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Bio-Psychosocial Needs for Patients with Second Degree Burns: Suggested Rehabilitation Program and Follow up Care

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Abstract: Burn injuries are considered, worldwide, one of the leading causes of injury, morbidity and mortality. Second-degree burns may affect patients: physically, socially and psychologically. **The aim** of the study is to identify the physical, social, and psychological needs of patients with second degree burns to suggest a habilitation program and follow up care that will improve quality of life after acute stage recovery. To achieve the aim descriptive research was undertaken. The study was conducted at the outpatient clinic of a burn unit, affiliated to a University hospital, in Cairo, Egypt. **A convenience sample** of 154 patients with second degree burns from both genders and aged 18 years old or above were the subjects of the study. Five tools were adopted for data collection: 1) An interview sheet, 2) Brief burn specific health scale (BSHS-B), 3) Self-esteem scale, 4) Body image and appearance scale, and 5) Social needs assessment. The **results** revealed that patients with second degree burns need physical, social, and psychological support to pass through the life-threatening experience. There is a highly statistically significant relation among bio-psychosocial needs for patients with second degree burn. Second degree burns affect patients' physical, psychological, and social well-being and preparation is needed to achieve a healthy recovery. The study recommends the implementation of a health awareness program to overcome the incidence of problems due to burns that might have a serious impact on the quality of life. A targeted rehabilitation program will enhance physical, psychological, and social adaptation as well as a healthy re-integration to the society.

Key words: Bio-Psychosocial needs- Second-degree burn, rehabilitation, follows up care

INTRODUCTION

Burns are a global health problem mostly occurring in low- and middle-income countries with almost two thirds in the African continent. Although more than 90% of all burns are preventable, burns remain common and are a major public health problem [1].

American Burns Association (ABA) (2011) reported that more than 500,000 persons suffer annually from burns, in the United States, resulting in approximately 3,500 deaths. Burn injuries account for about 45,000 admissions to acute-care hospitals every year [2]. CDC (2012) stated that, the economic cost of treatment and recovery from burn injuries rise to billions of dollars per year, as well as the cost of days lost from work and the cost of physical and vocational rehabilitation [3]&[4].

Burn injuries are considered one of the most serious and stressful injuries affecting all age groups. A burn is an injury to body tissues caused by direct contact or exposure to a thermal source, produced by chemicals, electrical current, radiation and friction [5]. Burns represent a particularly stressful experience not only to patients but also to their families. Moreover, extensive burns affect seriously the patients' physical, psychological, social, and economic well-being[6].

Second-degree burns involve the entire epidermis and varying portion of the dermis. They are painful and are typically associated with blister formation. Healing time

depends on the depth of the dermal injury and ranges from 2 to 3 weeks[7]. Due to skin and organ damage, burns might lead to open wounds, disability, death, major economic consequences. Severe emotional and psychological complications are encountered due to body image distortion lack of self-esteem, depression, anxiety and vulnerability. In addition, patients have social needs and should be given support from significant others and community members. Social support is among the most evident and adjustable predictor of maladjustment after burns. Researchers found that there is a strong relation between adequate social support and improvement of physical and social wellbeing [8]. In addition to acute primary treatment, patients require long term rehabilitation, reconstruction and anti-scar therapy.

Burn rehabilitation is comprehensive, complex, and requires a multidisciplinary approach to optimize the patient's physical and psychological recovery related to injury. It is a prolonged process that may continue for several years until the patient receives maximal benefit from rehabilitation care, including reconstructive surgery. The aim of rehabilitation is to facilitate the patient's return to a life with the least possible physical and psychological stress. Rehabilitation includes activities to maintain mobility and muscle mass so that the patients recover the ability for autonomy and self-care in the best possible ways, so that the patient can return to previous daily activities and work and adapt to social and cosmetic changes. The important components of the rehabilitation process after burn injuries

are pain management, and adequate psychological, and social support [9] & [10].

