

# The Effect of Pre-Discharge Multimedia Self-Care Education on Burn Specific Health among Patients with Burn

Shimaa Mahamed Abdou Rizk<sup>1\*</sup>, Bahia Galal Abd Elrazik Hassan<sup>2</sup>

<sup>1</sup>Lecturer of Medical-Surgical Nursing, Faculty of Nursing, Mansoura University, Egypt

<sup>2</sup>Lecturer of Medical-Surgical Nursing, Faculty of Nursing, Port Said University, Egypt

\*Corresponding author: [bahia\\_galal@yahoo.com](mailto:bahia_galal@yahoo.com)

Received September 22, 2018; Revised October 23, 2018; Accepted October 28, 2018

**Abstract** Background: Major Burns have long lasting impact on physical, psychological and social wellbeing. The aim of the current study was to evaluate the effect of pre-discharge multimedia self-care education on burn specific health among patients with burn. A quasi experimental research design was utilized. Setting: The study was conducted at Burn Center, Mansoura University Hospitals, Egypt. A convenient sample consisting of 100 adult patients with burn; 50 patients as experimental group and 50 as control group. Two tools were used in data collection; a structured interviewing questionnaire, and Brief Burn Specific Health Scale (BSHS-B). Results revealed positive outcome on different areas of the Burn Specific Health scores of patients in the experimental group after implementation of the multimedia self-care education. Conclusion: The multimedia self-care education had positive effect on improving the burn specific health scores of the patients in the experimental group. Recommendation; Continuous educational programs for patient with burn in order to improve their health scores, replication and expanded studies are also needed.

**Keywords:** burn specific health, multimedia self-care education, pre-discharge

**Cite This Article:** Shimaa Mahamed Abdou Rizk, and Bahia Galal Abd Elrazik Hassan, "The Effect of Pre-Discharge Multimedia Self-Care Education on Burn Specific Health among Patients with Burn." *American Journal of Nursing Research*, vol. 6, no. 6 (2018): 608-615. doi: 10.12691/ajnr-6-6-31.

## 1. Introduction

The skin is the largest and primary protective organ in the body that covers the body's entire external surface and serves as a first-order physical barrier against the external environment. In addition, the skin plays a role in immunologic surveillance, sensory perception, control of insensible fluid loss, and homeostasis in general. Burn has physical negative impact on the skin and affect many of skin functions including protection against ultraviolet (UV) light, temperature regulation, trauma, pathogens, microorganisms, and toxins, among others [1].

Burn is the fourth leading cause of injuries after motor vehicle accidents, falls, and violence. Prevalence of burns are a global public health problem, accounting for an estimated 180 000 deaths annually. In 2015 fire and heat resulted in 67 million injuries worldwide, this resulted in about 2.9 million hospitalizations and 238,000 dying [2]. About 90% of burns occur in the developing world. This has been attributed partly to overcrowding and an unsafe cooking situation [3].

In Egypt; according to the statistical reports, 100,000 people get burned yearly, and only a few manage to afford

the care needed to survive. According to the Ahl Masr Foundation, the numbers are harrowing; the mortality rate of burn victims is as high as 37%, compared to the average of 5% in other countries in the region. Moreover, the majority who do survive find it hard to carry on with their daily activities due to their physical disfigurement and physiological trauma [4].

Heat is the most common type of burn which may be caused by hot liquids, solids, or fire. Other causes include; cold, electricity, chemicals, friction, or radiation. Incidence of burn are similar for males and females but the underlying causes often differ among women in some areas, risk is related to use of open cooking fires or unsafe cook stoves. Among men, risk is related to the work environments, alcoholism, or smoking. Burns can also occur as a result of self-harm or violence [5].

Major Burns have long lasting impact on patients' physical, psychological and social wellbeing with persisting problems related to scarring, contractures, weakness, thermoregulation, itching, pain, sleep, and body image. In addition to the direct consequences of the burn, the intensive care treatment may also cause cognitive, affective or behavioral challenges. Consistently, burn injured individuals have reported limitations in health-related quality of life compared to general population norms [6]. The efficacy of therapy

of burned individuals is reflected in increased survivors, greater sequelae rates and reconstructive surgery [7].

