Research Paper

Body Image and Its Association With Self-esteem Among Amputation Cases at Prosthetics Center in Hilla City, Iraq

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ABSTRACT

Objectives: Throughout history, people have lived through various situations of security, peace, recovery, and war, as well as the cruelty over the diversity, intensity, duration, or shortness of life. This study aimed to assess the self-esteem of amputees living in Hilla City, Babylon Province, in Center of Iraq.

Methods: A descriptive correlational study was conducted to determine the association between body image and self-esteem of amputees. By a purposive sampling method, 200 subjects from both genders and different age groups (25-35, 36-46, 47-57, 58-68, and >69 years) were recruited. The study data were collected through the modified questionnaire of multidimensional body-self relations questionnaire, Rosenberg self-esteem scale, and interviews with the patients individually. The obtained data were collected and analyzed with descriptive and inferential statistics.

Results: Most participants were male patients aged between 58 and 68 years. The lower limbs were the most amputation site caused by the war for less than five years. The majority of amputees had negative responses toward their body image. As well as depicts (39%) as a majority response of amputated patients were never feel with their self-esteem. There was a high reverse association between body image and self-esteem ($P<0.01$).

Discussion: Our analysis reflects that amputees see themselves negatively, which leads to a lack of self-esteem. Also, a feeling of negative body image affects their self-esteem. Hospitals should provide specialists in mental health and psychological therapy to increase the chance for early intervention and psychological treatment in these cases. The hospitals must provide programs to guide amputees and reduce their psychological problems.

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Highlights

- The majority of amputees have negative body images about themselves.
- There is a reverse correlation between body image and self-esteem.
- Amputees see themselves negatively, which leads to a lack of self-esteem, whereas a feeling of negative body image affects self-esteem.

Plain Language Summary

Self-confidence refers to the negative or positive attitude of people towards themselves. Amputation disturbs the incorporation of the human body and decreases the quality of life due to reduced movement, pain, and physical and psychological integrity of patients' affection and leads to low self-esteem.

1. Introduction

Physical attraction is a complex combination of many physical and psychological factors. It is sometimes considered a physical trait in beautiful persons [1]. Self-esteem refers to the positive or negative attitude of people towards themselves and a comprehensive assessment of the person's wealth or value, including self, beliefs, and feelings, such as respect for triumph, despair, pride, and shame [2].

The concept of the physical way that people feel about their body image will affect their vital interactions in social and personal relations. In other words, the mental image that people possess about themselves is physically and equally important as the mental image that they believe others have told them [3]. It is an evolving state characterized by constant change of their growth and environmental change [4].

Amputation disrupts the social values emphasizing vitality, physical appearance, and fitness. So amputation can be seen as a sign of failure [5]. Amputation leads to the absence of three items regarding function, sensation, and body image. It will inevitably lead to a decline in physical capacity, which is likely to significantly affect employment, causing financial difficulties, isolation, and low self-esteem. After amputation, intimate relationships such as marriage are at risk, which is common with repeated failures because of the pain and sufferings [6]. Amputation disturbs the integration of the human body and reduces the quality of life due to reduced mobility, pain, and physical and psychological integrity of patients' affection [6].

Several studies on body image and amputation have focused on topics such as "body image and amputation of lower extremities," "body image in people with amputation," "a positive relationship between body image and level of participation in sports and physical activity," and "body image and respect self-affected by the amputation of limbs." These studies focused on amputees' body image or self-esteem [7, 8].

Because of few studies that dealt with the subject of body image and self-esteem in cases of amputation in the Arab countries in general and in Iraqi society in particular, the researchers hope that this study's results will add to this psychological heritage. This study shows that body image and self-esteem are affected by various diseases such as osteoporosis, diabetes mellitus, lower back pain, or rheumatoid arthritis. Therefore, the author aims to assess the self-esteem of amputees who live in Hilla City, Babylon Province, in Middle Iraq.

2. Materials and Methods

A descriptive correlational study was conducted to identify any association between body image and self-esteem among amputated patients.

Study Participants

The study included those who attended the Prosthetics Center in Hilla City, Iraq, with amputations in their upper and lower limbs. By a purposive sampling method, 200 subjects from both genders and different age groups (25-35, 36-46, 47-57, 58-68, >69 years) were recruited. The study data were collected for three months through a modified multidimensional body-self relations question-

naire (MBSRQ) and Rosenberg self-esteem scale [9]. The questions were composed of three parts:

Part I: Personal information related to amputation.