The rehabilitation process may be performed in outpatient clinics, during follow-up, post-discharge, and may take place over a few years to improve the outcome of burn injuries; both in terms of everyday functioning and the quality of life, making rehabilitation therefore recommended [11]. The frequency of follow-up visits is individualized. The initial outpatient visit for a patient with burn injuries is usually scheduled within 2 to 3 days after hospital discharge. Follow up care will vary, and frequency will be based on patients' needs.

Nurses play a vital role in facilitating the involvement of family and friends in the recovery and rehabilitation of burn survivors. Visits by recovered burn patients will allow patients to discuss their concerns [2]. Nurses in burn units, have an important role in dealing with patients not only during the acute phase, but also in the rehabilitation phase. Patients need physical, psychological, and social support for weeks or even months after their exposure. The core of nursing interventions can help patients return to the highest possible level of independence and quality of life [12]. Responsibilities of nurses are to support the patient and family members and instruct them to offer support during adaptation of patients to daily life. Referrals for social services or psychological counseling should be made as appropriate [13]. In addition to nursing care, physical and occupational therapy are all important elements to help the patient maintain maximum mobility, prevent contractures, improve self-sufficiency by using assistive devices, and, at a later stage, use pressure bandages to facilitate mobilization and reduce the incidence of severe scarring [10].

Significance of the study:

Burns are a major cause of injury worldwide. WHO estimates that more than 300,000 people die annually from fire-related burns worldwide. Over one million burns occur in the US each year. Approximately 5000 of these injuries are fatal; making burns the fourth leading cause of death from unintentional injuries [14]. The prevalence of burns is significantly higher in developing countries. In India, most burns occur in the domestic environment. The mortality is high and the social, psychological (disfigurement) and physical trauma that affect survivors greatly diminish the quality of life [15]. In the Eastern Mediterranean Region (EMR) the incidence is 187 per 100,000 per year compared to a lowest incidence in the Americas, which is 19 per 100,000 per year and a highest incidence in South East Asia, which is 243 per 100,000 per year. According to WHO 29,000 deaths occurred in the EMR with a mortality rate of 5.6 deaths per 100,000 [16].

Burns in Egypt are considered a major public health problem that is associated with high mortality and morbidity [17]. The Center of statistics, reported that, the total number of burn patients in outpatient clinics in 2017 were about 3600; of which 60% are second-degree burns [18].

Aim of the study:

The aim of the study is to identify the physical, social, and psychological needs of patients with second-degree burns

and to suggest a rehabilitation program for the follow up care of these patients.

MATERIAL & METHODS

Research design:

A descriptive research design was used to conduct this study.

Research questions:

1. What are the physical, psychological, and social needs for patients with second degree burns?
2. What are suggested rehabilitation program and follow up care?

Setting:

The study was conducted in the outpatient clinic of the burn unit of a University Hospital, Egypt. This clinic provides services to all burn patients care of first, and second-degree burns, wound dressing, health teaching according to the degree of burns, self-care after patients discharge and follow up care. This outpatient clinic works 3 days a week from 8 am to 12.00 noon.

Subject:

A convenience sample of adult patients with second degree burns was selected. The sample size was designed to be 154 patients with 2nd degree burns based on comparing 2 means with a power of 80%. The subjects were selected with the following inclusion criteria: adult patients (≥ 18 years), of both genders, with different education levels, second-degree burns, conscious, able to cooperate and communicate. Any other types of burns were excluded from the study.

Tools for data collection:

To collect data from the study subject, the following tools were either designed by the researchers, adapted or modified from literature review: (1) The interview tool designed by the researchers (2) the brief burn specific health scale (BSHS-B), (3) a standardized self-esteem scale (4) a body image scale and (5) a standardized social needs assessment tool modified by the researchers were utilized to achieve the aim of the study.

2.5.1. The interview sheet was designed in English after reviewing the related current national and international literature. The items were adopted from *Craven et al. (2013) [19]*; *Jensen (2011) [20]*. The following data were included:

- A. The socio demographic characteristics such as, age, gender, marital status, education, residence, job, and income.
- B. The clinical data sheet: to assess causes, site, place, and extent of burn.

