



Original Article



Relationship between Perceived Social Support and Self-esteem in Patients with Lower Limb Amputation

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ABSTRACT

Lower limb amputation significantly disturbs an individual's physical, psychological, and social functioning. Amongst the psychological concerns, reduced self-esteem is a critical concern that can hamper rehabilitation and adaptation. **Objectives:** To investigate the relationship between perceived social support, self-esteem, and psychological well-being in patients with lower limb amputations, focusing on how these factors influence psychological well-being. **Methods:** A cross-sectional analytical study was conducted at the Artificial Limb Center, Fouji Foundation Hospital, Rawalpindi, Pakistan. Data were collected from 120 lower limb amputees using standardized tools: the Rosenberg Self-Esteem Scale (RSES) and the Multidimensional Scale of Perceived Social Support (MSPSS). Participants were selected through consecutive sampling. Data were analyzed using SPSS version 26.0, including descriptive statistics and Pearson correlation to analyze the relationship between variables. **Results:** Findings showed that a majority of participants had low to moderate levels of self-esteem and perceived social support. A statistically significant positive correlation was identified between self-esteem and perceived social support (0.597, $p < 0.001$), indicating that individuals perceiving higher social support are likely to have higher self-esteem. Gender differences were prominent. Employment status, age, educational level, and income level also showed significant mean differences with self-esteem levels. **Conclusions:** The study supports a strong and significant relationship between perceived social support and self-esteem in lower limb amputees. Increasing perceived social support through targeted psychosocial interventions may add positively to the psychological well-being and rehabilitation outcomes of amputees. These findings highlight the importance of family, peer, and significant others' support systems in raising self-esteem during post-amputation change and recovery.

INTRODUCTION

Amputation has been one of the earliest surgical techniques since Hippocrates' time. It is performed in situations where saving a limb is not an option, such as when the limb is dead, non-functional, or endangers the patient's life [1]. Amputation is the surgical removal of a physical part, such as an arm, leg, or any other part of the body that is injured or contaminated [2]. Amputation rates range from 1.2 to 4.4 per 10,000 individuals in various countries, with the lower limbs accounting for up to 90% of incidents [3]. In 2019, the largest cause of disability was

unilateral lower limb amputation [4]. In the United States, about 150,000 lower limb amputations are performed annually (Prosthetics and Orthotics International, 2020). However, the most recent study along similar lines in South India showed a 54.1% increase in amputations, whereas the lower limb amputation rate in Pakistan ranges from 21% to 48 [5]. A person's mobility, comfort, and sense of physical integrity are all negatively impacted by amputation, which also restricts their capacity to engage in social, recreational, and professional activities. These challenges



significantly compromise overall health and quality of life, often leaving individuals to grapple with severe psychological and social consequences [6]. The loss of physical function following amputation not only impairs mobility but also significantly alters how a person feels about their appearance and body. A key component of this change is self-esteem, which is a reflection of one's value placed on oneself, and body image, which is how one views one's physical appearance. These views are strongly related to self-esteem, which is characterized as an assessment of one's value, whether positive or negative. Thus, the psychological effect of amputation ranges beyond physical loss, influencing both how individuals view their own bodies and their overall self-worth, ultimately shaping their emotional and social well-being [7]. The Sustainable Development Goals (SDGs) place a strong emphasis on well-being, especially Goal 3, which aims to "ensure healthy lives and promote well-being for all at all ages. This goal underscores the significance of both physical and mental health. However, amputees may experience emotions such as inadequacy, despair, and anxiety due to the sudden change in their body image and functionality, leading to a significant decline in their self-esteem [8]. Low self-esteem can hinder social adaptation, causing feelings of inadequacy, loneliness, self-destructive behavior, and social maladjustment, all of which further exacerbate the challenges faced by amputees [9]. Physical handicap affects a person's mental health, psychological state, family dynamics, and social interactions in addition to their psychosocial adjustment. These people are more socially isolated than normal people are. There are numerous challenges in readjusting to life following an amputation. Adolescent amputees perceived physical appearance has been connected to low self-esteem, anxiety, depression, and a reduced standard of living [10]. Research has indicated that social support is essential for adapting, particularly for people who are dealing with major life changes [11]. Lower limb amputation is a traumatic event that severely disturbs an individual's physical ability, body image, and emotional stability, producing a sharp decline in self-esteem. When self-esteem falls, motivation for rehabilitation, social participation, and psychological resilience are undermined, with real consequences for recovery and well-being [12].