Self-care education will educate the patients, give enough knowledge and skills that helps for decisions making and solving the self-related problems. Promotion of self-care helps the patients to have more control over their daily lives and be more able to deal with the social performance, thereby improving their physical, psychological and social well-being. Exercise training and empowering the patients through self-care strategies may improve the self-management and reduces pain [8].

Discharge from hospital is a serious and complicated transition in the life stages of burn patients. Stress and anxiety at this stage will increase the patients' need to receive information, training and reassurance. This information is essential for the patients' well-being. In addition; the discharge stage does not mean the end of treatment for burn patients, rather it means continuing life without the help of hospital staff. Patients with burn need to adapt to new lifestyle changes, to learn self-care measures at home, and to return to the society [9].

The major goal of health care systems is to maximize the performance and to improve the quality of life in the daily life. In this processes, the patients' self-care strategies improve the self-management and reduces the pain and other disorders. However, the patient will acquire enough knowledge and skills to make decisions and solve the self-related problems especially after discharge [10]

## 2. Significance of Study

Burns are types of trauma has aroused the interest of many health professionals concerned about improving patients' quality of life and reducing sequelae [11]. Many physical, psychological, and social problems have been reported after patient's discharge which may affect patients' health and quality of life. The Burn Specific Health Scale-Brief (BSHS-B) is one of the most commonly used instruments to measure quality of life after burns. Using multimedia self-care programs can facilitate patient's self-care learning. Nurses as important health care givers, having a crucial role in caring, increasing knowledge, self-care, and rehabilitation in order to improve patients' health status. This study was conducted to implement a pre-discharge multimedia self-care education and evaluate its effect of on patients' burn specific health scores.

## 3. Aim of the Study

The aim of the current study was to evaluate the effect of pre-discharge multimedia self-care education on burn specific health among patients with burn.

### 3.1. Research Hypothesis

Burn specific health scores of patients in the experimental group will increase after implementation of the multimedia self-care education.

## 4. Subjects and Methods

### 4.1. Research Design

A Quasi-experimental research design was utilized in this study.

### 4.2. Research Setting

This study was conducted at Burn Center of Mansoura University Hospitals, Egypt.

### 4.3. Subjects

A convenient sample consisting of 100 adult patients with burn; the study subjects were divided into two matched groups: Experimental group (50 patients) who had the multimedia self-care education and 50 patients as a control group who had only the routine care.

**Inclusion criteria:** Adult conscious patients aged from 18 years to 60 years old from both sexes, patients who are able to cooperate, communicate and who agreed to participate in the study.

**Exclusion criteria:** Patients with arms' handicaps, mental diseases, and patients suffering from chronic diseases that may affect physical, psychological, or social wellbeing.

### 4.4. Tools for Data Collection

Two tools were used in data collection:

#### 4.4.1. Tool 1

**A structured patients interviewing questionnaire,** developed by the researchers in simple Arabic language consisting of 2 parts: Part 1: Sociodemographic data sheet: Which included 9 closed ended questions (age, sex, marital status, level of education, occupation, residence, family members, room numbers, and monthly income). Part 2: Medical History data Sheet: consisted of 5 closed ended questions; accident site, burn cause, percent of total body surface area, burn site, and burn degree.

#### 4.4.2. Tool 2

**Burn Specific Health Scale-Brief (BSHS-B) Questionnaire:** A structured self-reported questionnaire Adapted from Kildal et al. [12], and translated to Arabic language. This questionnaire was designed specifically for patients with burn consisting of 40 items covering nine well-defined domains including simple abilities (questions from 1 to 3); hand function (questions from 4 to 8), affect (questions from 9 to 15), body image (questions from 16 to 19), interpersonal relationship (questions from 20 to 23), sexuality (questions from 24 to 26), heat sensitivity (questions from 27 to 31), treatment regimen (questions from 32 to 36), and work (questions from 37 to 40). Responses were rated on a 5-point Likert scale, scored from 1 to 5, (extremely, high, medium, low, and never) respectively. Score (1) means that patient is extremely suffering, and (5) reflects high health scores. Patients were asked to select the best answer reflecting their health

status. Each question had a minimum score of (1) and maximum point of (5), total score ranged from 40 to 200, mean scores were calculated for each of the domains.

**Tool validity:** Content validity of the tools was checked by a panel of seven experts from the Medical-Surgical Nursing specialty, modifications were done based on their opinions.

**Test reliability:** Testing reliability of the proposed tools was done using Cronbach's alpha test, showed high reliability of the tools in both groups; (0.725) for the control & (0.720) for the experimental group.