2.5.2. Brief burn specific health scale (BSHS-B):

It was developed by *Lewis, et al., (2014) [21]* and *Finlay, et al., (2014) [22]* and modified by the researchers to assess physical needs of patients with second degree burns. It includes 19 items divided into 4 main sub-groups related to: difficulties encountered (7 items), burn skin care (6 items), nutrition (2 items), activities of daily living and exercises (4 items).

Scoring system:

The patients' responses were marked on a five-Likert scale: strongly disagree, disagree, sometimes, agree, and strongly agree.

2.5.3. Self - esteem scale used to assess psychological needs of patients with second degree burn:

This tool is a standardized tool developed by *Connell, et al. (2013)[23]* and used to measure self-esteem among patients with second degree burns by measuring positive and negative feelings about self. It includes 12 items. The patients' responses were recorded on a five-Likert scale.

Scoring system:

- 5=strongly agree
- 4=Agree
- 3= Sometimes
- 2=Disagree
- 1=strongly disagree

2.5.4. Body image and appearance scale to assess psychological problems of patients with second degree burn:

This tool is a standardized tool developed by *Smith & Allorto (2016)[24]*. It includes 14 items used to assess body image and change in appearance among patients with second degree burns.

Scoring system:

These scores were converted into a percent score:

- 5=strongly agree
- 4=Agree
- 3= Sometime
- 2=Disagree
- 1=strongly disagree

2.5.5.Social needs assessment sheet: It is a standardized tool adopted from *Lewis, et al., (2014) [21] and Hinkle & Cheever, (2014)[7]* and modified by the researchers. It consists of 3 items: social contact, family, support, and sexual activity.

Scoring system:

Each item scores from 1-5. The score 1= strongly dissatisfied, 2=dissatisfied, 3= neutral, 4= satisfied and 5= strongly satisfied. Scores were then converted into a percent score.

Tools Validity and Reliability:

Questionnaires were reviewed by a panel of 3 expert nursing professors to evaluate face and content validity. The experts reviewed the tools for their content, clarity, simplicity, relevance, comprehensiveness, appropriateness, and applicability. Minor modifications were done, and the final forms of the tools were developed.

The reliability of the data collecting tools was done using alpha Cronbach coefficient for internal consistency. The results were 0.748 for physical needs, 0.734 for self-esteem needs, 0.874 for body image, and finally 0.858 for social needs.

Pilot Study:

A pilot study was carried out on 15 randomly selected patients to test clarity, feasibility, objectivity and internal consistency of the tools, and estimate the time needed to

complete each tool. Needed modifications were made in the data collection tools. Subjects included in the pilot study were excluded from the study sample.

Ethical Considerations:

An official written permission was obtained from the Medical and Nursing Director of the burn unit before conducting the study. Participants in the current study were volunteers. Oral consents were obtained from patients who met the inclusion criteria. Anonymity and confidentiality of data were ensured. Participants had the right to withdraw from the study at any time without giving any reasons.

Procedure:

The study was carried out in two phases: *preparatory phase and implementation phase*. The preparatory phase, dealt with administrative arrangements needed to carry out the study, organizing data collection tools, and selection of the setting. Once official permissions were obtained, the implementation phase followed. The aim and purpose of the study was explained to the study subjects prior to data collection. The process of data collection was carried out from March 2017 to July 2017. The outpatient clinic was visited by the researchers three days a week for 5 months from 09:00 am to 11:00 am meeting about 2-3 patients each time. Every meeting required from 30-45 minutes to collect data from every patient. An interview was conducted with each patient to facilitate understanding and clarification. All data collection sheets were filled by the researchers.

Data analysis:

The collected data was analyzed using (SPSS) version 24. Quantitative data was presented as a number, percent, mean, standard deviation (SD) and Spearman correlation (r). Probability level was set at $P \leq 0.05$ for all tests.

