

HEALTH RELATED QUALITY OF LIFE AND ASSOCIATED FACTORS AMONG BURN PATIENTS AT TWO BURN SPECIALTY HOSPITALS OF KATHMANDU

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ABSTRACT

Burn injury has high incidence in Nepal and the outcome is generally poor. Besides physical health, burn also impacts many other aspects of life, including quality of life. This study aimed to study health-related life quality among burn patients in Nepal and explore associated sociodemographic and burn-related factors. A descriptive study was conducted in two burn specialty hospitals of Kathmandu. Burn patients 18 years or older, after acute burn management, and admitted or attending the hospitals' out-patient clinic were studied. Data were collected through face-to-face interview and patients' hospital records, using the Burn Specific Health Scale Brief - Nepali version, consisting 40 items under three main domains (physical, burn-specific, and social-emotional). Among 337 burn patients, 154 were males (45.7%) and 183 females (54.3%); mean age was 39.7 years (± 16.9). The median score was 115 (IQR 97-146) and overall, 72.4% patients had poor health related quality of life. Poor health-related quality of life was found in 92.3% for physical function domain, 86.6% for burn specific domain and 70.3% for social-emotional function domain. Active age group, nuclear family type, higher education, deeper burn injury, larger affected skin area, presence of complication were significantly associated with poor health-related quality of life.

KEYWORDS

Burn injury, BHSF-B-Np, health related quality of life

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INTRODUCTION

Burns are a form of traumatic injury caused by thermal, electrical, chemical, or radioactive agents. Burns occur in all age groups. Burns are a global public health problem, accounting for an estimated 180,000 deaths annually.¹ In high-income countries, the rate for burn and death rates have been decreasing. However, the incidence and death rates are still high in low- and middle-income countries, mostly in the African and South-East Asia regions.² Burns are among the leading causes for loss of disability adjusted life years (DALYs) in low and middle income countries. It is the second most common injury in rural Nepal, accounting for 5.0% of disabilities.¹

Burn trauma has both physical and psychological sequel. Burn can have negative impact on physical and psychosocial functioning that affects the quality of life. The burnt individual is faced with various issues such as body image, functional, social, sexual, and economic difficulties. The measurement of physical and psychological outcome after burn injury of individual is necessary to help to optimize the multidisciplinary treatment in order to restore the quality of life.

In the Nepalese patients, studies on assessment of health-related quality of life (HRQOL) among burn survivors are very few. This study is intended to assess the HRQOL of burn survivors in two specialized hospitals in Kathmandu. The findings of the study are expected to be helpful guide in developing strategies to enhance the health and quality of life of burn patients.

METHODS AND MATERIALS

The study was an institution-based descriptive, cross-sectional study. The study was conducted among patients who sustained burn injury and attending a specialized hospital in Kathmandu - Kirtipur Hospital (KH), Kirtipur Municipality and Sushma Koirala Memorial Hospital (SKMH), Shankarapur Municipality. Dedicated burn care is provided by Nepal Cleft and Burn Center at Kirtipur Hospital; SKMH was established as a center for plastic and reconstructive surgery and burn care by the Interplast, Germany. Permission for data collection was obtained from both the hospitals.

Sample size - Tibebe *et al*³ (2021) have reported 57.5% prevalence rate of poor health-related quality of life among burn patients in a study in Ethiopia. The calculation of minimum sample size (n) is as follows –

$$n = z^2pq/d^2$$

where,

z = standard deviation at 95% confidence interval (= 1.96)

p = reported prevalence rate = 0.58 (57.5% in the referred literature)

q = 1-p = 0.42

d = allowable margin of error = 0.05 (5%)

Thus, $n = 3.84 \times 0.58 \times 0.42 / 0.0025 = 374$

Adding 10% non-response, the calculated sample size was 411.