#### 4.5. Operational Definitions

**Self-Care Education:** Refers to information, behaviors, and targeted measures educated and performed by individuals in order to maintain and improve their health. The goal of self-care education is to increase the patients' knowledge, vision about the disease and to emphasize their main role in disease management.

**Multimedia Education** can be defined as an integration of multiple media elements (audio, video, graphics, text, animation, etc.) into one synergetic and symbiotic whole that results in more benefits for the end user than any one of the media elements can provide individually.

#### 4.6. Pilot Study

A pilot study was carried out on 10 patients (10%) in order to test clarity and applicability of the tool. The pilot study was also used to estimate the time needed for each subject to fill in the questions. Modifications were done based on the results of the pilot study. Patients participated in the pilot study were excluded from the main study sample.

#### 4.7. Ethical Considerations

An official permission was obtained from director of Mansoura University Hospitals obtain the permission for data collection before conducting the study explaining the aim. An oral consent was taken from all patients participated in the study after explanation of purposes and nature of the study; they were given the right to withdraw at any time, or refuse to answer specific question without giving any reason. The researcher assured maintaining anonymity and confidentiality of subject's data.

#### 4.8. Field Work

The actual field work started from the beginning of January, 2018 to the end August 2018. The study comprised the following phases:

##### 4.8.1. Preparatory Phase

The preparatory Phase started from the beginning of January to end of February, 2018 (a period of 2 months). It included developing the structured tools and the program (Multimedia Self Care Education) based on the review of related literature. Represented by using booklets, pursuers, videos materials and power point presentations, it was written in a simple Arabic language and supplemented by photos and illustrations.

##### 4.8.2. Implementation Phase

The implementation phase started from the beginning of March, 2018 to end of May, 2018. The program was implemented in period of three months including pretest, program implementation, and post-test for patients in the experimental group; the program was carried out over 10 to 12 weeks. For the pre-test; the time consumed to fill the demographic, history, and Burn Specific Health Scale was from 20 to 30 minutes for experimental or control group. For post-test; the time taken was about 15-20 minutes for testing the Burn Specific Health Scale for the experimental group. The educational program was presented in 3 theoretical sessions. It was conducted through lectures and group discussions. First session; included "Overview about burn; definition, causes, risk factors, manifestations, and complications", second involved "burn degrees, characteristics of each degree, and its effect of health". Third session involved different management strategies and pain management. There was one practical session that was conducted through demonstration of wound care and physiotherapy. Each session lasted about 45 minutes and was accompanied by feedbacks. These educational sessions were done either individually or in groups (3-6) patients based on the number of patients in each room. All phases of the implementation phase took one week period of time. For Control group patients were selected with nearly same sociodemographic characteristics, same criteria of medical history as possible.

##### 4.8.3. Evaluation Phase

Immediately after implementation of the program, each patient in the experimental group was asked to evaluate the program, post-test was applied. Post-test was applied for control group after routine medical and nursing care, and after the last session of the program to ensure same consequences and same period of routine nursing care for both groups.

#### 4.9. Statistical Analysis

After data collection, they were coded and transferred into special design formats to be suitable for computer feeding. The Statistical Package for Social Science (SPSS) version 20 was used for statistical analysis and tabulation of the results. Statistical significance and associations were assessed using the arithmetic mean, standard deviation (SD), chi square (X<sup>2</sup>), and Fisher's Exact or Monte Carlo correction, Student t-test, Paired t-test, and F-test (ANOVA), and r-test (correlate) to detect the relations between the variables with significant level  $p \leq 0.05$ .

#### 4.10. Limitations of the Study

- Patients with third degree burn and patients with severe arm affection, it was difficult for them to apply the self-care skills and procedures, we motivated and supported these.
- Patients with face burn had low body images. At first; some of them were not communicating and refusing to share, but after explanation of the purposes of the study and applying the program for first group of patient, they feel the effectiveness of care and started to share, these patients were gathered in one group for support, sometimes individually.

## 5. Results

Table 1 shows that 50.0% & 60.0% of patients in the experimental and control groups were aged between 30 and 40 years old respectively, with mean age around 35. 62.0 % of the experimental group were females and were from rural areas, 68.0 % of them were married, 54.0 % had secondary school education. As regards to occupation and monthly income; 58.0 % and 78.0 % of the experimental group were not working and unsatisfied to their monthly income respectively. The mean family members in both groups were around 5 and mean room number were around 3. It was noticed that there were no significant statistical differences between experimental and control group as regard to all their sociodemographic characteristics.

