

Effect of Instructional Guidelines on Nurse's Performance Regarding Children Suffering from Burn

¹ Eman A.Ali, ²Hyam Refaat Tantawi, ³Fatma Mohamed, ⁴Inas Mohamed Lotfy

^{1,3}lecturer and ²Assistant Prof, of Pediatric Nursing, Faculty of Nursing/ Ain Shams University,

⁴lecturer in Administration Department, Military Medical Academy, Egypt

Abstract: This study aimed to evaluate the effect of instructional guidelines on nurses' performance regarding children suffering from burn. **Research design:** A quasi-experimental design pre and post test was used to conduct this study. **Setting:** The study was carried out at the burn center in El-Demerdash Hospital affiliated to Ain Shams University Hospitals. **Subjects:** A convenience sample of (40) nurses, worked in the previously mentioned setting. **Tools:** 1- A predesigned questionnaire (pre/post): to assess the demographic characteristics of nurses and their knowledge related to burn. 2- An observational checklist: to evaluate the nurses' performance regarding care of children suffering from burn. **Results:** The study revealed that only one quarter of the nurses had good total knowledge related to children burn pre instructional guidelines compared to three quarters of them post intervention. As well, nurses' performance was improved post instructional guidelines intervention. There was a positive correlation between total knowledge of the studied nurses and their total performance post guidelines intervention. **Conclusion:** Based on the findings of the present study instructional guidelines had a positive effect on improving the nurses' knowledge and performance regarding children suffering from burn. In addition to this study concludes that the study results support the study hypothesis. **Recommendation:** Continuous application of instructional guidelines to enhance nurses' knowledge and performance regarding children suffering from burn. **Keywords:** Instructional guidelines, burn, children with burn, nurses performance.

1. INTRODUCTION

Burn is a type of injury that is frequently seen in the emergency center setting. Burn injury is an alteration in the skin integrity resulting in tissue loss or damage due to transfer of energy from a source of heat to the human body. It initiates a sequence of physiologic events that in the most severe case leads to irreversible tissue destruction. The three types of burns that can inflict injury are thermal, chemical, and electrical (Jacobes 2015). Thermal burns are most common, that occurs from everyday events, household scalds, fire, hot temperature contact with a substance or object, and even sun exposure. Chemical burns can occur within the household or outside environment (Sachdev, 2010).

Chemical burns are either alkaline or acidic in PH, burning the mucous membranes with exposure or on contact. Electrical burns can be caused by exposure to either high or low voltage or to a lightning strike while outdoors. If the child with an electrical burn injury survives the initial shock, he will usually have more tissue damage than is generally expected (Elsevier, 2011).

Burn injury can lead to a lot of physical and psychological disturbance which required nursing skills and care of the family. Massive tissue edema after thermal injury is a well-recognized entity, although this process is responsible for the patient's large fluid needs during resuscitation and also for local problems, such as a compartment syndrome, there have been no effective treatment modalities introduced into clinical care to control the degree of edema (American Burn Association, 2014).

Categories of Bum injury are First-Degree, second-degree, and third degree however, classification by depth (superficial, superficial partial-thickness, deep partial thickness, and full thickness. Superficial (first -degree) bums are red, painful, and dry (**Robert, 2014**). These bums involved the epidermis only. Superficial partial thickness (second - degree) bums involve the entire epidermis and Superficial dermis. Full-thickness (third -degree and fourth -degree) bums involve all skin layers. They appear white, brown, or black in color (**Rossi, 2015**).

Bum injuries are considered immediately or potentially life threatening; whereas, the children with bum require special care that should be given by a knowledgeable and skillful nurse who is able to make accurate decisions to reverse, and to minimize the effect of bum injury and prevent complications as infection which may end child's life (**Adamo, 2015**). Because of children with burn are more susceptible to acquire infections more than other pediatric patients, the nurses should follow strict aseptic techniques when dealing with them, also it is very important for the nurse to be aware of early signs and symptoms of nosocomial infection (**Gupta, 2015**).

Worldwide, an estimated 6 million pediatric patients seek medical help for burns annually, but the majorities are treated in outpatient clinics. The number of (195000) death every year is caused by burn wounds, and the vast majority occur in low and middle-income countries (**WHO, 2014**). Whether inpatient treatment in a specialized bum unit is required depends principally on the severity of the bum, the concomitant trauma, and the general condition of the patient. In the European Union, transport accidents constitute (21.8%), accidental falls (19.4%), and suicide (24.7%) are the three most common "fatal injuries," with bums reported as "other Unintentional fatal injuries," together with poisoning drowning (34.1%) (**American Bum Association, 2010**).