Inclusion criteria for the study was burn patient after acute management of burn injury, of either sex, above 18 years and admitted in or coming for follow up outpatient care, physiotherapy in SKMH or KH. Individuals unable to provide information due to conditions such as critical illness and mental instability and having diagnosed as chronic severe physical and/or mental disorders before burn incidence were excluded.

Variables of the study - Independent variables were demographic characteristics (age, sex, socioeconomic status, marital status, educational status, ethnicity, occupation) and burn-related characteristics (place of burn, cause and time of burn, affected body parts, percentage body surface area, depth or degree of burn, types of complications, comorbidities). Dependent variables were health related quality of life information on different domains. Occupation was also categorised as productive (business, agriculture, laborer, and employee) and unproductive (student and housewife).

Data were collected by questionnaire method, using validated Nepali translation of the burn specific health scale – brief (BSHS-B-Np). The burn specific health scale – brief is a questionnaire consisting of 40 items across nine domains, i.e hand functioning, simple abilities, affect, work, sexuality, interpersonal relationships, body image, heat sensitivity, and treatment regimen. Each item is rated in five point Likert scale with 0: ‘extremely’ to 4: ‘none/not at all’. The total score range is 0-160, with higher score indicating higher HRQOL and score 146/160 or above indicated adequate recovery.⁴

The Nepali translation of the burn specific health scale – brief (BSHS-B-Np) has been claimed to be reliable and valid scale for burns survivors to assess their health related quality of life in Nepali context.⁵ A pretest was conducted on 15 patients from SKMH and the reliability of the tool was checked and its Cronbach alpha coefficient value was 0.86.

Ethical approval was obtained from the Nepal Health Research Council (Ref. No.: 744) and also from Public Health Concern Trust (PHECT Nepal, Kirtipur Hospital).

After getting due permission from concerned hospitals, the data was collected by trained data enumerators from November 2023 to September 2024. Patients meeting the selection criteria were approached and requested to participate in the study by giving introduction of the study. All patients consenting to the study and giving informed written consent were enrolled. General socio-demographic information was obtained by conversation. Relevant clinical information was filled from

the OPD cards, discharge reports and hospital records. Information on health-related quality of life was obtained by administering the BSHS-B-Np questionnaire.

The differences in rate of poor HRQOL between different groups were compared by the Chi Square test setting a p value of 0.05; statistical software SPSS 16.0 was used.

RESULTS

The study was completed in 337 patients, 154 males (45.7%) and 183 females (54.3%). Their mean age was nearly 40 years, with more than one third in the age group 18-30 years (Table 1).

Table 1: Sociodemographic characteristics of burn patients (n=337)

Variables	Category	n	%
Age groups (years)	18 – 30	122	36.2
	31 – 40	82	24.3
	41 – 50	45	13.4
	51– 60	39	11.6
	Above 60	49	14.5
Sex	Male	154	45.7
	Female	183	54.3
Ethnicity	<i>Brahmin</i>	38	11.3
	<i>Chhetri</i>	63	18.7
	<i>Adhibasi-Janajati</i>	151	44.8
	<i>Madhesi</i>	57	16.9
	<i>Dalit</i>	28	8.3
Religion	Hindu	259	77.5
	Buddhist	42	12.6
	Christian	25	7.5
	Others	8	2.4
Family type	Nuclear	193	57.6
	Joint	139	41.5
	Extended	3	0.9
Educational level	No formal education	94	27.9
	Primary	42	12.5
	Secondary	29	8.6
	Higher secondary	53	15.7
	University level	119	35.3
Marital status	Unmarried	111	33.0
	Married	206	61.3
	Divorcee	3	0.9
	Widowed	16	4.8
Occupation	Student	55	16.3
	Business	26	7.7
	Agriculture	56	16.6
	Waged work (laborer)	30	8.9
	Employee	87	25.8
	Housewife	81	24.0

Table 2: Burn related characteristics of the respondents (n= 337)

