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Psychological Flexibility in People with Lower Limb Amputation among Males & Females in Indian Population

Shivangi Mehra[1], Sarika Boora[2], Chitra Kataria[3]

[1]Prosthetist & Orthotist, Indian Spinal Injuries Centre, New Delhi.
[2]Head Psychologist & Director, Therapy & Beyond, New Delhi.
[3]H.O.D (Rehabilitation Department) & Principal, Indian Spinal Injuries Centre- Institute of Rehabilitation Sciences, New Delhi.

Corresponding Author: Shivangi Mehra

ABSTRACT

Aims and Objectives: The present study compares the gender differences psychological flexibility people with lower limb amputation.
Methodology: In the present study a sample of 100 Lower Limb Amputee Patients (n=100, n=50 Males, n=50 Females) were collected from rehabilitation hospitals & NGOs of New Delhi. Convenient Sampling technique was used to collect the sample. The Acceptance and Action Questionnaire (AAQ-2) was administered to assess the psychological flexibility among males & females with lower limb amputation. The scores of psychological flexibility were evaluated to find out the gender differences among subjects with lower limb amputation.
Results: Data recorded was analyzed using SPSS data analysis software. An Independent t-test was used to compare the difference among both the genders with lower limb amputation in terms of psychological flexibility. There was significant difference seen among the females with lower psychological flexibility as compared to males with lower limb amputation.
Conclusion: It can be concluded that there was a gender difference in context of Psychological flexibility in subjects with lower limb amputation. The key findings of the study suggest that the females with lower limb amputation have lower psychological flexibility in comparison of males with lower limb amputation.

Key words: Lower limb amputation, gender difference, psychological flexibility, Acceptance and action questionnaire (AAQ-2).

INTRODUCTION

India is a vast country with a large number of people living in a community with various disabilities. It has been estimated that there are approximately 0.62 amputees per thousand in India[1, 2].This translates to close to one million amputee individuals in the country. Sources of emotional support are probably different from India than the Western world, as family ties are stronger and provide close supervision and support[3]. The prevalence of psychiatric disorders among amputees has been found to be in the range of 32%–84%. These rates are generally high as compared to population based psychiatric prevalence studies conducted in India[1].

Moreover, the characteristics of health service delivery in India differ considerably from elsewhere, with access to mental health care being difficult and fragmented.

Gender has been shown to influence how health policies are conceived and implemented, how biomedical and contraceptive technologies are developed, and how the health system responds to male and female[4].

Gender analysis in health has been undertaken mainly by social scientists who observed that biological differences alone cannot adequately explain health behaviour. Health outcomes also depend upon social and economic factors that, in turn, are

influenced by cultural and political conditions in society[5].

In order to understand health and illness, it is important to take into account sex and gender.

The links among mental health, gender, and economic status were clear in several aspects of the Korean study. Women had about twice the incidence of poor mental health indicators than men, and the mental health problems increased as income declined[6].

Gender is an independent factor in the success of rehabilitation, with women doing less well than men, regardless of other factors; age, level of amputation and comorbidity. Living alone was also a significant factor but was found to be related to gender, indicating that people who lived alone did less well because they tended to be women. The fact that women are less likely to be limb fitted is of even more concern as they are more likely to live in isolation on discharge. As a result of the differences in limb-fitting outcome, more women tend to require social support and resources than men[7].

Psychological inflexibility refers to rigid psychological reaction against one's value in order to avoid distress, uncomfortable feeling and thought and tend to ignore the present moment. Psychological inflexibility has been suggested as an important element in the etiology and the preservation of psychopathology. The increase of psychological inflexibility among patients will heighten their symptom burden and leads to the lack of engagement with valuable activities and relationship. In contrast, psychological flexibility is the ability to fully experience present moment that includes one's thoughts and feelings without struggling to control or change it, and the ability to either persist or change behavior in the given context that is consistent with one's values and goals. Individual who is psychologically flexible able to disengage with unworkable thought and actions, enjoy the present moment, accept the thing and circumstance that beyond control, and choose to live in held values and move closely to those values[8].

There is dramatic decrease in the incidence of psychological symptoms in individuals after amputation by the time of discharge from the rehabilitation unit.This may be due to adjustment after the emotional stress of limb loss as well as the learning of new skills to adjust to life after amputation. Indeed the loss of a limb has been compared to bereavement[9].

The amputation of a limb brings about several changes in the psychological and social functioning of an individual: alterations in self-concept and body image, decreased quality of life and loss of employment status or occupation. Such changes may reduce an individual's ability to maintain emotional well-being and promote maladaptive reactions, leading to psychosocial maladjustment such as anxiety and depression[10]. A number of studies have investigated the role of coping and social support as protective factors for psychosocial adjustment after amputation.

Hence there is need of understanding the experiences of amputees in the Indian context, which may help to understand the extent of the problem and the direction of further research or upgrades in the delivery of services in rehabilitation units for physical as well as mental aid for the patients post amputations. This study therefore explores the difference in acceptance and psychological flexibility in people with lower limb amputation on the basis of gender in the Indian context as females are already little underprivileged in comparison to males due to male dominant society prevailing in India[11].

METHODOLOGY

This research study was conducted to compare the difference between psychological flexibility among males and females with lower limb amputation. Since gender and acceptance by society & one-self plays a major role in society post lower limb amputation.

A sample of 100 lower limb amputees with 50 males and 50 females was collected by Non- Probability Convenient Sampling. The data was collected from rehabilitation unit of hospitals and NGOs from New Delhi. The research design was survey study. The data was collected after taking consent from the subject and screening the inclusion criteria which included age-18-60, Lower limb amputees including amputation from hip, knee, ankle, foot.

Comparison between the psychological flexibility & acceptance among males and females lower limb amputees was done using the Acceptance and Action (AAQ-2) Questionnaire.