RESULTS:

Table (1): Socio-demographic characteristics of the study group (N=154):

Items	Number	%
Age		
18-<30	54	35.1
30-<50	58	37.7
≥50	42	27.2
Mean ± SD	35.8 ±10.44	
Gender		
Male	57	37.0
Female	97	63.0
Marital status		
Single	72	46.8
Married	44	28.5
Divorced	32	20.8
Widowed	6	3.9
Educational level		
Illiterate	34	22.2
Read and write	19	12.3
Intermediate	77	50.0
Secondary	13	8.4
University	11	7.1
Residence		
Urban	79	51.3
Rural	75	48.7
Working		
No	85	55.2
Yes	69	44.8
Income		
adequate	88	57.1
low	66	42.9

The mean age of patients is 35.8 ± 10.44 , 63 % females, 46.8% single and 50% with intermediate education.

Almost 51.3% came from urban areas, 55.2% had no work and 57.1% had an adequate income. (Table 1)

Table (2): Distribution of clinical data as reported by the study group (N=154):

Items	Number	%
Causes of burn:		
○ Fire or flame	80	51.9
○ Liquid or boiling water	37	24.0
○ Electrical	36	23.5
○ Chemical	1	0.6
Site of burn:		
○ Face and other body parts	60	39.0
○ Body parts without face	94	61.0
Burn incident		
○ In house	65	42.2
○ Out of house	89	57.8
Extent of burn		
○ Less than 10%	40	26.0
○ From 10 -25%	114	74.0

About 51.9 % of burns were due to direct fire,(61% reporting a burn that affected the body only. More than half

(57.8%) were exposed to burn outside their house. The majority (74%) of patients reported that, the extent of the burn covered 10-25% of the body. (Table 2)

Table (3): Distribution of the study group in the burn specific health scale (N=154):

Item	Agree (%)	Sometime (%)	Disagree (%)
(A) How much difficulty do you have?			
- Dressing by yourself	70	22	8
-Getting in and out of a chair	75	15	10
-Signing your name	63	22	15
-Eating without support	69	17	14
-Unlocking a door	69	17	14
- Working in your old job performing your old duties	73	19	8
-Resume previous interests and activities gradually	76	16	8
(B) Skin care			
-Avoid further trauma to burned skin	67	23	10
-Leave blisters that may form intact	75	21	4
-Don't get out and do things in hot weather.	66	30	3
-Lubricate healed burned skin with mild lotion, avoid scratching	60	32	8
-Avoid tight clothing over burned areas	58	32	10
-Taking care of wound dressing and observe signs of infection including redness, swelling, drainage, or foul odor	54	34	12
(C) Nutrition			
-Eat a healthy, nutritious diet	64	32	4
-Drink adequate volume of fluids	42	40	18
(D) Activities of daily living and exercise			
-Perform as much of own care as possible	69	27	4
-Adhere to the exercise regimen	69	26	5
-When rest, swollen limbs elevated	75	21	4
-Take analgesic medication as prescribed for relieving pain	66	30	3

Most patients (75%) had difficulty in getting in and out of a chair or resuming gradually previous interests and activities. About two third (66%), did not get out and avoided doing things in hot weather to avoid further skin trauma. In addition, about two-third (64%) of studied patients ate a

healthy, nutritious diet, and took analgesic medication as prescribed for pain relief. Finally, more than half of the studied sample (69%) performed as much of their own care as possible and followed the exercise regimen. (Table 3)

Table (4): Distribution of the study group as regarding their self-esteem (N=154):

Statement	Agree (%)	Sometime (%)	Disagree (%)
I feel that I have a number of good qualities	50	35	15
I think that I am a failure	38	42	20
I am able to do Things as well as most other people.	46	34	20
On the whole, I am satisfied with myself	60	27	13
I wish I could have more respect for myself	48	39	13
I certainly feel useless at times	39	34	27
At times I think I am not good at all.	30	42	28
I feel that I am inadequate or inferior when I compare myself with other persons	30	30	40
I feel that I can't handle any situations	29	40	31
I feel that I cannot act	32	38	30
I feel that I don't have goals or dreams to accomplish.	26	39	35
I feel I don't have much to be proud of	30	42	28