Variables	Category	n	%
Burn Occurrence	Less than 6 months	216	64.1
	More than 6 months	121	35.9
Burn place	House	239	70.9
	Cow shed	34	10.1
	Office	34	10.1
	Other	30	8.9
Cause of burn	Flame	196	58.5
	Scald	104	31.0
	Chemical	4	1.2
	Lightning	4	1.2
	Electricity	27	8.1
Affected body part	Face	80	23.7
	Head	22	6.5
	Neck	68	20.2
	Chest	105	31.2
	Abdomen	130	38.2
	Back	85	25.2
	Upper limb	212	62.4
	Lower limb	183	53.8
	Genital	31	9.2
	Buttock	30	8.9
Burn Depth	Second	160	47.5
	Third	57	16.9
	Fourth	12	3.6
	Mixed	108	32.0
Complication	Infection	5	1.5
	Contracture	141	41.8
	Hypertrophic scar	22	6.5
	Delayed healing	31	9.2
	Other (itching, pain)	140	42.0
Treatment	Physiotherapy	147	43.6
	Dressing (wound care)	128	38.0
	Surgery	71	21.1
	Other	42	12.5
Taking medicines	No	240	71.2
	Yes	97	18.8
Comorbidity	No	310	92.8
	Yes	24	7.2

Table 3: BSHS-B-Np score for assessing HRQOL of burn patient (n = 337)

