

The Relationship between Quality of Life and Sexual Satisfaction in Women with Severe Burns

Soheila Rabiemoor^a, Jafar Kazemzadeh^b, Saeedeh ALIZADEH^c

^aNursing and Midwifery Department, Reproductive Health Research Center, Urmia University of Medical Sciences, Urmia, Iran

^bReconstructive and Burn Surgery, Urmia University of Medical Sciences, Urmia, Iran

^cNursing and Midwifery Department, Urmia University of Medical Sciences, Iran

ABSTRACT

Introduction: Burn, especially in women, can affect the quality of life and it due to a change in sexual life. This study was designed to investigate the relationship between the quality of life and sexual satisfaction in women with burns.

Material and methods: This was a descriptive-analytical cross-sectional study conducted on 101 women with severe burns who were referred to Imam Khomeini Hospital in Urmia, Iran, in 2016. The data gathering scales were demographic questionnaire, burn specific health scale-brief (BSHS-B) and Index of Sexual Satisfaction (ISS).

Results: The mean scores of the quality of life and sexual satisfaction were 102.94 ± 20.88 and 57.03 ± 25.91 , respectively. Also, there was a significant relationship between quality of life and its subscales with sexual satisfaction and some demographic variables ($p < 0.05$).

Conclusion: Interventional efforts for improving sexual satisfaction and thus, quality of life in these patients are important. The findings of this study appear to be effective in planning for women with a history of burns.

Keywords: burn, quality of life, sexual satisfaction, women.

INTRODUCTION

Burns are devastating injuries that threaten human life in different ways and are perceived to be a challenging world health crisis (1). Deformities and other related dysfunctions may have serious physical, psychological, economic and social consequences. In this regard, psychological problems are significantly associa-

ted with quality of life (QOL) and participation of patients in rehabilitation practices (2). They suffer from physical problems and rely on others in doing daily routines (3). Burn scars surely have some physiological, psychological as well as social effects on patients that give rise to sexual problems (4). Sexual satisfaction is essential to marriage, lack of which robs the couple off the joy of life and causes sexual problems (5). Burn

Address for correspondence:
Saeedeh Alizadeh, Master of Science
Tel.: 00984432754961, 00989146073731
Email: saeideh.alizadeh@gmail.com

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injuries are problematic, particularly among women, because they tend to define life satisfaction in terms of their positive or negative sexual relation, which is highly dependent on their body (6). Studies show a strong relationship between QOL and sexual satisfaction. Nevertheless, they mostly neglect women with burn injuries. Thus, the present study aims to examine the relationship between QOL and sexual satisfaction in women with severe burns. □

MATERIAL AND METHODS

The research design of the present study was a descriptive-analytic study. The aim of this study was to explore the quality of life and sexual satisfaction in women with severe burns in Imam Khomeini Hospital of Urmia, Iran, between June 2016 and January 2017. This hospital is the only referral center accepting burn patients in West Azerbaijan, a province in the North-West of Iran. Considering a similar study conducted by S. J. Pope *et al.*, 101 patients were selected as the sample of the study (7) by using a convenience sampling technique.

Inclusion criteria: Burnt patients with 15% or larger total body surface area (TBSA), six months after discharge, age over 15, females, married, and with a history of admission to the hospital to treat burns.

Exclusion criteria: Mental retardation, communication and hearing disorders, and unwillingness to participate in the study. □

Measurements

Demographic questionnaire including: age, education, financial situation, time elapsed from the burn (month), etiology of burns and site of burn. Burn Specific Health Scale-Brief (BSHS-B): The scale is a 40-item questionnaire with the following three domains: physical (18 questions), mental (11 questions), social (11 questions). Responses are rated on a 5-point Likert scale. A high mean score indicates a better QOL (8). In the study performed by Kildal *et al.*, the obtained reliability from the Cronbach Alpha coefficient for each domain showed a reliability of 0.75-0.93 (8). The validity of the scale was confirmed for Iranian context in the study conducted by Pishnamazy *et al.*, and its reliability was tested using test-retest and was found to be 0.85 (9).

Parameters of burns			
Items		No.	%
Age (year)	20-30	31	30.7
	31-40	35	34.7
	41-50	18	17.8
	51≤	17	16.8
Duration of injury (month)	6-12	59	58.4
	13 ≤	42	41.6
Etiology of burns	Hot fluids	41	40.6
	Flame	46	45.5
	Electricity	3	3
	Chemical materials	11	10.9
TBSA	15-30	89	88.1
	31-45	12	11.9
Site of burn	Head, face and neck	72	72
	Upper arms	91	91
	Anterior trunk	57	57
	Posterior trunk	7	7
	Lower limbs	41	41
	Genitalia	5	5
Financial situation	Not enough	62	61.4
	Fair	37	36.6
	No money problem	2	2
Education	Illiterate	24	23.8
	Primary and high school	57	56.4
	College certificate and diploma	20	19.8
Occupation	Home maker	94	93.1
	Practitioner	7	6.9
Residence	Urban	66	65.3
	Rural	35	34.7