Table 2 reveals that 60% & 70% of patients in the experimental and control groups were injured at home respectively; flame and hot fluids were the main causes of burn in 42.0 % and 44.0 % of them respectively. As regards to burn percent; it was noticed that 40.0 % and 42.0 % of the experimental and control groups had affected respectively with 15-25 % of total body surface area burned. 78.0& 76.0 % of them had second degree burn respectively ( $P < 0.05$ ). While there were no significant statistical differences between the study and control group as regards to their medical history.

Figure 1 shows that 85% & 38% of patients in experimental and control groups had upper limb injury respectively, 36% & 24% of them respectively had lower limb injury. While 10% & 2% only were injured in head and neck respectively.

**Table 1. Comparison between the Experimental and The Control Groups Regarding their Sociodemographic Characteristics (n = 50)**

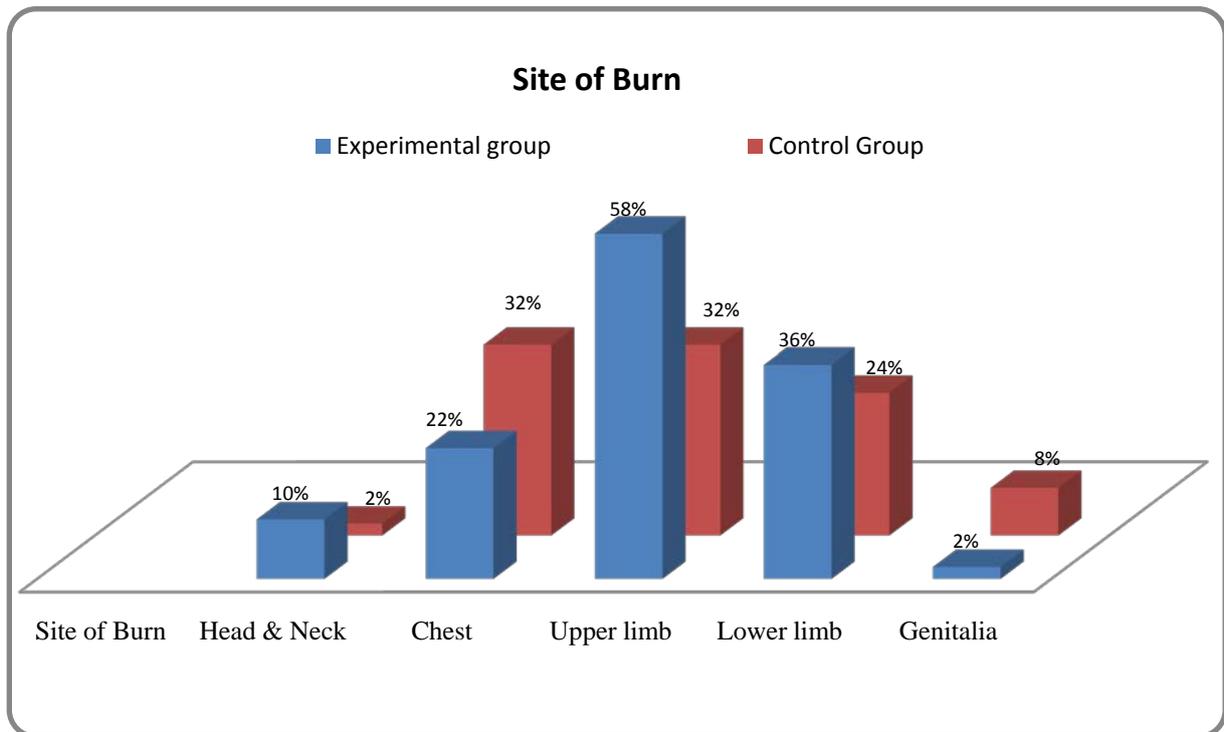
Patient's Socio- Demographic Data	Experimental Group (n = 50)		Control Group (n = 50)		Test of Significance	p-Value
	No.	%	No.	%		
Age (years)						
18-	15	30.0	12	24.0	$\chi^2=5.540$	MCp=0.138
30-	25	50.0	31	62.0		
40-	9	18.0	3	6.0		
50- 60	1	2.0	4	8.0		
Mean $\pm$ SD.	35.16 $\pm$ 8.76		35.86 $\pm$ 8.88		t=0.397	0.692
Sex						
Male	19	38.0	14	28.0	$\chi^2=1.131$	0.288
Female	31	62.0	36	72.0		
Marital Status						
Married	34	68.0	32	64.0	$\chi^2=2.666$	MCp=0.468
Divorced	8	16.0	5	10.0		
Widow	1	2.0	4	8.0		
Single	7	14.0	9	18.0		
Education						
Illiterate	10	20.0	4	8.0	$\chi^2=5.457$	0.244
Read and write	8	16.0	6	12.0		
Secondary	27	54.0	33	66.0		
University	5	10.0	7	14.0		
Occupation						
Working	21	42.0	22	44.0	$\chi^2=1.280$	MCp=0.258
Not working	29	58.0	28	56.0		
Residence						
Rural	31	62.0	27	54.0	$\chi^2=0.657$	0.418
Urban	19	38.0	23	46.0		
Family Members						
Mean $\pm$ SD.	5.26 $\pm$ 1.26		5.26 $\pm$ 5.26		t=0.00	1.000
Room Numbers						
Mean $\pm$ SD.	3.46 $\pm$ 0.91		3.34 $\pm$ 0.96		t=0.642	0.522
Monthly Income						
Satisfied	11	22.0	4	8.0	$\chi^2=3.843$	0.051
Unsatisfied	39	78.0	46	92.0		

