

## **BODY IMAGE, HOPELESSNESS AND PERSONALITY DIMENSIONS IN LOWER LIMB AMPUTEES**

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### **SUMMARY**

A sample of lower limb amputees and equal number of matched surgical controls was studied on body image, hopelessness and personality dimensions using Fisher's Body Distortion Questionnaire (BDQ), Beck's Hopelessness Scale and Hindi PEN Inventory. Amputees had significantly higher mean scores on body distortion ( $\bar{x}$  27.86), hopelessness ( $\bar{x}$  14.08) and neuroticism ( $\bar{x}$  9.30) as compared to surgical controls. Furthermore they had significantly lesser scores on extraversion ( $\bar{x}$  11.26) in comparison to their surgical counterparts. No significant differences were found on psychoticism in the two groups. Psychological aspects of amputation have not received much attention. By and large, amputees are believed to have more difficulty in dealing with people than things. It is the loss of ability to relate psychologically, socially, sexually and vocationally that inhibits the amputees most.

Some people are emotionally destroyed by an amputation, e.g., the great Coleporter, who never wrote another hit song after his amputation. It goes without saying that his amputation did not affect his ability to write music, except for its emotional impact.

Undergoing an operation is a unique psychological and physical experiences for any person (Abrams 1975). The impact is likely to be much more if the procedure entails loss of bodily parts, particularly of limbs. Such procedures tend to correlate with castration anxiety, infantile fear of punishment and whatever cathexes are attached to the organ to be operated upon (Freedman et al. 1976). Personal mutilation by amputation leads to hostility directed towards significant others which, being unacceptable, is repressed and is replaced by guilt and/or depression (Kolb 1954). Further, psychiatric symptoms may be manifestations of mourning the loss of a limb that was an essential part of the patient's body schema. Amputees are also

reported to have distortion in body image, self pity, anxiety, shock, grief, anger and frustration (Friedman 1972).

Various aspects of the phantom limb phenomena in amputation have been studied, to the total exclusion of other psychiatric sequelae (Handerson and Smyth 1948; Cronholm 1951; Sunderland 1968; Melzack 1971; DeGutierrez Mahoney 1970; Carlen et al. 1978; and Wilson et al. 1978). This gap was bridged by some data available from Indian Studies by Shukla et al. (1982 a, 1982 b). In their study of 72 amputees, these authors disclosed that nearly one fifth of the cases were diagnosed as having psychotic depressive reactions, two-fifths as having depressive neurosis and two, both with right upper limb amputations, as schizophrenic. Besides phantom limb phenomena (seen in four-fifths of the cases), nearly two-thirds had psychiatric symptoms in the form of depression, anxiety, crying spells, insomnia, loss of appetite, suicidal ideas and psychotic behaviour. Some investigators

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have documented certain personality correlates of psychiatric symptoms following amputation or, for that matter, any operation (Parkes 1973, Soloman and Schmidt 1978). The patients developing such symptoms have been found to be at the rigid end of an *adaptable-rigid* dimension and show dislike of and resistance to change, thus making coping with amputation more difficult (Parkes, 1973). Parkes' patients also showed 'compulsive self reliance', for such patients the experience of relative helplessness and the need to rely on others, however loving, would be a galling and humiliating one.

Since psychological factors of body image, hopelessness and personality dimensions appear to be most relevant in amputation, the present study attempts to compare data on these variables in amputees and non-amputees.

#### Material and Methods

*Sample* - A sample of 50 consecutive lower limb amputees was selected from Rehabilitation Research Centre (RRC), Jaipur. Age range of the patients were restricted to 18-45 years with a minimum education of primary level. All the patients were male. Most of them belong to middle socio-economic group. A control sample of 50 surgical patients were also chosen who were matched with amputees with respect to age, sex, education and socio-economic status. These surgical patients had undergone surgery for renal stone, piles, appendicitis etc.

#### Tools Employed

*Body Distortion Questionnaire (BDQ)*: This questionnaire has been developed by Fisher (1965) to assess distortions in Body Image. It consists of a list of 82 statements about the body and its

dimensions, e.g., hands, mouth, skin, eyes, nose, legs etc. The Body Image Distortions have been classified into nine categories: Larger (14 statements); Smaller (14); Boundary (10); Openings (10); Skin (10); Size Change (4); Dirt (6); Miscellaneous (4) and Depersonalization (10).

The B.D.Q. is considered a reliable and valid index of distortion in body image. It has been found to be suitable clinically also. The statements are clear and simple and validity checks are inbuilt in the questionnaire. Hindi adaptation of this test by Nathawat and Mathur (1982) was used in the present study.