How much difficulty do you have:	Extreme n (%)	Quite a bit n (%)	Moderate n (%)	A little bit n (%)	None n (%)
Hand function					
Signing your name	51 (15.1)	42 (12.5)	35 (10.4)	24 (7.1)	185 (54.9)
Eating with utensil	52 (15.4)	38 (11.3)	40 (11.9)	22 (6.5)	185 (54.9)
Picking up coins from a flat surface	55 (16.3)	35 (10.4)	33 (9.8)	38 (11.3)	176 (52.2)
Unlocking door	48 (14.2)	37 (11.0)	23 (6.8)	47 (13.9)	182 (54.0)
Tying shoelaces	50 (14.8)	31 (9.2)	33 (9.8)	44 (13.1)	179 (53.1)
Work					
Burn causes difficulty in my work	67 (19.9)	104 (30.4)	54 (16.0)	61 (18.1)	50 (14.8)
Burn affects my work efficiency	61 (18.1)	90 (26.7)	59 (17.5)	72 (21.4)	55 (16.3)
Burn has caused problems in my work	77 (22.8)	89 (26.4)	54 (16.0)	69 (20.5)	48 (14.2)
Heat sensitivity					
Being out in sun bothers me	24 (7.1)	46 (13.6)	64 (19.0)	44 (13.1)	159 (47.2)
Hot weather bothers me	20 (5.9)	33 (9.8)	73 (21.7)	55 (16.3)	156 (46.3)
I cannot get out and do things in hot weather	22 (6.5)	44 (13.1)	35 (10.4)	65 (19.3)	171 (50.7)
The fact I cannot go out bothers me	13 (3.9)	32 (9.5)	32 (9.5)	66 (19.6)	194 (57.6)
My skin is more sensitive than before	35 (10.4)	58 (17.2)	26 (7.7)	70 (20.8)	148 (43.9)
Affect					
I often feel sad or blue	12 (3.6)	29 (8.6)	51 (15.1)	95 (28.2)	150 (44.5)
At times, I think I had an emotional problem	9 (2.7)	30 (8.9)	43 (12.8)	86 (25.5)	169 (50.1)
I am troubled by feelings of loneliness	9 (2.7)	30 (8.9)	20 (5.9)	64 (19.0)	214 (63.5)
I have feelings of being caught or trapped	8 (2.4)	26 (7.7)	21 (6.2)	72 (21.4)	210 (62.3)
I don't enjoy visiting people	12 (3.6)	28 (8.3)	51 (15.1)	77 (22.8)	169 (50.1)
I have no one to talk about my problem	13 (3.9)	27 (8.0)	56 (16.6)	69 (20.5)	172 (51.0)
I am not interested in doing things with my friends	14 (4.2)	28 (8.3)	60 (17.8)	68 (20.2)	167 (49.6)
Skin care					
Taking care is nuisance	2 (0.6)	40 (11.9)	63 (18.7)	82 (24.3)	150 (44.5)
Don't like to do care necessary for my burn injury	3 (0.9)	21 (6.2)	58 (17.2)	80 (23.7)	175 (51.9)
Wish it is not necessary	6 (1.8)	26 (7.7)	52 (15.4)	77 (22.8)	176 (52.2)
Difficult for me to do all the things for care of burn	2 (0.6)	31 (9.2)	37 (11.0)	81 (24.0)	186 (55.2)
Skin care hampers other important works	12 (3.6)	35 (10.4)	47 (13.9)	84 (24.9)	159 (47.2)
Sexual relationship					
Worry of less excitement	4 (1.2)	13 (3.9)	37 (11.0)	38 (11.3)	228 (67.7)
Less interest	5 (1.5)	26 (7.7)	49 (14.5)	52 (15.4)	133 (55.8)
Unable to kiss and hug	6 (1.8)	25 (7.4)	53 (15.7)	42 (12.5)	194 (57.6)
Inter-Personal Relations					
Don't like family behavior	0	11 (3.3)	24 (7.1)	34 (10.1)	268 (79.5)
Want to be alone	2 (0.6)	10 (3.0)	26 (7.7)	36 (10.7)	163 (78.0)
Family better without me	2 (0.6)	22 (6.5)	28 (8.3)	55 (16.3)	230 (68.2)
Burn kept me separated from family	3 (0.9)	12 (3.6)	18 (5.3)	39 (11.6)	265 (78.6)
General ability					
Bathing independently	17 (5.0)	25 (7.4)	29 (8.6)	48 (14.2)	218 (64.7)
Dressing	18 (5.3)	21 (6.2)	33 (9.8)	56 (16.6)	209 (62.0)
Getting in and out of chair	10 (3.0)	20 (5.9)	23 (6.8)	44 (13.1)	240 (71.2)
Physical appearance					
General appearance bothers me	47 (13.9)	49 (14.5)	72 (21.4)	73 (21.7)	96 (28.5)
Unattractive to other	50 (14.8)	37 (11.0)	73 (21.7)	76 (22.6)	101 (30.0)
Want to forget appearance change	71 (21.1)	113 (33.5)	56 (16.6)	50 (14.8)	47 (13.9)
Appearance of my body bothers me	77 (22.8)	67 (19.9)	41 (12.2)	74 (22.0)	78 (23.1)

Almost two thirds of the burn patients had duration of injury less than six months. Flame burn was the most common cause and the commonest place of occurrence was at home. Limbs and trunk were the most commonly affected body parts and face, buttock and genitals were the least affected parts. Most victims sustained second degree or mixed depths of injury. More than 90.0% had no other comorbidities (Table 2).

The health related quality of life in burn patients were assessed by using the burn specific health scale brief Nepali version (BSHS-B-Np) in different domains as shown in Table 3. More than half of the burn patients had no difficulty in hand function, while 14 to 16 percent of

burn patient had extreme difficulty. The ability to perform general work was affected severely among one fifth of the burn patient. Almost half of the burn patient has no sensitivity on burnt skin. However, around one tenths of the burn patient have extreme heat sensitivity on burnt skin also prevented them from going out in hot weather. Half of the burn patient had no problems with affect but it was seen that 9-15% of burn patient had problem with mood.