$\chi^2$ : Chi square test, MC: Monte Carlo t: Student t-test, \*: Statistically significant at  $p \leq 0.05$ .

**Table 2. Comparison between the Experimental and The Control Groups Regarding Their Medical History (n = 50)**

Patient's Medical History	Experimental Group (n = 50)		Control Group (n = 50)		$\chi^2$	p-value
	No.	%	No.	%		
Accident Site						
Home	30	60.0	35	70.0	1.136	0.567
Work place	10	20.0	8	16.0		
Outside	10	20.0	7	14.0		
Burn Cause						
Flame	21	42.0	18	36.0	1.952	MCp= 0.586
Hot fluids	18	36.0	22	44.0		
Chemicals	5	10.0	7	14.0		
Electric	6	12.0	3	6.0		
Percent of total body surface area burned						
< 15%	9	18.0	11	22.0	5.32	0.07
15-25%	20	40.0	21	42.0		
> 25%	21	42.0	18	36.0		
Burn degree						
Second degree	39	78.0	38	76.0	3.55	0.059
Third degree	11	22.0	12	24.0		

$\chi^2$ : Chi square test, MC: Monte Carlo t: Student t-test, \*: Statistically significant at  $p \leq 0.05$ .



**Figure 1.** Comparison between the Experimental and The Control Groups according to Burn Site (n = 50)

Table 3 shows that there were highly significant statistical differences in different areas of the Burn Specific Health Scale scores between patients in the experimental group after implementation of the multimedia health education compared to the control group; representing a highly significant statistical difference between the two groups ( $P < 0.05$ ).

Table 4 reveals that there were negative correlations without significant statistical differences between total scores of Burn Specific Health Scale and medical history of the experimental group after implementation of the Program. However same relation was positive in the control group.

**Table 3. Comparison between the Experimental and Control Groups Regarding their Burn Specific Health Scale (BSHS) Scores (n = 50)**