Perceived social support can powerfully buffer emotional distress and restore confidence, yet the dynamics between support and self-worth after amputation remain poorly monitored. The absence of clear understanding about how these two psychological factors interact leaves a critical aspect of amputees' emotional recovery insufficiently recognized. Therefore, examining the relationship

between self-esteem and perceived social support among lower limb amputees becomes crucial to provide actionable insight to improve patient-centered rehabilitation and strengthen recovery outcomes. This study aimed to determine if a relationship exists between self-esteem and social support in lower limb amputation patients. To assess the level of perceived social support and self-esteem in patients with lower limb amputation. To determine the mean difference in self-esteem across specific demographic variables, including age, gender, education level, employment, economic status, Family system, residence, residence type, and marital status. To analyze the relationship between perceived social support and self-esteem in patients with lower limb amputation.

METHODS

A cross-sectional analytical study design was used to examine the relationship between perceived social support and self-esteem among individuals who have had lower limb amputation. The investigation was conducted at Rawalpindi's Fouji Foundation Hospital's Artificial Limb Center (ALC). The study was conducted from January to August 2025. Before commencing data collection from the main sample, a pilot study was conducted to assess the reliability and internal consistency of the research instruments. After ethical sanction from the Institutional Review Board (IRB) Re: 570-AAA-ERC-AFPGMI dated 2 January 2025 and permission from the Fouji Foundation Hospital, data collection was carried out through a researcher-administered structured questionnaire. The target population was all the lower limb amputation patients attending OPD at the Artificial Limb Center, Fouji Foundation Hospital, Rawalpindi. The sample was drawn from the targeted population. A consecutive sampling technique was utilized to enroll participants from the Artificial Limb Center, Fouji Foundation Hospital, Rawalpindi, Pakistan. Using specific inclusion criteria, this non-probability sampling technique entails enrolling all eligible participants until the target sample size is reached. The sample size of 90 is determined by using the G*Power calculator, assuming an effect size of 0.288, as per previous literature [13, 14], an alpha error of 0.05, and a power of 0.80. To increase the response rate, a sample size of 120 was considered for this study. Participants were aged 18 -65 years and individuals who had had lower limb amputation for a minimum period of six months. Exclusion criteria were individuals with significant comorbidities affecting mobility (e.g., severe cardiovascular disease, neurological condition). Two well-established and standardized instruments were employed to collect data in this study. The Rosenberg Self-Esteem Scale (RSES) was applied to evaluate participants' self-esteem, while the Multidimensional Scale of Perceived Social Support

(MSPSS) was used to measure their perceived social support. To ensure cultural and linguistic appropriateness, the Urdu-translated and previously validated versions of both tools were adopted. The RSES, created by Morris Rosenberg in 1965, was used to measure self-esteem. The open-access validated Urdu version of the RSES, with a Cronbach alpha of 0.773, was used in this study [15]. Every item on the Likert scale has a score between 1 and 4, where 1 represents "strongly disagree" and 4 means "strongly agree. A reverse-scored item is also included, in which a response of 1 represents "strongly agree" and 4 represents "strongly disagree." Additionally, while questions 1, 3, 4, 7, and 10 are not inverted, their responses are directly encoded as "strongly disagree" (1) and "strongly agree" (4). In contrast, questions 2, 5, 6, 8, and 9 are opposite questions. Participants scoring between 10 and 20 were categorized as having a low sense of self-worth, those scoring from 21 to 30 as possessing a moderate level, and those between 31 and 40 as demonstrating a higher degree of self-regard [15]. Rizwan and Aftab, created the MSPSS, which calculates perceived social support in three areas: friends, family, and significant others [16]. There are twelve questions in all, three, four, eight, and eleven of which are applicable to family, six, seven, nine, and twelve to friends, and one, two, five, and ten to significant others. The present research utilized the Urdu-adapted version of the social support questionnaire, previously validated in a local study [16].