*Hopelessness Scale*: This test has been devised by Beck et al. (1974) to measure the cognitive component of depression, which they labelled hopelessness. The test consists of 20 statements related to hopelessness. The authors of the test found high correlation to hopelessness with suicidal intent or ideation. Hindi adaptation of the test by Nathawat and Tiwari (1987) is used for this study.

*P.E.N. Inventory*: It measures three orthogonal dimensions of personality viz. Extraversion - Introversion, Neuroticism - Stability, and Psychoticism - Toughmindedness. So it gets the name of PEN (Psychoticism, Extraversion, Neuroticism) inventory. PEN inventory used in the present study has been translated in Hindi and standardized in India at PGI, Chandigarh (Pershad and Verma 1977).

*Procedure*: The above psychological tests were administered to all the amputees and surgical controls individually; scoring was done manually as suggested in the manuals of the respective tests. Means, S.D.'s and Significance of difference between means of the raw scores of all these tests of amputees and non-amputees were computed.

Table 1  
Socio-demographic characteristics of  
amputees and non-amputees

Variables	Amputees	Non-Amputees
Age ( $\bar{x}$ ) (in years)	27.44	27.70
<b>Education</b>		
Middle	9	9
Above Middle to Higher Secondary	25	17
Above Higher Secondary to Graduation	16	22
Post-Graduation	0	2
<b>Occupation</b>		
Agriculture	9	7
Business	10	10
Govt. Service	12	20
Private Job	12	9
Student	7	4
<b>Income</b>		
Upto Rs. 500	20	15
500-1000	15	12
1000-1500	14	22
1500-2000	1	1

It may be seen from Table 1 that matching of two samples in terms of age and sex is almost complete. Both the groups also match fairly well with respect to education, occupation and income. By and large groups belong to middle socio-economic status.

Table-2 provides mean scores on body distortion, hopelessness, extraversion, neuroticism and psychoticism and significant differences between the Mean Scores of Body Distortion, Hopelessness, Extraversion, Neuroticism and Psychoticism of amputees and non-amputees.

It may be seen from the above table that amputees have significantly more body distortion, hopelessness, and neuroticism as compared to non-amputees (surgical controls). Furthermore, amputees were significantly less extroverted in comparison to non-amputees. However,

Table 2

Measures	Amputees $\bar{x}$		Non-Amputees $\bar{x}$	
Body Distortion	27.86	14.09	16.68	4.38*
Hopelessness	14.08	2.28	8.12	4.03*
Extraversion	11.26	2.12	12.54	2.91*
Neuroticism	10.30	2.83	5.72	2.80*
Psychoticism	6.64	2.476	6.10	2.65†
* P < 0.001,			† n.s.	

no significant differences occur on psychoticism scores of amputees and non-amputees.

### Discussion

The present study was an attempt to see whether some psychological variables such as body image, emotionality and personality dimensions are adversely affected as a result of lower limb amputation. Facing any surgical procedure is believed to be associated with disturbing psychological and physical experiences for any person (Abrams 1975). The impact, understandably is likely to be much more if the procedure entails loss of limbs. The loss of limb is not infrequently linked with a misfortune and serious handicap to one's body and self-esteem. Thus, it was expected that these psychological variables will be adversely affected as a result of amputation. Findings of the present study were in expected direction revealing significant body image distortion and extreme degree of hopelessness as compared to other surgical patients. Furthermore, significant differences were observed on personality dimensions of neuroticism and extraversion in amputees and other surgical controls. Amputees were significantly higher on neuroticism and lower on extraversion when compared to controls. In Eysenckian terminology amputees seem to have dysthymic type of personality (i.e. dysthymics

are those who score high on neuroticism and introversion). Thus, body image, hopelessness, and major personality dimensions were adversely affected on account of amputation. These findings are in conformity with the observations made by Siller and Silverman (1958), Freedman (1978), Prasad et al. (1971), and Shukla et al. (1982 a).

These research workers are of the view that such adverse reactions are generally related to loss of function. It is obvious that as a result of amputation, more so losing a vital part of the body, amputees lose status in society which may be related to several factors. But the attitude of the society for the disabled is considered to be most unhealthy and unfavourable in the opinion of amputees. That is why amputees express the feelings that they have far more difficulty in dealing with people than with their own handicap and limitations. Thus, these negative reactions in the body image and feeling of hopelessness and having neurotic and introverted reaction result when they relate and compare themselves with other members of the society who do not belong to their class.

Findings of the present study suggest one should take considerations of adverse psychological reactions in the rehabilitation of lower limb amputees. It goes without saying that amputation is a great stressor for anyone and it results in emotional and psychological disturbances but perception of this stress can be greatly reduced if one is prepared to cope with it more constructively and creatively.

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