TABLE 1. Distribution of the study patients according to parameters of burns

Variable	Minimum	Maximum	Mean	SD
Quality of life	59	193	102.94	20.88
Physical	32	87	50.53	9.45
Mental	11	55	24.25	7.7
Social	14	55	28.14	7.24
Sexual satisfaction	9	130	57.03	25.91

TABLE 2. Mean and standard deviation of quality of life and related dimensions with sexual satisfaction

Index of Sexual Satisfaction (ISS): This scale contains 25 questions. Responses are rated on a 7-point Likert scale between 0 and 6. The obtained scores ranged from 0 to 150. The score of ≥75, as a cut-

ting score, indicates a higher degree of sexual satisfaction. The internal consistency of this scale was assessed by using an Alpha coefficient of .91. The validity of the questionnaire was evaluated by using the test-retest method, which had a coefficient of 0.93 (10). The obtained data were analyzed using SPSS 16. Descriptive statistics as well as an ANO-

VA test and independent sample t test, Pearson's correlation and stepwise multiple regression analysis were run to analyze the data.

RESULTS

Table 1 shows that two-thirds of women with burns are in the reproductive age group

Social	Mental	Physical	Quality of life	Variable	
mean±std	mean±std	mean±std	mean±std		
26.80±7.82	22.96±8.29	51.61±11	101.38±23.67	20-30	Age
30.32±7.81	26.13±8.10	49.54±9.51	106±22.07	31-40	
26.36±5.35	23.10±6.18	50.26±6.58	99.73±14.15	41-50	
27.78±5.57	23.71±6.84	51.14±9.59	102.64±19.63	51≤	
0.87	0.82	0.53	0.72	p-value	
28.79±7.28	24.86±7.74	51.32±9.55	104.98±20.78	15-30	TBSA
23.33±4.88	19.75±5.92	44.66±6.38	87.75±14.93	31-45	
0.01	0.03	0.02	0.007	p-value	
27.55±7.52	24±7.85	49.50±9.31	101.06±22.19	6-12 month	Duration of injury
28.97±6.84	24.61±7.57	51.97±9.57	105.57±18.83	13≤	
0.33	0.69	0.15	0.28	p	
28.82±7.60	28.83±7.99	50.78±9.27	109.58±20.93	Accidental	Circumstance of injury
27.60±73.7	23.64±7.49	48.66±10.99	102.04±19.94	Suicidal	
0.04	0.02	0.24	0.009	p	
28.82±7.60	25.73±8.12	51.63±10.80	106.19±22.93	Hot fluids	Etiology of burn
27.60±73.7	23.58±7.66	49.26±8.56	100.45±20.88	Flame	
30±2	23±9.64	50.66±2.51	103.66±13.65	Electricity	
27.36±4.31	21.90±5.37	51.72±8.95	101±13.42	Chemical materials	
0.006	0.63	0.41	0.99	p	
26.12±4.92	22.83±6.87	46.08±8.70	105.43±20.07	Urban	Residence
28.77±7.74	24.70±7.93	51.92±9.30	98.22±21.83	Rural	
0.11	0.32	0.008	0.03	p	
27.93±6.91	23.92±7.21	50.01±9.07	101.89±19.27	Home maker	Occupation
31±11.16	28.71±12.51	57.28±12.52	117±35.46	Practitioner	
0.28	0.11	0.04	0.20	p	
29.56±7.72	26.33±8.03	54.05±10.07	109.94±21.87	Favorable income	Financial situation
27.25±6.83	22.95±7.25	48.32±8.40	98.53±19.11	Unfavorable income	
0.12	0.03	0.003	0.007	p	
26.12±4.92	22.83±6.87	46.08±8.70	95.04±16.91	Non-academic education	Education
28.77±7.74	24.70±7.93	51.92±9.30	105.40±21.47	Academic education	
0.11	0.32	0.008	0.03	p	

TABLE 3. The relationship between quality of life and demographic variables in burn injuries

Variables	r	p-value
QOL	0.61	0.001
Physical	0.43	0.001
Mental	0.47	0.001
Social	0.68	0.001

TABLE 4. Relationship between dimensions of quality of life with sexual satisfaction in women with burn injuries

(20-30 years, 30.7%, and 31-40 years, 34.7%). A majority of victims had accidents (88.1%), and few (11.9%) committed self-immolation. Maximum burn rate based on TBSA ranged from 15% to 30%. Moreover, 91 patients had burns in upper organs. There were five cases of burns in genital organs. About two-thirds of patients had low income (62%). Most of the patients were educated (76.2%). Participants were mostly housewives (93.1%) and lived in urban areas (65.3%).

Table 2 shows the mean and standard deviation of quality of life and related dimensions with sexual satisfaction in women with burns.