With regards to skin care, very few burn patient feel skin care of burnt area is nuisance. The effect of burn on sexual relationship is not seen among more than half of the burn patient and also to interpersonal relationship. The changed physical appearance of burnt area

Table 4: Level of HRQOL among burn patient (n = 337)

Domain	Values			Recovery	
	Median	Q1-Q3	Range	Poor n (%)	Good n (%)
Physical function	22	13-31	0 – 36	311 (92.3)	26 (7.7)
Nonphysical (burn specific)	32	24-37	5 – 40	292 (86.6)	45 (13.4)
Social and economic function	59	48-72	15 – 84	237 (70.3)	100 (29.7)
Overall HRQOL	115	97-146	39 – 160	244 (72.4)	93 (27.6)

Table 5: Association between HRQOL and different socio-demographic characteristics of the respondents (n = 337)

Socio-demographic characteristic	Category	HRQOL Recovery		Chi- sq. value	P value
		Poor n (%)	Good n (%)		
Age*	18 to 30	100 (80.0)	25 (20.0)	25.46	<0.001
	31 – 40	65 (79.3)	17 (20.7)		
	41 – 50	33 (73.3)	12 (27.6)		
	51 – 60	26 (66.7)	13 (33.3)		
	Above 60	20 (43.5)	26 (56.5)		
Sex	Male	117 (76.0)	37 (24.0)	1.81	0.221
	Female	127 (69.4)	56 (30.6)		
Family type*	Nuclear	149 (77.2)	44 (22.8)	11.31	0.003
	Joint/extended	94 (66.2)	48 (33.8)		
Educational level*	Uneducated	56 (59.6)	38 (40.4)	12.56	0.014
	Basic/primary	31 (73.8)	11 (26.2)		
	Secondary	20 (69.0)	9 (31.0)		
	SLC	43 (81.1)	10 (18.9)		
	University	94 (79.0)	25 (21.0)		
Marital status*	Unmarried	89 (79.5)	23 (20.5)	11.63	0.003
	Married	147 (71.4)	59 (28.6)		
	Widowed/ Divorce	8 (42.1)	11 (57.9)		
Occupation	Productive	139 (69.8)	60 (30.2)	1.58	0.12
	Unproductive	105 (76.1)	33 (23.9)		

*p-Value significant at ≤ 0.05 level, Chi Square test

Table 6: Association between Burn Related Characteristics and HRQOL of Burn Patient (n=337)

Burn related characteristic	Category	HRQOL recovery		Chi- sq. value	P value
		Poor n (%)	Good n (%)		
Burn degree*	Second	93 (58.1)	67 (41.9)	31.23	<0.001
	Third	60 (87.0)	9 (13.0)		
	Mixed	91 (84.3)	17 (15.7)		
Bun duration	Less than 6 months	147 (68.1)	69 (31.9)	1.487	0.263
	More than 6 months	90 (74.4)	31 (25.6)		
Complication*	Absent	21 (52.5)	19 (47.5)	8.99	0.004
	Present	223 (75.1)	74 (24.9)		
Comorbidity	Absent	228 (73.5)	82 (26.5)	2.54	0.088
	Present	14 (58.3)	10 (41.7)		
Affected part*	Exposed	29 (70.7)	12 (29.3)	70.27	<0.000
	Unexposed	37 (40.2)	55 (59.8)		
	Mixed	178 (87.3)	26 (12.7)		
TBSA*	Less than 20%	183 (67.8)	87 (32.2)	14.54	< 0.001
	More than 20%	61 (91.0)	6 (9.0)		

*p-Value significant at ≤ 0.05 level, Chi Square test

has however bothers among one fifth of burn patient extremely.

Among the respondents, 92.3% for physical function domain, 86.6% for burn specific domain and 70.3% for social and economic function domain had poor health-related quality of life. The overall HRQOL of study participant in this study revealed that 72.4% respondents had poor quality of life, with score range from 39-160/160.

Better recovery was seen among burn patient with older age compared to younger patients, living in joint or extended family compared to nuclear, in the lower education levels compared to more educated, and in divorcee or widowed compared to unmarried or married patients. Occupation type and gender did not have significant relation with the poor or good recovery in burn patients.