Unfortunately, although patients with severe bums are more likely to survive, death still occurs (**Karter, 2010**). Bums are caused by exposure to fire, hot liquid, chemicals or electrical current. Flame bums are the most serious where smoke inhalation, and not the burn, is the main cause of the death. Scald burns are the most common (85% of cases) especially in children below the age of 4 years. They are usually caused by hot liquids (as hot tea), hot bath water and hot cooking oil. Serious effects of scald bums are mainly related to the extent and depth of burned area (**El-Hemeda, 2014**).

Nurses spend more time with burned children than do any other health care providers, and burned children outcomes are affected by nursing care quality. Thus, improvements in patient safety can be achieved by improving nurse performance (**Patrick, 2016**). Assessments is the first step in management for children suffering from bum injuries by assessing site, depth of bum and calculate percentage of total body surface area affected then immediate treatment for bum victims. "Stop, Drop, and Roll" to smother flames. Remove all burned clothing. If clothing adheres to the skin, cut or tear around burned area. Remove all jewelry, belts, tight clothing, from over the burned areas and from around the victim's neck. This is very important; burned areas swell immediately (**Ghosh, 2015**). Assessment and monitoring of airway patency and breathing should be carefully observed as patients at risk of inhalation burns can deteriorate up to 72 hours post bum injury, particularly if they have sustained bums in an enclosed space (**Konecki, 2015**).

Children who sustain bums injuries are at increased risk of circulatory compromise due to significant fluid loss and fluid shifts, these pediatric patients must be closely monitored for Signs and symptoms of hypovolemia, hypothermia and other circulatory concerns (**Karter, 2010**). Consider the need for an electro-cardiograph (ECG) and continuous cardiac monitoring if the burn is of electrical origin Burn injuries are often associated with extreme amounts of pain and discomfort due to damaged/loss of skin coupled with widespread edema, a detailed pain assessment must be completed upon arrival to hospital and then continued at regular intervals (1-4 hourly minimum) throughout the patient's admission, prior to/during procedures as well as during outpatient visits Re-evaluation of pain, post pain management is vital to ensure analgesia is adequate (**Parker, et al., 2011**).

Nursing staff should assess the child's pain prior to the procedure commencing and pre-emptive analgesia should be administered. Staff should re-evaluate the effectiveness prior to the procedure commencing and throughout the procedure. Pain Assessment should occur continuously throughout the procedure by observing the behavior and comfort level of the child as well as using an appropriate pain assessment scale. If analgesia and sedative agents prescribed are not providing effective pain management/sedation then the procedure should be paused until appropriate analgesia/ sedation is available and pain is manageable (**Luxner, 2011**). To complete a bums dressing change in a safe and time efficient manner which minimizes pediatric patient and family distress, staffing requirements must be considered. Simple analgesia: 1-2 nursing staff of which 1 is experienced in bums dressing changes. Oral sedation agents: 2-3 nursing staff of which 1 monitors the

patient, 1 is experienced in bums dressing and 1 staff member assists. Nitrous Oxide: 2-4 nursing staff of which 1 is accredited in nitrous oxide administration. 1 is experienced in bums dressing and 1-2 staff members' assists IV agents. An Anesthetists and Anesthetic technician are required; 2-3 nursing staff of which 1 is experienced in bums dressing and 1-2 nursing staff members to assist (Davies, 2010).

Staff should adhere to the aseptic technique policy for all aspects of wound care outlined. Clean the wound using a soft wipe with water, normal saline, pH neutral soap or certified. Enough pressure should be applied to deride the damaged skin and remove exudates, loose skin and slough. A moistened swab may be beneficial, particularly in swabbing dry areas on the burn injury (Liao, et al., 2013).

Edema is common in the initial days post bum, therefore tight circumferential bandages should not be applied. Elevation of the limb in the immediate days post injury will limit swelling. Additional products may be utilized on burns wounds at the discretion of medical and nursing staff. Facial bums may require regular wound care including cleansing followed by application of paraffin cream. Parents should be encouraged to be involved in providing this care (Wilkins, 2012).

Nutrition plays a vital role in bum healing, minimizing complications of care and meeting the increased metabolic demands associated with pediatric patients with bums. A diet high in protein, calcium, energy and micronutrients (in particular Zinc and Vitamin C) has been shown to be most beneficial for wound healing. Children should be encouraged to eat and drink foods high in these nutrients and nutritional supplements such as Sustagen may also be required.