About two third (60%) of the studied patients were satisfied with themselves. Half (50%) of the patients felt that they had good qualities, and less than half (46%) felt that they

were able to do things as most people do. While less than half, (42%), thought that they were condemned, not good at all, and didn't have much to be proud of. (Table 4)

Table (5): Distribution of study group as regarding concerns about body image and appearance (N=154):

Statement	Agree (%)	Sometime (%)	Disagree (%)
I feel the lack of stature and lack of respect among my relatives.	30	44	26
I feel shame and hypersensitivity constantly because of my injury.	45	40	15
I wish to change my formality (shape)	58	29	13
I am disturbed by the lack of acceptance of the opposite sex.	33	25	42
I don't think people would want to touch me.	30	25	45
Changes in my appearance have interfered with my relationships.	26	33	41
I feel that my burn made me unattractive to others.	45	31	24
I cannot bear to look in the mirror	37	37	26
I bother me the sense of fear the children have when seeing me	27	22	51
I feel upset from others sympathy.	25	40	35
I insisto avoid contact with other.	22	33	45
Changes in dealing of persons affected me after my injury.	21	33	46
I prefer to spend my time away from others.	29	28	43
I feel jealous when others are leading their normal life and I cannot.	36	38	26

The body image analysis revealed that more than half (58%) of the respondents wished to change their shape and stiffness. Frequent feeling of shame and hypersensitivity was reported by (45%) as they felt unattractive to others

because of their injury and burn. Also, less than half (44%) felt lack of concern and respect among their relatives, while 40% felt upset from others' feeling of sympathy (Table 5).

Table (6): Distribution of study group concerns about their social needs (N=154):

Statement	Satisfied (%)	Partially satisfied (%)	Dissatisfied (%)
Social contact Satisfied with the support they get from friends	74	18	8
Family support: Satisfied with their personal relationship	71	15	14
Sexual activity Satisfied with their sexual life	65	20	15

The social needs analysis revealed that most patients (74%) were satisfied with the support they got from friends as well as with their personal relationships (71%). About two thirds

Table (7): Total mean scores of various bio-psychosocial needs and Correlation between physical and psychosocial needs among studied patients with second degree burn (N=154):

Item	Test	Physical Needs	Psychological Needs		Social needs
			Self- esteem	Body image	
	Mean	69.07	42.68	33.32	8.95
	Sd ±	14.21	12.31	11.95	3.18
Physical needs	R		.583	.713	.666
	p value		.000**	.000**	.000**

** highly significant at $p < 0.001$

The highest mean was observed among Physical needs ($X=69.07 \pm 14.21$) followed by self-esteem ($X = 42.68 \pm 12.31$) then body image ($X= 33.32 \pm 11.95$) and finally the social needs which were not reported as being of high impact. Shows that there is a strong correlation between psychosocial needs (body image, self – esteem and social needs) and physical needs among studied patients with second degree burn $p < 0.001$.

DISCUSSION

Burns are an important problem specifically in developing countries. Based on the available information regarding the incidence of burns and burn related deaths, this should be considered as a significant problem in Egypt **Afify et al., (2018)[17]**. Burns are one of the leading causes of morbidity and mortality among Egyptians as many cities lack well-equipped and prepared burn centers **Taha et al., (2018)[25]**.

The current study aimed at identifying the physical, social, and psychological needs of patients with second-degree burns and to suggest a rehabilitation program for the follow up care for these patients. Discussion of the findings in the current study covered the following main areas: demographic characteristics of the studied patients', patients' physical, psychological, social, needs, correlation among bio-psychosocial needs for patients with second degree burn, and the suggested rehabilitation program and follow up care.

As regarding the demographic characteristics of the studied patients, the findings of the current study revealed that, the study referred to a group of second degree burn patients from both genders with a mean age of 35.8 ± 10.44 . This finding is in disagreement with **Edlich et al., (2008)[26]** who reported that the highest incidence of serious second degree burn injury occurs in adults aged 20-30 years.