With regards to burn related characteristics, burn injury of severe extent (third degree, more TBSA), burn in exposed body part and having complication had poor recovery. Recovery rate had no significant relation with having comorbid conditions and duration of burn.

DISCUSSION

Burn injuries are global health problem and have impact on a person's life in many aspects that include impairment of their physical appearance, interpersonal relationship,

psychological, social and physical functioning. Hence, focusing on health related quality of life of burn victim is important. This study was conducted to assess HRQOL and associated factors among burn patients in hospitals dedicated of burn care in Kathmandu Valley.

Among total 337 burn patients, 36.2% are from age group (18-30 years), 54.3% are female. Most of the burn events occurred at home (70.9%), more than half (58.5%) of the burn was caused by flame followed by scald (31.0%), 47.2% of the patients sustained second degree depth of burn, and post-burn contracture was the commonest form of complication (41.8%).

The age and sex composition of our patients is similar to other studies, with predominance of female patient and working age group (15-59 years).⁶⁻⁸ Though house is considered as safe place, the most common place of burn incident is inside house itself, mostly in kitchen and the most common mechanism of burn injury is flame that is followed by scald.^{7,8}

Recovery: The BSHS-B-Np includes 40 items comprising nine HRQOL domains: simple abilities, heat sensitivity, hand function, treatment of regimens, work, body image, affect, interpersonal relationships and sexuality.⁵ The total score of 140 and above indicated good recovery from burn incidence in terms of health related quality of life.⁴

In this study, the median total score was 115, indicating that the majority of patients had

poor recovery at the time of interview. Among total burn patients, 244 (72.4%) had poor quality of life. This finding shows that the HRQOL among burn patient is poor or has poor recovery compared to 57.5% patients with poor recovery in the study conducted in Ethiopia.³

The study found significant association between age and HRQOL. The elderly aged above 60 years and above had better recovery than younger age group. However the study conducted by Alkhatami and Aldekayel⁹ did not find significant relationship between QOL and age. The finding of this study regarding improved quality of life in elderly is contrasted with the finding of another study that showed poor quality of life in older patient.⁸

In several studies, the quality of life after burn is more compromised in female as compared to male.¹⁰⁻¹² This can be because females have poor social support that negatively affect during post burn period or women find it harder to live with mutilated body. However, this study found no significant gender difference for the HRQOL scores. Our finding is similar with some other studies.^{8,9}

Spronk *et al*¹¹ did not find any significant association between living alone, level of education and marital status. In this study, the burn patient living in joint or extended type family, lower education level (illiterate), and widowed / divorcee had good recovery than those living in nuclear family, educated group and married or single. This could be explainable as living in joint family provides an environment of care and support by the other family members, which is lacking in nuclear family. Also, widowed or divorcee and elderly people also usually live in joint or extended family. A systematic review showed that having a job was associated with a better HRQOL.¹¹ Also, in a study conducted in Sweden, it was found that the unemployment among burn patient was found to be associated with poor HRQOL.¹³ This study shows no significant association between HRQOL and type of occupation as productive or unproductive.

Education level is also the important factor for determining HRQOL of burn survivor. The education allows burn victim to understand and better access of burn wound management that positively affect in coping, recovery and quality of life.¹⁴ The university degree was associated with highest quality of life.¹⁵ However in this study the level of education is negatively associated with HRQOL. The better HRQOL in lower education level seems a contradictory finding. The reason for this finding is most

likely because mostly elderly patients, although less educated, are usually living in the joint or extended families and receiving good family support.