Part II: Body image questionnaire (A positive question).

Part III: Self-esteem questionnaire (A negative question).

The validity of the study questionnaire was determined by a panel of five experts, including nursing science experts. The experts were asked to offer their opinions and suggestions on each of the study questionnaire's components in terms of language appropriateness, association with the dimension of study variables to which it was assigned, and suitability for the study population. To assess the questionnaire's reliability, data were collected from breast cancer patients, and the test was administered to 15 people from the study population who were not part of the original sample. The Cronbach α was found to be 0.89. Amputee patients who refused to participate were excluded from the study.

Through the used questionnaire and interview, the data were collected individually based on the researchers. Each interview took between 20 and 30 minutes and was held by researchers.

Statistical analysis

The information of the study was analyzed by SPSS software v. 20. Descriptive statistics described the study variables, including frequencies and percentages, means, and standard deviation. The inferential statistics included the Pearson correlation and linear regression analyses.

3. Results

The descriptive characteristics of the study samples and the Chi-square test results are presented in Table 1. The results show that most participants were male and aged between 58 and 68. The lower limbs were the most amputated site caused by the war for less than five years.

Table 2 about the bivariate correlation analysis presents a significant correlation (positive) between body image and self-esteem (r=0.822, P=0.000).

Findings in Table 3 confirmed that body image had a significant effect on the self-esteem of amputation cases (P=0.000).

4. Discussion

Our findings indicate that most study samples were male, aged 58-68. The lower limbs were the most amputation site caused by the war for less than five years.

These results are due to more men's involvement in the war, and in our society, males are considered to take all the work responsibilities. So men are at risk of amputation, while women are subject to amputation because of congenital conditions or defects.

War accounts for the highest proportion of the causes of amputation; most wars were in the past; therefore, most participants' ages were high. Another study was conducted on 42 patients who experienced lower limb amputation with the same results as ours [10].

The cutoff point depicts that most (62%) of amputated patients had negative attitudes towards their body image (Figure 1). As well as depicts (39%) as a predominated responses of amputated patients were never felt with their self-esteem (Figure 2).

These results are because amputation is a permanent process, and the amputated part does not return to the body, so the uncertainty in the appropriateness of compensation for the part of the amputee creates concern in cases of amputation.

Studies confirm the low self-esteem of the disabled in cases where people with disabilities in upper and lower peripheral showed elevated disorders, in particular with regard to the concerns and feelings of guilt and self-capacity self-concept [11].

Our findings indicated that body image might positively correlate with self-esteem (r=0.822, P=0.000). The researcher attributes the result of this relationship to the fact that the image of the body has an impact on self-esteem; that is, the more an individual's body image is formed from negative aspects of the body, the lower the self-esteem and vice versa. This conclusion is logical, as the image of the body is related to the individual's future optimism and aspirations.

It is recognized that the amputation process is permanent so that the amputated part does not return to the body again, i.e., the absence of certainty in the appropriateness of compensation for the amputated part creates a feeling of inferiority in amputees [12].

Table 1. Correlation between body image and self-esteem

Variables	Characteristics	No. (%)
Age (y)	25-35	36(18.0)
	36-46	44(22.0)
	47-57	33(16.5)
	58-68	52(26.0)
	69+	35(17.5)
Gender	Male	149(74.5)
	Female	51(25.5)
Marital Status	Single	60(30.0)
	Married	132(66.0)
	Separated	6(3.0)
	Widowed	2(1.0)
Have children	Yes	121(60.5)
	No	79(39.5)
Site of amputation	Upper limb	74(37.0)
	Lower limb	104(52.0)
	Joint amputation	22(11.0)
Cause of amputation	Accident	36(18.0)
	War	94(47.0)
	Diseases state	60(30.0)
	Anomalies	10(5.0)
Duration of amputation (y)	<5	82(41.0)
	5-10	54(27.0)
	>10	64(32.0)

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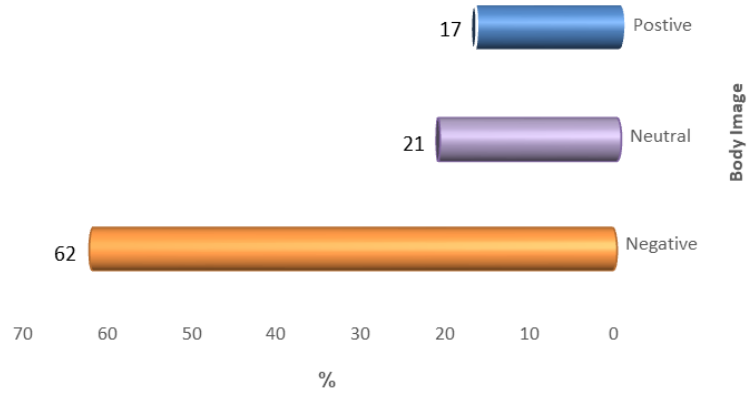