Burn Specific Health Scale (BSHS)	Experimental group(n = 50)		Control group(n = 50)		t(p1) in Pre-test	t(p2) in Post-test
	Pre	Post	Pre	Post		
Heat sensitivity						
Total score	1.30±1.11	11.70±1.83	1.42±1.11	1.54±1.05	0.541 (0.590)	33.989* (<0.001*)
% score	6.50±5.56	58.50±9.16	7.10±5.54	7.70±5.27		
t(p3)	37.745*(<0.001*)		1.950(0.057)			
Affect						
Total score	10.48±3.52	14.78±3.11	9.26±2.86	8.64±2.98	1.904 (0.060)	10.074* (<0.001*)
% score	37.43±12.56	52.79±11.11	33.07±10.20	30.86±10.65		
t(p3)	12.574*(<0.001*)		2.804*(0.007*)			
Hand function						
Total score	10.0±8.81	13.20±7.13	8.98±8.47	8.74±8.24	0.590 (0.556)	2.895* (0.005*)
% score	50.0±44.03	66.0±35.63	44.90±42.34	43.70±41.19		
t(p3)	5.472*(<0.001*)		1.769 (0.083)			
Treatment regimen						
Total score	7.90±4.18	12.0±5.89	7.50±4.11	7.40±4.09	0.483 (0.630)	4.536* (<0.001*)
% score	39.50±20.88	60.0±29.45	37.50±20.53	37.0±20.45		
t(p3)	4.945*(<0.001*)		1.528 (0.133)			
Work						
Total score	4.0±3.70	8.56±4.28	3.62±3.69	3.62±3.69	0.514 (0.609)	6.183* (<0.001*)
% score	25.0±23.15	53.50±26.73	22.63±23.07	22.63±23.07		
t(p3)	7.824*(<0.001*)		-			
Sexuality						
Total score	1.88±1.32	2.32±1.36	1.75±1.22	1.67±1.20	0.498 (0.620)	2.546* (0.012*)
% score	15.67±10.99	19.33±11.35	14.61±10.19	13.89±9.99		
t(p3)	4.416*(<0.001*)		1.695 (0.096)			
Interpersonal Relationship						
Total score	6.16±4.22	9.76±4.29	5.54±3.41	5.56±3.38	0.808 (0.421)	5.438* (<0.001*)
% score	38.50±26.35	61.0±26.80	34.63±21.32	34.75±21.13		
t(p3)	7.584*(<0.001*)		0.330 (0.743)			
Simple Abilities						
Total score	1.52±0.97	2.0±1.32	1.31±0.82	1.27±0.81	1.182 (0.240)	3.306* (0.001*)
% score	12.67±8.12	16.67±11.04	10.89±6.87	10.61±6.77		
t(p3)	3.830*(<0.001*)		1.698 (0.096)			
Body Image						
Total score	2.90±1.22	5.40±1.94	2.78±1.20	2.86±1.21	0.497 (0.621)	7.857* (<0.001*)
% score	18.13±7.60	33.75±12.11	17.37±7.50	17.88±7.58		
t(p3)	9.768*(<0.001*)		1.071 (0.290)			
Overall (Total)						
Total score	52.94±12.46	88.36±12.66	48.28±12.39	47.18±12.26	1.875 (0.064)	16.521* (<0.001*)
% score	33.09±7.79	55.23±7.91	30.18±7.74	29.49±7.66		
t(p3)	24.265*(<0.001*)		2.636*(0.011*)			

t: Student t-test, t: Paired t-test, \*: Statistically significant at  $p \leq 0.05$ , p<sub>1</sub>: p value for comparing between the two studied groups in pre-test, p<sub>2</sub>: p value for comparing between the two studied groups in post-test, p<sub>3</sub>: p value for comparing between pre-test and post-test in each group.

**Table 4. Correlation Coefficient between Patient's Medical History and Total Scores of Burn Specific Health Scale after Implementation of the Program**

Patient's Medical History	Overall Burn Specific Health Scale (Bshs) Post Program			
	Experimental Group (N = 50)		Control Group (N = 50)	
	r-test	P. value	r-test	P. value
Cause of Burn	-0.159	0.270	0.256	0.073
Percent of Total Body Surface Area Burned	-0.014	0.471	-0.056	0.702
Site of Burn	-0.116	0.423	0.190	0.185
Burn Degree	-0.118	0.414	0.042	0.773

r = Pearson correlation.

## 6. Discussion

Burn injuries can adversely affect the quality of life of patients that can affect their physical, emotional, social and spiritual well-being. The Burn Specific Health Scale-Brief (BSHS-B) is one of the most widely used methods for determining post-burn injury quality of life.

Regarding the sociodemographic data of the study subjects; the results of the current study shows that both studied groups; experimental and control were matched concerning their sociodemographic characteristics as there was no significant difference between them. The results of the study revealed that most of patients participated in the study were in adult age, around two thirds of them were females, married, and were from rural areas. These findings goes in the same line with the results of Abd Elalem, et al [13]; a study carried out in Egypt entitled "the effect of self-care nursing intervention model on self-esteem and quality of life among burn patients" Who reported their patients were around 40 years of age, about half of them were married and came from a rural area. This similarity could be related to same settings and same environmental factors.