HRQOL and Burn characteristics: The severity of burn is one of the important factors for determining the HRQOL of individual following burn injury; more the depth of burn, poorer the outcome in relation to HRQOL. In this study also, the burn patients with third degree burns had poorer outcome (87.0%) than those with second degree burn (58.0%). This finding of severity of burn (more severe) result in poorer HRQOL is supported by finding in various study.^{10,16} The burn patient often have various complication as infection, contracture, scar that have impact in recovery of burn patient. The total body surface area percentage (TBSA%) of burn is negatively associated with HRQOL. In this study individual with more than 20.0% TBSA has poorer recovery than TBSA <20%. This finding is similar in other studies as well.^{8,10,11,17}

Finding from this research revealed that burn patient with complications such as wound infection, hypertrophic scar, contracture has poorer recovery than those without such complication. The effect on quality of life might be due to pain, altered functional ability, body image and feeling of unattractiveness caused by the complications. The finding is supported by other studies, in which burn survivor with complication as amputation, hypertrophic scar and contracture had poorer quality of life.^{3,14}

The comorbidity of other diseases is another important determinant of HRQOL in burn patient.¹³ The study conducted by Tibebu *et al*,³ (2021) showed that the burn survivor with comorbidity were 3.7 times more likely to have poor quality of life than those who do not have any illness. Similar finding is reported in study conducted in India,¹⁰ Sweden,¹² China.¹⁸ However, we did not find a significant difference in HRQOL score between patients with and without comorbidities.

All deep second degree and third degree burn are at risk of developing hypertrophic scar. The part of body affected by burn may affect the post burn life due to presence of scar, altered appearance and impaired function that can have effect on HRQOL of burn survivor. This is because injury on visible area result in the individual to feel inferior when comparing with society. In this study the HRQOL of burn area in exposed had poor recovery in comparison of burn in unexposed area, and the finding is statistically significant. This finding

is consistent with the study that revealed that burn survivor having injury in exposed body part were 2.9 times more likely to had poor QoL than those having injury on unexposed body part.³ Also the finding is consistent with the study in India that indicated the involvement of exposed parts, as face result in poor QoL.¹⁰

Strength and limitation: This study is the first of its type in Nepalese context aiming to seek the HRQOL of burn patient using validated tool at Specialized center dedicated to care the burn patient.

As it is cross sectional study, it limits to find the recovery of burn patient in term HRQOL over the time. The findings reflect only the current state of HRQOL, which may not account for long-term recovery or fluctuations in quality of life over time.

In conclusion, the health related quality of life of burn survivors were studied in two burn specialty hospitals of Kathmandu, using the validated Nepali translation of the burn specific health scale brief. We found that most of the burn patients had poor HRQOL. With regards to domain of BSHF-B-Np, the better recovery is seen in social and economic function, followed by burn specific domain and least in physical function domain. Burn victim of active and younger age group, nuclear family type, higher educational status, and unmarried had poor

HRQOL. The better HRQOL in lower education level seems a contradictory finding. The reason for this finding is most likely because mostly elderly patients are less educated who are again receiving good family support in the joint, extended families. With regards to burn related characteristics, severity of burn (TBSA% and depth), with complication and exposed part had poor HRQOL. The major limitation of this study is their number of patient participants which is less than calculated minimal sample size. Further studies with sufficient number are suggested, especially to explore the role of family circumstances in HRQOL of burn survivors.