Figure 1. Body image and self-esteem

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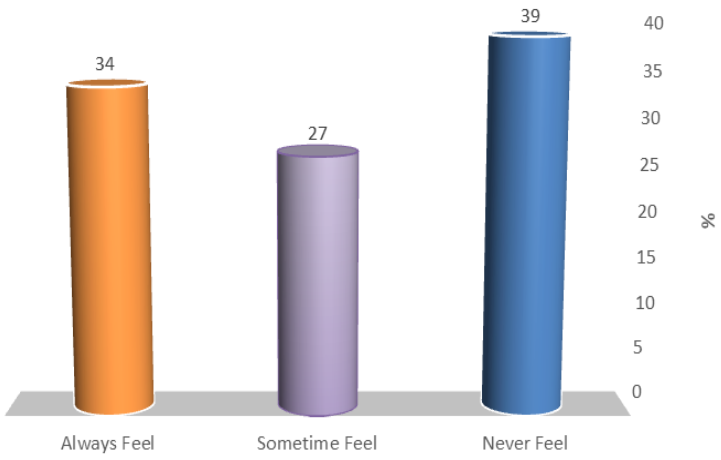

Figure 2. Majority assessment of self-esteem

The findings come to the amputation of the case before the individual is affected by the realization of the individual to self-acceptance and acceptance, and helped this opinion resulting from amputation to perpetuate self-image, so the individual in the case of monitoring and evaluation of the same, which is known as the contemplation of the state of the individual that deepens low self-concept of the individual, on the case anxiety has led to the amputation of the restructuring and the drafting of the self.

These results are consistent with the study that assessed body image and self-esteem in Australia. The study showed that the amputation of the lower limbs significantly affects the body image of the patient. Self-esteem seems independent, and the amputation of the lower limbs is not affected. However, self-esteem is greatly influenced by a sense of phantom pain. Doctors believed this phenomenon was related to psychological problems [9].

Studies have confirmed a relationship between body image and self-esteem and the effect of body image on anxiety among individuals in general and amputees in particular. They confirmed that the body image has a clear impact on determining what the future is, making the person more anxious and isolated because amputation is considered a disability, which results in distorting the body image of the individual, and the new image of the body makes the individual more turbulent than his healthy peers. Hence, he suffers from emotional disorders and isolation [13].

Table 2. Correlation between body image and self-esteem (n=200)

		Self-hardiness
Social Support	Spearman's rho	0.822**
	Sig. (2-tailed)	0.000
	N	200

** Correlation is significant at the 0.01 level (2-tailed).

Table 3. Linear regression between body image and self-esteem (n=200)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	45.891	1	45.891		
Residual	83.869	198	0.567	80.982	0.000
Total	129.760	199			

After the body image evaluation, the self-identity changes. The amputation of the lower limbs affects performance, thereby weakening patients at different educational levels, leading to negative expectations about themselves in the future [10].

It is also supportive of anxiety feeling the individual believes that the amputated limb is still present and feels it, which is scientifically known as the phantom limb phenomenon. This phenomenon has direct adverse effects on the individual and has a clear role and impact in strengthening anxiety in these people [14].

Study limitations

Self-esteem and body image are complex factors and are determined by many factors. The constructed questionnaire relied on psychological aspects and may not reflect the actual complexity of this relationship. Therefore, interpretation of results should be considered with caution.

5. Conclusion

Our analysis reflects that amputees see themselves negatively, which leads to a lack of their self-esteem. Thus, the study recommends that hospitals provide specialists in mental health and psychological therapy to increase the chance for early intervention and psychological treatment in these cases. In addition, hospitals should provide programs to assist cases of amputation to reduce their psychological problems.

Ethical Considerations

Compliance with ethical guidelines

All experimental protocols were approved by the Babylon Health Directorate, Iraq, and all experiments followed the approved guidelines.

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Authors' contributions

All authors equally contributed to preparing this article.

Conflict of interest

The authors declared no conflict of interest.

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