Following translation, the instrument underwent reliability and consistency testing in Pakistan, yielding a Cronbach's alpha of 0.93, which reflects excellent internal reliability. It assesses perceived social support across three domains: assistance from family members, friends, and significant others [16]. Patients with scores between 12 and 36 were classified as having poor social support, those with scores between 37 and 60 as having moderate social support, and those with scores between 61 and 84 as having strong social support.

RESULTS

120 Lower extremity amputation patients took part in the study; the bulk of these participants, 97 (80.8%), were male, while only 23 (19.2%) were female. Moreover, a significant part of the participants, 65 (54.2%), were between the ages of 34 and 48 years, followed by 35 (29.2%) aged between 49 and 65. A smaller section, 20 (16.7%), was in the youngest group of 18 to 33 years. A significant number, 96 (80%), of participants reported having their own residence, while 24 (20%) resided in rental housing. Furthermore, regarding economic status, out of 120 participants, only 99 participants revealed income; nearly half, 58 (58.6%), made less than 50,000, whereas 25 (25.3%) earned less than 100,000, and 16 (16.2 %) had an income

above 100,000. In terms of marital status, a clear majority, 92 (76.7%), of participants were married, whereas 28 (23.3%) were unmarried. Most of the participants (61.3%, n=73) gained education up to the matriculation level or below. A considerable proportion (34.5%, n=45) stated have complete education at the graduate level, whereas only a small number (4.2%, n=5) had done postgraduate studies (Table 1).

Table 1: Demographic Features of the Study Participants

Demographic Variables	n (%)
Age of Participant	
18 - 33	20 (16.7%)
34 - 48	65 (54.2%)
49 - 65	35 (29.2%)
Gender	
Male	97 (80.8%)
Female	23 (19.2%)
Residence	
Urban	64 (53.3%)
Rural	56 (46.7%)
Family System	
Combine Family	40 (33.3%)
Individual Family	80 (66.7%)
Types of Ownership	
Personal property	96 (80.0%)
Rent	24 (20.0%)
Monthly Income	
< 50000	58 (48.3%)
< 100000	25 (20.8%)
> 100000	16 (13.3%)
Marital Status	
Married	92 (76.7%)
Unmarried	28 (23.3%)
Education Level	
Intermediate and Less	73 (60.8%)
Graduates	41 (34.2%)
Post Graduates	5 (4.2%)
Employment	
Govt Job	34 (28.3%)
Private job	67 (55.8%)

The study shows the distribution of self-esteem levels among participants, presented in terms of both frequency and percentage. The data show that the major proportion of individuals, comprising 44 participants (36.7%), reveal low self-esteem, as defined by scores ranging from 10 to 20 (Figure 1).

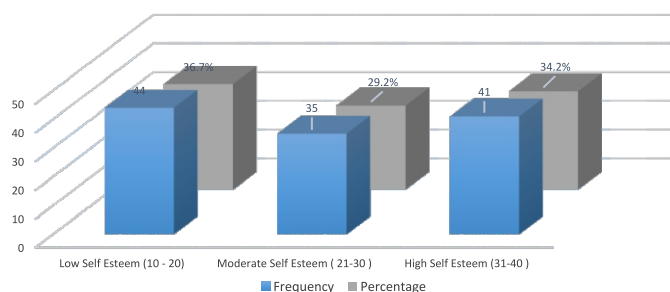


Figure 1: Level of Self-Esteem

The study showed that 44 participants reported low perceived social support, making up a major part of the sample. Moderate social support was illustrated in 34 participants, while 43 participants experienced high perceived social support. The data indicate that participants tended to report either low or high perceived social support more frequently than moderate levels (Figure 2).

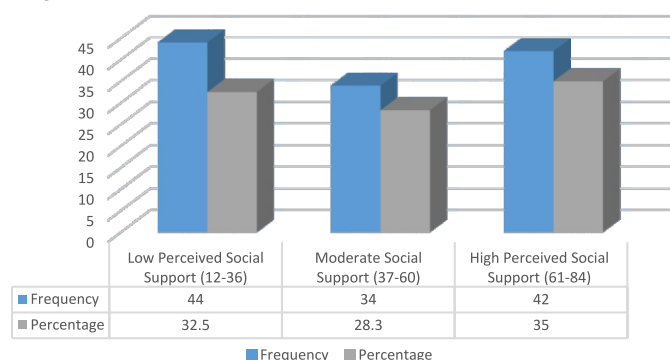


Figure 2: Level of Perceived Social Support

One-Way Analysis was done for Self-Esteem Scores (Table 2).