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REFERENCES

1. WHO. Burns: Key facts [Internet]. WHO Fact Sheets. 2018. Available from: <https://www.who.int/news-room/fact-sheets/detail/burns%0ABurns> (Accessed on: Dec 2024).
2. WHO. Burns: Key Facts [Internet]. Burns Factsheet. 2023. p. 1–6. Available from: <https://www.who.int/en/news-room/fact-sheets/detail/burns> (Accessed on: Dec 2024).
3. Tibebe NS, Desie T, Marew C, Wubneh M, Birhanu A, Tigabu A. Health-related quality of life and its associated factors among burn patients at governmental referral hospitals of Amhara Regional State, Northwest Ethiopia, 2020: Institutional-based cross-sectional study. *Clin Cosmet Investig Dermatol* 2021; 14: 367–75. DOI: 10.2147/CCID.S306211
4. Kvannli L, Finlay V, Edgar DW, Wu A, Wood FM. Using the Burn Specific Health Scale-Brief as a measure of quality of life after a burn - What score should clinicians expect? *Burns* 2011; 37: 54–60. DOI: 10.1016/j.burns.2010.07.010
5. Shakya R, Manandhar M, Dangol R, Shrestha A. Cross cultural adaptation and validation of burn specific health scale- brief in Nepali (BSHS-B-Np). *J Patient-Reported Outcomes* 2020; 4. DOI: 10.1186/s41687-020-00190-0
6. Tripathi S and Basnet SJ. Epidemiology of burn injuries in Nepal: A systemic review. *Burn Trauma* 2017; 5: 1–6. DOI: 10.1186/s41038-017-0075-y
7. Gupta S, Mahmood U, Gurung S et al. Burns in Nepal: A population based national assessment. *Burns* 2015; 41: 1126–32. DOI: 10.1016/j.burns.2014.11.012
8. Shahid F, Ismail M, Khan S. Assessment of quality of life in post burn survivors: A cross-sectional single-center first validation study from Pakistan. *Burn Open* 2018; 2: 35–42. DOI: 10.1016/j.burnso.2017.08.003
9. Alkhatami AM and Aldekhayel S. Assessment of the quality of life of moderate and severe burn patients in Saudi Arabia using the Burn Specific Health Scale-Brief. *Burn Open* 2024; 8: 241–4. DOI: 10.1016/j.burnso.2024.06.007
10. Jain A, Rathore S, Jain R, Gupta I, Choudhary G. Assessment of the depression and the quality of life in burn patients seeking reconstruction

- surgery. *Indian J Burn* 2015; 23: 37. DOI: 10.4103/0971-653x.171647
11. Spronk I, Legemate CM, Dokter J, van Loey NEE, van Baar ME, Polinder S. Predictors of health-related quality of life after burn injuries: A systematic review. *Crit Care* 2018; 22: 1–13.
 12. Wasiak J, Paul E, Lee SJ. Patterns of recovery over 12 months following a burn injury in Australia. *Injury* 2014; 45: 1459–64. DOI: 10.1016/j.injury.2014.02.018
 13. Orwelius L, Willebrand M, Gerdin B, Ekselius L, Fredrikson M, Sjöberg F. Long term health-related quality of life after burns is strongly dependent on pre-existing disease and psychosocial issues and less due to the burn itself. *Burns* 2013; 39: 229–35. DOI: 10.1016/j.burns.2012.11.014
 14. Bourgi J, Sleiman Z, Fazaa E *et al*. Predictors of generic and burn-specific quality of life among adult burn patients admitted to a Lebanese burn care center: a cross-sectional single-center study. *Int'l J Burns Trauma* 2020; 10: 81–9.
 15. Elsherbiny OEE, Salem MA, El-Sabbagh AH, Elhadidy MR, Eldeen SMA. Quality of life of adult patients with severe burns. *Burns* 2011; 37: 776–89. DOI: 10.1016/j.burns.2010.12.017
 16. Spronk I, Legemate C, Oen I, van Loey N, Polinder S, van Baar M. Health related quality of life in adults after burn injuries: a systematic review. *PLoS One* 2018; 13: 1–21. DOI: 10.1371/journal.pone.0197507
 17. Druery M, Brown TLH, Muller M. Long term functional outcomes and quality of life following severe burn injury. *Burns* 2005; 31: 692–5. DOI: 10.1016/j.burns.2005.03.001
 18. Öster C, Willebrand M, Ekselius L. Burn-specific health 2 years to 7 years after burn injury. *J Trauma Acute Care Surg* 2013; 74: 1119–24. DOI: 10.1097/TA.0b013e318283cca0