Insertion of a nasogastric tube and commencement of enterable feeds should be considered for children who sustain significant bum injuries and/or facial bums and are unable to tolerate adequate oral intake. Where possible feeds should commence within 6-8 hours of the bum injury (Elnagar, 2014).

Significance of the study:

The statistical and medical records department at El-Demerdash hospital revealed that the number of children, who diagnosed with bum injury are increased in the following three consecutive years (2015, 2016, & 2017) as (405, 543, 487) burnt children respectively.

Aim of the study:

This study aimed to evaluate the effect of instructional guidelines on nurses' performance regarding children suffering from bum. This aim was achieved through:

- Assessing knowledge and performance of nurses regarding children suffering from bum.
- Designing and implementing instructional guidelines for studied nurses regarding children suffering from bum.
- Evaluating the effect of instructional guidelines on nurses' knowledge and performance regarding children suffering

Research hypothesis:

It was hypothesized that the implementation of instructional guidelines improves the nurses' knowledge and performance regarding children suffering from bum.

2. SUBJECTS AND METHODS

Technical Design:

It included research design, setting, subjects and tools for data collection.

Research design:

A quasi-experimental design was used to conduct this study.

Research setting:

The study was conducted at the center of bum at El-Demerdash Hospital affiliated to Ain Shams University Hospitals.

Research subjects:

A sample of convenience included all (40) the nurses who are working in the previously mentioned setting

Tools of data collection:

Data were collected through using the following tools:

1. Pre-designed questionnaire: (pre/post):

It was designed by the researcher after reviewing the relevant literature and written in simple Arabic language. It consists of three parts to assess the following data.

Part I: Demographic characteristics of nurses: It concerned with characteristics of nurses include: age, gender, years of experience, qualification and training courses.

Part II: Nurse's knowledge related to burn:

It concerned with definition of burn, causes, degree of burn, signs and symptoms, burn complication, first aid management and discharge instructions.

Scoring system for knowledge questions: The right answers were scored one, and those wrong were scored zero. These Scoring system :-Score from 0 <60 referred to poor knowledge.

-Score from 60 <75 referred to average knowledge.

-Score from 75 ≤ 100 referred to good knowledge.

Part III: Observational checklist: Designed Observational Checklist adopted from (Salah 2002), it used to assess the nurse's practice regarding care of children suffering from burn. The done step was scored one or two score according to its weight, and the other not done or incorrect done step was scored zero, then total score was classified as:

Scoring system:

- Score from 0 <85 referred to incompetent performance.
- Score from 85 ≤ 100 referred to competent performance.

Validity and Reliability:

It was ascertained by a jury of 5 experts in pediatric in both nursing and medical field. Their opinions elicited regarding the format, layout, consistency, accuracy and relevancy of the tools. Testing reliability of the translated version of questionnaire was done by Cronbach alpha, the result was 0.788.

Operational Design:

It consisted of preparatory phase, ethical considerations, pilot study and fieldwork.

Preparatory Phase:

This phase included reviewing of literature related to nurses' knowledge about burn. This served to develop and selected the study tools for data collection. During this phase, the researchers also visited the selected place to be acquainted with the personnel and the study setting.

Ethical Considerations:

Informed consent was obtained from nurses prior to data collection, the studied nurses were informed about the purpose and the expected outcomes of the study and they were assured that, the study is harmless and their participation is voluntary and they have the right to withdraw from the study at any time without giving any reason. They were also assured that, anonymity and confidentiality will be guaranteed, as well the collected data will be used for the research purpose only. Ethics, values, culture and beliefs were respected.

Pilot study:

A Pilot study was carried out including 10% of the studied nurses (4 nurses) to test the applicability and feasibility of the study tools. Modifications were done according to the results of the pilot study. Nurses included in the pilot study were

excluded from the main study sample since some modifications were done in the form of rephrasing for some statements. The final form of the tools was then obtained and the time needed for completing each tool was also determined.

Fieldwork:

The actual fieldwork was carried out over a period of 5 months from beginning of Julie to the end of November 2018. The researchers were available in the study setting 3 days/week in the morning and afternoon shifts and the actual fieldwork was divided into four phases:

1. Assessment phase: (one month)

In this phase, the researchers were using the constructed tools to collect data about nurses' knowledge and performance related to children suffering from bum (pre-test), in their workplace. The purpose of the study and its expectations were explained by the researchers to the studied nurses before starting interviewing and data collection. The pre designed questionnaire was filled in by the nurses. Time needed to filling in the questionnaire depended on nurses' own knowledge, the average time ranged between 15-20 minutes. The observational checklist was filled in by the researchers, in nurses' workplace, during applying the care to the children suffering from bum. The time needed to fill in the checklist depended on the time of the procedure, each procedure time ranged between 10 to 15 minutes.