Table 2: One-Way Analysis of Variance for Self-Esteem Scores by Demographic Factors

Factors	Source	SS	df	MS	F	p-value	η^2
Age Group	Between Groups	575.47	2	287.74	6.39	<0.098	0.098
	Within Groups	5267.52	117	45.02			
	Total	5842.99	119	—			
Economic Status	Between Groups	1112.93	2	556.47	14.59	0.233	0.233
	Within Groups	3662.06	96	38.15			
	Total	4774.99	98	—			
Education Level	Between Groups	765.20	2	382.60	8.77	0.131	0.131
	Within Groups	5063.68	116	43.65			
	Total	5828.88	118	—			

SS Stands for Sum of Squares

The table presents self-esteem scores based on the nature of employment. Government employees have a higher mean self-esteem score of 27.764 compared to 23.791 for private employees. The standard deviation is slightly lower for the government group, showing less variability. The t-value is 2.760 with a significance level of 0.017. Since the p-

value is less than 0.050, the difference in self-esteem scores between government and private employees is statistically significant (Table 3).

Table 3: Independent Samples t-Test for Self-Esteem by Employment Type

Employment Type	n	Mean $\pm$ SD	t	DF	p-value
Government Job	34	27.76 $\pm$ 5.82	2.76	99	0.017
Private Job	67	23.79 $\pm$ 7.29			

The study presents differences in mean self-esteem scores across gender, marital status, family system, residence, and property ownership. No statistically significant differences were observed across gender ($t = 0.163$, $p = 0.658$), marital status ($t = -2.784$, $p = 0.378$), family system ($t = 0.211$, $p = 0.833$), or residence ($t = 1.482$, $p = 0.891$), demonstrating that self-esteem levels did not vary significantly across these demographic groups (Table 4).

Table 4: Self-Esteem Score across Different Family System, Marital Status, Gender, Property Ownership, and Residence

Variables	Group	n	Mean $\pm$ SD	t	df	Sig.
Family System	Combined Family	40	25.45 $\pm$ 7.67	0.211	118	0.833
	Individual Family	80	25.16 $\pm$ 6.70			
Marital Status	Married	92	24.61 $\pm$ 6.92	-2.784	118	0.378
	Unmarried	28	27.39 $\pm$ 6.97			
Gender	Male	97	25.31 $\pm$ 6.95	0.163	118	0.658
	Female	23	25.04 $\pm$ 7.38			
Property Ownership	Personal Property	96	25.85 $\pm$ 6.96	1.883	118	0.062
	Rent	24	22.88 $\pm$ 6.82			
Residence	Urban	64	26.14 $\pm$ 6.91	1.482	118	0.891
	Rural	56	24.25 $\pm$ 7.04			

The study presents the Pearson correlation between total self-esteem and total perceived social support. A correlation coefficient of 0.597 points toward a moderate to strong positive relationship between the two variables. This means that as perceived social support rises, self-esteem is likely to increase as well. The significance value is .001, which is less than predictable value of 0.005, ratifying that the correlation is statistically significant. The result supports the hypothesis that social support plays an important part in increasing individuals' sense of self-esteem (Table 5).

Table 5: Relationship between Self-Esteem and Perceived Social Support

Variables	r-value (Pearson Correlation)	p-value (Sig.)	Findings
Self-Esteem $\leftrightarrow$ Perceived Social Support	0.597	<0.001	Moderate to strong positive correlation

($n = 120$, $p < 0.001$)