Table 3 shows a significant relationship between quality of life and burn severity, cause of burn, education, income, and job. Moreover, there is a significant relationship between the physical aspect of QOL with burn severity, living place, education, job and income, while the psychological aspect of QOL is significantly related to burn severity, cause of burn and income. In addition, the social aspect of QOL has a significant relationship with burn severity and burn cause. Data analysis was based on cut-off point and indicates that 82% of participants scored 75 or lower, while only 18% scored higher than 75. That is, 82% of women with burn injuries reported they were sexually dissatisfied. Moreover, results of t-test and ANOVA revealed no relation-

ship between sexual satisfactions and demographic variables.

Results of Pearson correlation test demonstrated a positive and significant correlation between sexual satisfaction and the physical, social and psychological dimensions of QOL ($p < 0.01$) (Table 4). Univariate and multivariate linear regression analysis also revealed that income, education and burn severity were highly predictable among other variables of QOL (adjusted R square 0.13). A more optimal income level (8.87) increased the quality of life and was significant ($P = 0.032$). Education ($P = 0.08$) was also found to increase QOL but was not significant. Burn severity (-15.75) decreased quality of life and was significant ($P = 0.01$) (Table 5). □

DISCUSSION

Results indicated that most cases occurred for women aged 20-41 and this is in agreement with Eslamlou's findings.(11) Self-immolation was considerably frequent among women who intended to commit suicide (12 reported cases) and this reflects a deep social problem. It supports the fact that the rate of self-immolation is high in reproductive women in Iran (11, 12). Zareipour *et al.* showed that six out of 32 pregnant women attempted suicide by burning (13).

The present study found no significant relationship between age and dimensions of QOL, which is in agreement with the findings of Pishnamazi *et al.* (9) and Elsherbiny *et al.* (14). This may be explained by the fact that burns are important for all age groups, as they have considerable effects on the victim's life.

The study found a significant relationship between burn severity and mental, physical and social dimensions. Severe burns significantly decreased the QOL. Druery *et al.* reported similar results (3). It is assumed that severe burns significantly affect patients' life and decrease their QOL.

Variable	Univariate regression coefficients	P-value	Multivariate regression coefficients	P-value
Financial situation	11.41	0.007	8.87	0.032
Education	10.36	0.03	8.16	0.08
TBSA	-17.24	0.007	-15.75	0.01
Circumstance of injury	-7.53	0.24		

TABLE 5. Linear regression model on effects of the variables on total score of quality of life in women with burn injury

Moreover, no significant relationship was found between time after burns and QOL and its dimensions. This is in agreement with the findings of Elsherbiny *et al.* (14) and inconsistent with those of Pishnamazi *et al.* (9). It may be that burns cause long-lasting scars.

The study has also found a significant relationship between the cause of burn and social and mental dimensions. Women who attempted self-immolation reported a lower score of their QOL. Similarly, Elsherbiny *et al.* found a significant association of hand functions and QOL with cause of burn (14). Serious social and psychological problems of women who attempt self-immolation explains this relationship.

Data analysis reveals a significant relationship between residence and physical dimension. Physical dimension was lower for women in rural areas. Elsherbiny *et al.* showed a significant relationship between QOL regarding skin sensitivity to heat, interpersonal relations, sexual relationships and living place. This is confirmed in the present study (14). It seems that women with burn injuries living in rural areas have limited access to health-care centers to alleviate their physical problems.

This study found a significant relationship between total score and physical dimension with education, which is consistent with the findings of Pishnamazy *et al.* (9) and inconsistent with those of Yue *et al.* (15). It seems that educated women enjoy a higher economic and social position and are more likely to receive healthcare services to cope with problems.

A significant relationship between job and physical dimension was found. Moreover, a significant relationship was found between physical and mental dimensions with income. Dyster-Aas *et al.* established that a good job with an appropriate level of income significantly promoted the quality of life and this is in agreement with our findings (16).

The level of sexual satisfaction dropped below the cut-off point for 82% of participants with severe burns. They were sexually dissatisfied with

their lives. Oster *et al.* reported that within seven years after burns, women had a lower sexual satisfaction (17).

The study found no significant relationship between sexual satisfaction and any demographic variables. Nevertheless, sexual satisfaction was significantly related to dimensions of QOL. It means that sexual satisfaction independently, apart from demographic variables, affects the quality of life in women with burns.

Physical problems such as changing of skin color and body shape, loss of organs and hair in women with burns have been studied and proved to disturb self-image, which cause depression, isolation, extreme emotional sensitivity, low self-esteem and considerably decline in QOL level (3, 18, 19). Corry *et al.* showed that women with burns are less likely than men to engage in social interactions (20). Conel *et al.* reported that women with burns showed a more marked decrease of sexual satisfaction than men within a year after the events (21). □

CONCLUSION

The present study investigated the relationship between sexual satisfaction and quality of life in women with burns. Considering the fact that sexual satisfaction significantly affects the quality of life, practitioners are suggested to carefully observe these variables and design intervention practices to promote sexual satisfaction and quality of life in women with burn injuries. Psychological and counseling interventions can prove highly effective in this regard. □

Conflicts of interest: none declared.

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