Two third of the studied patients were females. This finding is in agreement with **Waqas et al., (2018)[27]** study of perceived social support among patients with burn injuries who reported that more than half of the studied patients were females. From the researchers' point of view the interpretation of the previous findings may be because women are more involved with house work activities and are cooking to prepare food for their families which might lead to a higher exposure to fire and burn. As well, the actual study findings agree with **Edelman (2007)[14]** study of social and economic factors associated with the risk of burn injuries, in the UK. She stated that, more women had burns at home as compared to men.

In relation to marital status less than half of the study subjects are single and about two thirds had different levels of education these findings agree with **El daghar, (2018)[28]** study of assessment of physical and psychological problems among patients with second degree burns who stated that, two third of her studied patients were educated and the majority were in the intermediate level of education. Concerning residence and working, the findings of this study reported that, less than half of the studied patients were working and the same percentage lived in urban areas. The findings are in disagreement with **Abd Elalemet al., (2018)[29]** study of the effect of self-care nursing intervention model on self-esteem and quality of life among burn patients, in Egypt, who reported that more than half of their sample lived in rural areas.

About the causes of burn, the findings of the current study clarify that, slightly more than 50% of the studied patients had burns as a result of a fire or flame. The previous finding is in agreement with **Taha et al., (2018)[25]** who, in their study of pattern of Burns in a Population studied at Cairo University Hospitals, over a year, reported that about half of the sample, had burns due to flames as a result of the explosion of gas cylinders, still used in poor dwellings in Egypt. In relation to the site of burn, the current study showed that more than half of the studied patients' had burns in various parts of the body such as chest, abdomen, thigh, upper arm rather than the face. The percentage of area burned was observed to be between 10-25%. The previous findings are in agreement with **Abd Elalem et al., (2018)[29]** who stated that more than half of the studied patients had burns in different parts of the body rather than the face; also more than half of the patients had burns covering 10-25% of the body surface.

Burn specific health scale (BSHS-B) reported the physical needs of patients with second degree burn. The finding of this study show that, the majority of studied patients reported that they were unable to dress by themselves, to get in and out of chair, to return to their old job, to perform their old duties, and to resume previous interests and activities gradually. From the investigators point of view this may be attributed to immobilization of the affected part because of the burn and contraction and shortening of tendons and muscle weakness that prevents patients from performing activities of daily living, dressing or caring for themselves. This may emphasize the importance of starting range of motion exercise (ROM) as early as possible to decrease the complications and assist patients to cope with the recovery. Patients need occupational training programs to adapt to their new condition, prompt recovery, rehabilitation and facilitate independency.

Psychological assessment is a must to formulate a management plan for long-term management of post-traumatic stress disorder **Taha et al., (2018) [25]**. Self-esteem, body image & appearance are important to maintain healthy psychological needs.

In relation to self-esteem the findings of this study reveal that, about half of the studied patients were satisfied with self-esteem in only three items: "I am satisfied with myself; I feel that I have good qualities, and I am able to do things other people do". In all items of the self-esteem scale the patients were dissatisfied. The previous findings may indicate psychological trauma, due to scars and change in body image, leads to self-dissatisfaction and underestimation of self and a feeling of shame. On the same line **Andrews et al., (2012)[30]** reported that the psychological difficulties encountered by patients after a burn injury may include post-traumatic stress including anxiety, nightmares, flashbacks, avoidance, emotional numbing, as well as mental health difficulties such as depression, functional problems of mobility and sometimes loss of interest in life. The previous finding is in agreement with **Faisalet al., (2015)[31]** in their study of self-esteem in male and female patients with facial burn injuries, in Pakistan. They stated that, social and moral support is an important factor to generate positivity in improving self-esteem of burn patients. Family, friends and relatives need to be adequately guided to help in reducing the level of anxiety and depression related to low-self-esteem. This is especially imperative for women as they are mostly attached to their household requiring more attention and strength from their families.