DISCUSSION

The most prominent outcomes of the study were the moderate to strong positive correlation ($r = 0.597, p < 0.001$) between self-esteem and perceived social support. This result is in line with a broad body of literature suggesting that perceived social support functions as a buffer in contrast to the psychological suffering often associated with physical disability and chronic health conditions. Studies have consistently shown that people with higher perceived social support exhibit greater psychological resilience and higher self-esteem following traumatic physical injury [11]. Furthermore, a study conducted on prosthetic use in lower limb amputation conducted by reveals that social support has a significant effect on self-esteem as well as motivation [16]. A study on amputees proves that social support has a significant impact on psychological well-being and self-esteem [12]. The result from the current study echoes these findings and strengthens the concept that individuals who feel supported by their social setups, whether family, friends, or significant others, are more likely to maintain or improve positive self-esteem regardless of physical loss, and these results are consistent with previous studies. Furthermore, it reinforces the notion that self-esteem is not solely determined by physical ability but is strongly shaped by the quality of interpersonal relationships and emotional resources available [9]. These findings are consistent with previous literature, which underscores the significance of social connectedness in fostering resilience and psychological well-being [16, 17]. First, the correlation between these two variables is investigated in this population specifically, resulting in contributing new evidence to rehabilitation nursing and psychosocial health literature [18, 19]. By incorporating psychosocial intervention, this research offers practical implications for holistic rehabilitation nursing, emphasizing the importance of social support systems in promoting self-esteem and overall well-being among amputees [20]. On the contrary, gender, marital status, residence (urban/rural), family system (joint/nuclear), and property ownership did not significantly affect self-esteem in the present study. On the contrary, in the study of Rizwan et al. marital status was observed as a significant difference in self-esteem. This difference may be explained by variations in cultural context, sample characteristics, and the accessibility of social support systems [15].

Self-reported measures were used for both self-esteem and perceived social support, which may present social reputation bias or incorrect understanding due to personal interpretation of the items. Another limitation within the sample relates to the gender disproportion, with males constituting 80% of participants and the female is 20%.

The study demonstrates the value of integrating psychosocial considerations into post-amputation care to ensure more holistic recovery and improved quality of life for affected individuals. The recommendation for future research should be that rehabilitation programs combine psychological counseling, peer support groups, and family education to nurture supportive environments. Nurses, being front-line caregivers, can play an essential role in detecting individuals at risk of low self-esteem and beginning early interventions. Create hospital- or community-based peer support programs where amputees with good self-esteem can mentor new patients, present shared experiences, provide emotional support, and practical guidance.

CONCLUSIONS

The results of this study highlight the significant role of perceived social support in determining self-esteem in patients with lower-leg amputation. A moderate to strong positive relationship between these variables highlights that individuals who perceive higher levels of emotional and social support are likely to report better self-Esteem. This supports the opinion that psychological adjustment after amputation is not merely influenced by clinical rehabilitation but is strongly affected by social relationships and perceived support. Future Research studies would consider a longitudinal design to inspect variations in self-esteem and social support over time.

Authors' Contribution

Conceptualization: NN¹, MA¹

Methodology: NN¹, MA¹, MA², TR

Formal analysis: NN²

Writing and Drafting: NN¹, MA¹, MA², US, TR

Review and Editing: NN¹, MA¹, MA², US, TR, NN²

All authors approved the final manuscript and take responsibility for the integrity of the work

Conflicts of Interest

All the authors declare no conflict of interest.

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REFERENCES

- [1] Sarroca N, Valero J, Deus J, Casanova J, Luesma MJ, Lahoz M. Quality of Life, Body Image and Self-Esteem in Patients with Unilateral Transtibial Amputations. *Scientific Reports*. 2021 Jun; 11(1): 12559. doi: 10.1038/s41598-021-91954-1.
- [2] McDonald CL, Westcott-McCoy S, Weaver MR, Haagsma J, Kartin D. Global Prevalence of Traumatic Non-Fatal Limb Amputation. *Prosthetics and*