Concerning level of education, occupation, and monthly income; the results of the current study shows that more than one half of them had secondary school education, were not working, and more than three quarters of them were unsatisfied to their monthly income. These results also are in agreement with the results of Abd Elalem, et al [13] who found that approximately one-third of patients had secondary education, one-half were housewives, and almost two-thirds had inadequate monthly incomes.

While these findings are incompatible with the results of Stampolidis [14], a study conducted in Greece, entitled "Quality of Life in Burn Patients", the results showed that the sample consisted mostly of male people, aged about 52 years and working more frequently. These differences were mostly associated with different environmental factors in different settings.

With regard to the study subjects' medical history, the results of this study revealed that about two-thirds of patients were injured at home, flame was the main cause of burning in more than one-third of the study subjects, about one-half of them had 15-25 percent of the total body surface area burned, with second-degree burning in different body parts. These findings are the same as the results of the results of Hashemi et al. [15] who studied the effect of Orem's self-care programs on burn patient's quality of life; they stated that; more than two thirds of their patients were burned at home, thermal was the main

cause of burn. More than half of the patients had 10%-20% extent of burn.

Concerning burn site, the results of the current study conducted that the majority of patients in both experimental and control groups were injures in upper and lower limbs however face injuries were minimum. These findings are supported with the findings of a study conducted in Brazil by Echevarría-Guanilo, et al [16] assessing health-related quality of life in the first year after burn, which revealed that among etiological agents, alcohol and flammable substances appeared in about two thirds of patients, the majority of accidents occurred at home and the most affected areas of the body were upper limbs without facial injury. We found that patients with upper limb injury needed more time for self-care learning depending on the degree of burning.

While these results in contrast with Faisal et al [17] who stated that the majority of cases were industrial burned accidentally which took place at work. The findings of the current study may be due to some factors such as; the majority of the study subjects were females, housewives, injured at home, had low income, and inadequate educational level. This point of view is supported by Ciofi-Silva et al [18] who reported that burn injuries are associated with low income, poverty, and unemployment.

The main objective of the present study was to evaluate the effect of pre-discharge multimedia self-care education on burn specific health of patients with burn. The results displayed a significant improvement of BSHS scores of the experimental group after implementation of the multimedia health education with highly significant statistical differences compared to the scores of the control group. This result reflects the effectiveness of the program in improving patients' burn specific health scores. Similar results reported by Ardebili [19] who was evaluating the effect of multimedia self-care education on quality of life in burn patients, Who reported that multimedia self-care education was successful in improving the quality of life after 3-month intervention. Lotfi et al [20] also found that the pre-discharge education had a significant improvement in the quality of life of burn patients.

On the same scope; the results of our study reflected a negative correlations with non-significant statistical differences between total burn specific health scale scores of patients in the experimental group after implementation of the multimedia self-care education and different variables of patients' medical history (burn cause, percent, site, and degree). However the relation was positive with the control group. This finding was in harmony with the findings of

Lotfi et al. [20] Who indicated that life quality enhancement is associated with the percentage of total body surface area quantitative factor. From the researcher point of view, these results reflect the impact of the education on promoting and supporting therapeutic managements to decrease burn degree and the percentage of body surface area affected.

## 7. Conclusion

The results of the current study concluded that; the multimedia health education program was effective on improving burn specific health scores of the the experimental group.

## 8. Recommendations

The following recommendations are suggested Based on the results of the study:

1. Continuous educational programs for patient with burn in order to improve their health scores.
2. Replication and expanded studies are also needed.