Concerning body image and appearance, the finding of current study mentioned that, slightly half of the studied subject mentioned a feeling of shame and hypersensitivity related to the injuries. They felt relatives show lack of respect because of their injuries. From the researchers' point of view, the interpretation of the previous findings is because the injuries affect skin and causes deformity. The patients felt that the change in body image and appearance diminished their self-confidence and resulted in altering their body image. Patients are in high need of spiritual support from family, care givers, and members of the community. The findings of this study put into evidence that more than half of the studied subject wished to change their shape, stiffness, and scar. The new distorted appearance raises feelings of fear, looks of pity from others and is scaring children. It is evident that socially acceptable limits may be stigmatized, and the patients become isolated eventually developing psychological problems because of this social stigma. The previous findings are in line with **Masonet al.(2012)[32]** who found that their patients wished to change their shape and appearance as it causes more distress than injury of any other part of the body as it is considered as a barrier to social and cultural socialization.

Most studied patients reported being satisfied with social support regarding social contact with friends, family support, and sexual activity. From the researchers' point of view, the interpretation of the previous findings maybe due to the social support which is an important element motivating patients to go through critical time in life. In

addition, the feeling of acceptance from the family encourages and support patients to overcome the negative feeling and facilitate recovery and well-being. This may motivate patients to recover from the stressful and hard time they went through. The previous findings are in accordance with **Waqas et al., (2018)[27]** who mentioned that social support has been found to play a vital role in the physical and psychological wellbeing of individuals in both health and illness settings.

Half of the patients reported that their physical needs were high, while more than one third of studied patients had high self-esteem needs. The rationale for the previous finding might be due to the negative effect of burn on the muscle tone preventing patients from performing ADL such as dressing, eating, grooming. Also, the change of appearance due to the scar affects negatively patient's self-esteem. The previous finding is in agreement with **Jaschke & Moila (2012)[33]**; who reported that patients who are aware of the physical and psychological impact of their injuries, typically have larger burns and more severe pain and express more guilt about the precipitating event. Patients may also their grieve former life such as job, mobility, physical ability, appearance.

The current study revealed that there is a highly statistically significant relation between physical, psychological, and social needs of patients with second degree burn $p < 0.001$.

Patients with second degree burn should be transported as quickly as possible to a suitable hospital with facilities for rapid management and prevention of complications.

Finally based on the results of current study, the researchers identified that rehabilitation program and follow up care.

Nursing assessment should be provided throughout inpatient care and support by social workers, clinical psychology services through inpatients admission and following discharge, these services provide ongoing support to burn patients to assist them to pass the very critical period in their life and develop coping mechanisms to improve the quality of life. Nurses have a key role in helping the burn patients to adapt to their new body image by using self-care model, counseling and brochures to facilitate knowledge and guidance (**Langeschmid, et al., 2014)[34]**.

Continuous training program of a holistic approaches (health education, physical, psychosocial support for the patients with second degree burn. In addition help patient to be independent according to level of burn injuries, participate in activity of daily living, range of motion. Also ongoing burn rehabilitation program for physical, occupational and psychological therapy are needed by all patients to reduce the feelings of hopelessness and enhance their ability to return to normal activity. Social educational program for family and significant others to facilitate an increased understanding of the illness as well as to suggest strategies that may be useful in dealing with difficult behavior (**Hamilton Health Services, 2013 [35] and Hashemi, et al., 2014)[36]**.

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CONCLUSION

Second degree burns affect patients' physical, psychological, and social well-being and preparation is needed to achieve a healthy recovery. The majority of studied patient strongly needed physical and psychological support but the majority was satisfied with social needs

RECOMMENDATIONS

- Health awareness program for people at risk in the community should be given to overcome the high incidence of burn injuries.
- Counseling programs should be taught to burn patients and their families regarding care of burns, causes of burns, and treatment.
- Implement rehabilitation programs and follow up care for second degree burn patients to facilitate physical, psychological, and social support.
- Apply a multidisciplinary approach including physiotherapist, psychologist, surgeon, and nurses for the success of any burn comprehensive management and rehabilitation activities.

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