- Orthotics International. 2021 Apr; 45(2): 105-14. doi: 10.1177/0309364620972258.
- [3] Asif M, Tiwana MI, Khan US, Qureshi WS, Iqbal J, Rashid N et al. Advancements, Trends and Future Prospects of Lower Limb Prosthesis. IEEE Access. 2021 Jun; 9: 85956-77. doi: 10.1109/ACCESS.2021.3086807.
 - [4] Yuan B, Hu D, Gu S, Xiao S, Song F. The Global Burden of Traumatic Amputation in 204 Countries and Territories. Frontiers in Public Health. 2023 Oct; 11: 1258853. doi: 10.3389/fpubh.2023.1258853.
 - [5] Mughal A, Chaudhary A. Level of Mobility and Its Association with Quality of Life in Lower Limb Amputees. The Rehabilitation Journal. 2020 Dec; 4(02): 167-71. doi: 10.52567/trj.v4i02.1.
 - [6] Holzer LA, Sevelde F, Fraberger G, Bluder O, Kicking W, Holzer G. Body Image and Self-Esteem in Lower-Limb Amputees. PLOS ONE. 2014 Mar; 9(3): e92943. doi: 10.1371/journal.pone.0092943.
 - [7] Ahmed F, Lyu A, Xu N, Ksaibe Y, Kadoun R. The Relationships Between Body Image, Self-Esteem and Quality of Life in Adults with Trauma-Related Limb Loss Sustained in the Syrian War. Journal of Vascular Nursing. 2024 Sep; 42(3): 191-202. doi: 10.1016/j.jvn.2024.05.005.
 - [8] Alkadem AT and Noori AK. Self-Esteem and Its Correlation with Quality of Life Among Amputees. Iranian Journal of War and Public Health. 2023 Oct; 15(3): 315-21. doi: 10.58209/ijwph.15.3.315.
 - [9] Bleidorn W, Kretzschmar A, Rauthmann JF, Orth U, Denissen JJ, Hopwood CJ. Self-Esteem and Income Over Time. Psychological Science. 2023 Oct; 34(10): 1163-72. doi: 10.1177/09567976231185129.
 - [10] Demirdel S and Ülger Ö. Body Image Disturbance, Psychosocial Adjustment and Quality of Life in Adolescents with Amputation. Disability and Health Journal. 2021 Jul; 14(3): 101068. doi: 10.1016/j.dhjo.2021.101068.
 - [11] AL-Jubori RH, Yasir AA, Hindi NK. Quality of Life Among Amputees: A Mediating Role of Social Support. Medical Journal of Babylon. 2023 Apr; 20(2): 315-21. doi: 10.4103/MJBL.MJBL_330_22.
 - [12] M Noori AK and Al-Obaidi MJ. Social Interaction and Its Association with Quality of Life among Lower Limb Amputees. Iranian Journal of War and Public Health. 2024 Jun; 16(2): 161-7.
 - [13] Kamran M, Mumtaz N, Saqulain G. Amalgamation of Self-Esteem, Depression, Anxiety and Stress among Prosthesis Users. Journal of the Pakistan Medical Association. 2021: 1-3. doi: 10.47391/JPPMA.872.
 - [14] Sharif M, Zaidi A, Waqas A, Malik A, Hagaman A, Maselko J et al. Psychometric Validation of the Multidimensional Scale of Perceived Social Support During Pregnancy in Rural Pakistan. Frontiers in Psychology. 2021 Jun; 12: 601563. doi: 10.3389/fpsyg.2021.601563.
 - [15] Rizwan M, Malik S, Malik NJ, Siddiqui RS. Urdu Rosenberg Self-Esteem Scale: An Analysis of Reliability and Validity in Pakistan. Sociology International Journal. 2017; 1(2): 00010. doi: 10.15406/sij.2017.01.00010.
 - [16] Rizwan M and Aftab S. Psychometric Properties of the Multidimensional Scale of Perceived Social Support in Pakistani Young Adults. Pakistan Journal of Psychology. 2009 Jun; 40(1).
 - [17] Anderson DR, Roubinov DS, Turner AP, Williams RM, Norvell DC, Czerniecki JM. Perceived Social Support Moderates the Relationship Between Activities of Daily Living and Depression After Lower Limb Loss. Rehabilitation Psychology. 2017 May; 62(2): 214. doi: 10.1037/rep0000133.
 - [18] Gorbani A, Rezaiee Moradali M, Shabanloei R. Relationship Between Self-Esteem and Perceived Social Support in Burn Patients in Sina Hospital of Tabriz. Nursing Open. 2021 May; 8(3): 1194-200. doi: 10.1002/nop2.734.
 - [19] Shafiullah R. Association Between Self-Esteem and Perceived Social Support in Patients with Facial Burn Scars at Burn and Plastic Surgery Centre Peshawar, Pakistan. 2023.
 - [20] Olukolade O, Alao T, Adebisi A. The Role of Social Support and Need for Achievement on Psychological Well-Being of Below the Knee Amputees. OSR Journal of Humanities and Social Science. 2013; 18(1): 23-7. doi: 10.9790/0837-1812327.