After obtaining the scores for questionnaire, the scores were evaluated and result was obtained.

RESULTS

The data collected was obtained in accordance with the standard protocol and scored and analyzed with the help of the SPSS software.

The analysis included the Mean, Sta ndard Deviation and T test.

A total of 100 subjects in which 50 subjects were male and another 50 subjects were female. Subjects have been recruited for the study after checking and screening for inclusion criteria.

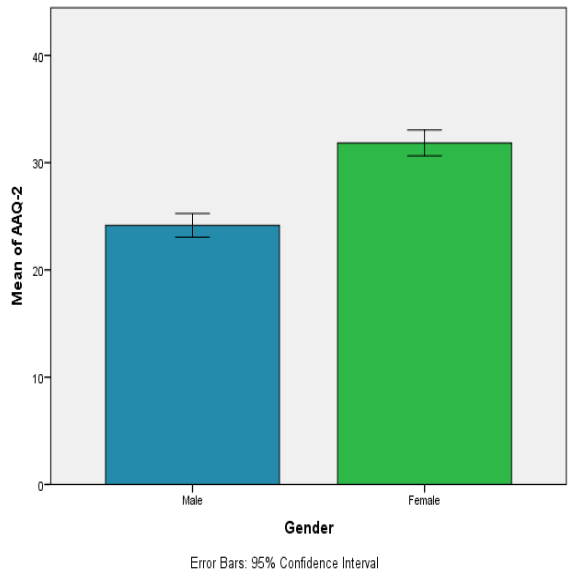
AAQ-2

To see the significant difference in mean of psychological flexibility among male and female, we applied independent sample t-test. Here, p-value is less than 0.05 shows that there is a significant difference in AAQ-2 among Male and Female. Moreover, the mean of AAQ-2 of female is significantly greater males.

Below given tables shows the scores minimum, maximum with standard deviation and mean difference.

Gender	N	Min	Max	Mean	Std. Deviation	Std. Error Mean	Mean Difference
Male	50	16	32	24.16	3.878	0.548	
Female	50	24	41	31.84	4.235	0.599	
Total	100	16	41	28.00	5.587	0.599	-7.680

The graph of mean of AAQ-2 gender wise is given below. Here error bars representing the 95% confidence.



DISCUSSION

Studies suggest that the Indian literature on the psychological effects of amputation has gradually increased over time in order to understand the psychological impairment and psychiatric disorders among the amputees from different perspectives.

The prevalence of psychiatric disorders among amputees has been found to be in the range of 32%–84%. These rates are generally high as compared to population-based psychiatric prevalence studies conducted in India[1], this indicates psychological flexibility and acceptance is not easy among amputees. It can be devastating and difficult to manage. Psychiatric conditions (involving substance abuse, character disorders, or disorders of thought or mood that predispose to suicide attempts with limb injuries) leading to

amputation may be particularly challenging in primary care[12].

The result of psychological flexibility is evaluated by Acceptance and Action Questionnaire (AAQ-2) among males the minimum score of AAQ-2 was 16 and maximum score was 32 with mean score of 24.16. The mean score of AAQ-2 for with standard deviation for males was 24.16 ± 3.878, standard error of 0.548. Whereas among the other 50 subjects who participated in the study was females with minimum score of AAQ-2 being 24 and maximum score being 41 and mean score is 31.84. The mean score of AAQ-2 for females with standard deviation was 31.84 ± 4.235, standard error of 0.599. The overall mean score of AAQ-2 with standard deviation was 28.00 ± 5.587 with standard error 0.559. The mean difference between both genders was -7.680.

The score of AAQ-2 is a one factor measure of psychological inflexibility or experiential avoidance. Scores are achieved by summing the seven items. Higher the score of AAQ-2 the greater is the level off psychological inflexibility[13].

Interestingly, the analysis found the items of the AAQ-II to be more strongly related to items designed to measure distress than items designed to measure acceptance/non acceptance with minimal references to functional outcomes.(Martin Wolgast, 2014)

This indicates that the females who undergoes amputation faces more psychological trauma and distress in terms of feelings, emotions, worries and painful experience post amputation.

The links among mental health, gender, and economic status were clear in several aspects of the Korean study. Women had about twice the incidence of poor mental health indicators than men, and the mental health problems increased as income declined[6].

Study by Singh Rajiv et al. suggest that that gender is an independent factor in the success of rehabilitation, with women doing less well than men, regardless of other factors; age, level of amputation and comorbidity[7].

The loss of a body part also affects the perception of someone's own body and its appearance. The perception of physical attractiveness is a complex construction of various psychological and physical factors. It is the degree to which a person's physical traits are considered aesthetically pleasing or beautiful. The perception of beauty has a major impact on our social life, psychological and physical condition as well as QoL. Therefore amputation may be seen as a sign of failure. Amputees have to adapt physically, socially, and psychologically to alterations in structure, function, and body image[10].

The study shows that females are not able to accept their post-amputation appearance feeling amputation & its cause as a painful memory, feels emotionally more unstable and worries a lot about everything.

The higher scores of AAQ-2 indicate greater level of psychological inflexibility among females in comparison to males.

CONCLUSION

The result of the studies shows that there was a gender difference in context of Psychological flexibility.

The key findings of the study suggest that females with lower limb amputation are psychologically less flexible than males with lower limb amputation.

Clinical Implications

The findings of the study suggest that psychological inflexibility is a major problem post amputation more commonly seen among females. Amputation leads to emotional trauma and psychological disturbances which can be a painful memory leading to a less satisfactory life. As in India women are already facing many problems due to the male dominant society therefore it will be helpful to understand the mental & emotional state of women post amputation so as to provide them a better & more satisfactory life.

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