustment. An investigation reported that young amputees exhibit more severe signs of psychological maladjustment as compared to older amputees<sup>26</sup>. Our study also verified these findings and result of the current analyses indicated that majority of young amputee's had lowered self-esteem and greater adjustment issues<sup>27, 28</sup>. Current study further demonstrated that self-esteem is an important predictor of adjustment to limb loss and it has a direct relation with better psychological adjustment. It was found that an amputee level of psychological adjustment is increased or decreased by their level of self-esteem, which implies that

higher the level of self-esteem, higher will be rate of psychological adjustment. This comes in agreement with one other study which states that amputee with positive self-esteem admits the fact that he is being challenged with a mishap in his life and it should be treated in the same way like other life challenges<sup>21, 28</sup>. They are self-assured that they still have enough strength, talents and abilities to live a normal, productive and happy life. This assurance makes the adjustment process much easier and quicker<sup>29</sup>. In such cases the role of family and society is very important in rebuilding their self-confidence and self-worth. These findings are also supported by a meta-analysis study which revealed that social support affects levels of hopefulness and self-esteem, which in turns decreases the level of depression and increases the level of psychological adjustment<sup>30</sup>. Furthermore, problematic support is linked with increased level of psychosocial adjustment issues. High level of self-esteem contributes to successful adjustment to amputation and help in the healing process. As a result, an amputee may overcome the harmful aspects of this heart-rending experience and efficaciously attains normal and healthy life.

#### CONCLUSION:

Amputation badly disturbs the psychological condition of a person involved. It is inferred that self-esteem is an important coping tool and has a direct relation with better psychological adjustment. Amputee's with good self-esteem considered amputation a life saving decision and crucial for their physical health. Acceptance of this fact helps them to develop feelings and determination that they are still capable enough to manage their life affairs and this makes the adjustment process much easier and quicker.

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