## References

- [1] Ojeda L., Amanda M., and Oakley. (2017). Anatomy, Skin (Integument). StatPearls [Internet]. Treasure Island (FL): Available at: <https://www.ncbi.nlm.nih.gov/pubmed/28723009>.
- [2] World Health Organization. (2017). Archived from the original on 21 July 2017. Available at: <http://www.who.int/mediacentre/factsheets/fs365/en/>
- [3] GBD. (2015). Mortality and Causes of Death, Collaborators. "Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980-2015: a systematic analysis for the Global Burden of Disease Study 2015". *Lancet*. 388 (10053): 1459-1544.
- [4] Egypt Today (2016): To-Open-Egypt-s-First-Burn-Injuries available at: <https://www.egypttoday.com/Article/10/3128/Ahl-Masr-Set-To-Open-Egypt-s-First-Burn-Injuries>.
- [5] World Health Organization, (2016): "Burns Fact sheet N°365". Archived from the original on 2015-11-10. Retrieved 3 March 2016.
- [6] Elliott D, Davidson JE, Harvey MA, Bemis-Dougherty A, Hopkins RO, Iwashyna TJ, et al., (2014): Exploring the Scope of Post-Intensive Care Syndrome Therapy and Care: Engagement of Non-Critical Care Providers and Survivors in A Second Stakeholders Meeting. *Crit Care Med.*; 42 (12): 2518-26.
- [7] Hoogewerf CJ, van Baar ME, Middelkoop E, van Loey NE. (2014). Impact of Facial Burns: Relationship between Depressive Symptoms, Self-Esteem and Scar Severity. *Gen Hosp Psychiatry*. May-Jun; 36 (3): 271-6.
- [8] Grisbrook TL, Reid SL, Edgar DW. (2012). Exercise Training to Improve Health Related Quality of Life in Long Term Survivors of Major Burn Injury: A Matched Controlled Study. *Burns*; 38: 1165-73. PMID: 22538174.
- [9] Tahir SM, Memon MM, Ali SA, Rasheed S. (2011). Health Related Quality of Life After Burns; Are We Really Treating Burns? *J Ayub Med Coll Abbottabad*; 23 (2): 152-6.
- [10] Ardebili F., Manzari Z., and Bozorgnejad M. (2014). Effect of Educational Program Based on Exercise Therapy on Burned Hand Function; Educational program in burn, 3(1).
- [11] WHO. (2015). "Burns Fact sheet N°365". WHO. April 2014. Archived from the original on 2015-11-10. Retrieved 3 March 2016.
- [12] Kildal M., Andersson G., Axel R., Meyer F., Lannerstam, K, and Gerdin B. (2001). Development of a Brief Version of the Burn Specific Health Scale (BSHS-B). *The Journal of Trauma Injury, Infection, and Critical Care*; Volume 51(4).
- [13] Abd Elalem, SM., Shehata, OM., Shattla SI. (2018). The Effect of Self-Care Nursing Intervention Model on Self-Esteem and Quality of Life among Burn Patients, *Clinical Nursing Studies*. 6(2). Available at: <http://www.sciedupress.com/journal/index.php/cns/article/viewFile/12469/7966>.
- [14] Stampolidis N., Castana O., Nikiteas N., Vlasis K., Koupidis S.A., Grammatikopoulos I.A., Mantzari E., Pallantzas A., Kourakos P., and Papadopoulos O. (2012). Quality of Life in Burn Patients in Greece. *Annals of Burns and Fire Disasters*; 25 (4).
- [15] Hashemi F, Dolatabad FR, Yektatalab S, Ayaz M, Zare N, Mansouri P. (2014). Effect of Orem Self-Care Program on The Life Quality of Burn Patients. referred to Ghotb-al-Din-e-Shirazi burn center, Shiraz, Iran: a randomized controlled trial. *Int J Community Based Nurs Midwifery*; 2:40.
- [16] Echevarría-Guanilo M, Gonçalves N, Farina J, Rossi L. (2016). Assessment of life quality after burn injuries. *Esc Anna*; 20(1): 155-166.
- [17] Faisal A, Hussain N, Jawed H. (2015). Self-esteem in Male and Female Patients of Facial Burn Injuries in Karachi. *Pakistan Business Review*; 17 (3).
- [18] Ciofi-Silva CL, Rossi LA, Dantas RS, et al. (2010). The Life Impact of Burns: The Perspective from Burn Persons in Brazil during Their Rehabilitation Phase. *Disabil Rehabil.*; 32 (6): 431-437. PMID: 20113190.
- [19] Ardebili F., Ghezeljeh T., Bozorgnejad M., Zarei M., Ghorbani H., and Manafi F. (2017). Effect of Multimedia Self-Care Education on Quality of Life in Burn Patients [www.wjps.ir/Vol.6/No.3/](http://www.wjps.ir/Vol.6/No.3/) available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6409141/>.
- [20] Lotfi M, Ghahremanian A, Aghazadeh A, Jamshidi F. (2018). The Effect of Pre-Discharge Training on the Quality of Life of Burn Patients. *J Car Sci*; 7 (2): 107-12.