2. Planning phase: (one month)

The collected data pre assessment was analyzed to elect the nurses training needs then the instructional guidelines was designed by the researchers in Arabic language in the light of the literature review. It was revised, organized and the content of the guidelines was prepared according to nurses' educational needs. It included knowledge about bum degree, factors, severity, immediate care, first aids, management, investigation, role of the nurse and the discharge instructions. The practical aspects of the instructional guidelines included; first aid and care of children suffering from bum.

3. Implementation phase: (two months)

This phase consumed 8 weeks, three days per week, to implement the instructional guidelines. The researchers inspected the roster of nurses to identify the number of nurses in each shift .The studied nurses were divided into 8 groups, each group involved 5 nurses. The instructional guidelines was applied in 8 sessions(6 hrs)for each group(2 sessions for theory&4 sessions for practice). The time of each session ranged from 45 to 60 minutes. At the beginning, an introduction about the important of instructional guidelines was done;, the researchers used group discussion with the studied nurses to cover the theoretical aspects of the instructional guidelines related to bum. Different methods of teaching were used as group discussion, demonstration and re demonstration. Suitable media was used such as; real equipments, posters and guidelines.

4. Evaluation phase: (one month)

The same tools were used immediately post implementation of the instructional guidelines for all studied nurses as an indicator to determine the level of improvement.

Administrative Design:

An official permission to conduct the study was obtained through an issued letter from the Dean of the Faculty of Nursing, Ain Shams University, to the medical and nursing directors of the previously mentioned study setting to obtain their approval to conduct the study. The letter included the title, aim and the expected outcome of the study.

Statistical Design:

The collected data were organized, revised, scored, tabulated and analyzed using the number and percentage distribution. Statistical analysis was done through computer using the Statistical Package for Social Sciences (SPSS) version 18. Qualitative variables were compared using Chi-square (X^2) test and quantitative variables were compared using Pearson correlation coefficient (r). The significance of the results was considered as follows: When $p > 0.05$: it is statistically insignificant difference; while $p < 0.05$ or $p < 0.001$: it is statistically significant difference.

3. RESULTS

Table (1) shows the distribution of the studied nurses according to their characteristics, it reveals that, slightly more than half of nurses (52.5%) were in the age group of 20<30 years with mean age 29.75±5.06, more than three quarters of them (95.0%) was female. Meanwhile, the highest percentage of the studied sample (40.0%) was diploma nurse.

Table (2) shows more than one third of the study subjects (35.0%) were having experience between 5<10 years in nursing field and 97.5% of them attending a training course.

Figure (1) illustrates that 66% of nurses have poor knowledge pre guidelines intervention compared with 54% of them have good knowledge post guidelines intervention, with a statistically significant difference ($X^2= 12.53$ at $p<0.001$) between pre/post instruction guidelines intervention

Figure (2) shows that, about 13% only of nurses has good knowledge regarding management of bum pre guidelines intervention, compared with more than two thirds of them have good knowledge post guidelines intervention.

Table (3) indicates that there are statistically significant differences ($p<0.001$) between pre/post instructional guidelines intervention in all items regarding discharge instructions which included knowledge about diet, home care ,daily activity and social, emotional & psychological support . As showed in the current finding that the majority of the study sample didn't give discharge instructions to the children and their family pre intervention, while the majority of them give the instruction to the children post intervention.

Table (4) illustrates that three quarters of the studied nurses had good score of total knowledge regarding bum post guidelines intervention compared with pre intervention with statistically significance difference between the pre and post instructional guidelines ($P<0.001$).

Table (5) clears that 35.0% of the studied nurses were competent pre instructional guidelines intervention compared with 72.5% post intervention with statistically significant differences ($p<0.001$) between pre/post instructional guidelines intervention regarding care of children with bum.

Table (6) illustrates positive correlation between total knowledge of the studied nurses and their total practices regarding children suffering from bum.($p< 0. 05$)Post instructional guidelines intervention.

Table (1) Distribution of the Studied Nurses According to their Demographic Characteristics (N=40)

Item	No	%
Age		
20 <30 years	21	52.5
30<40 years	19	47.5
Mean ±SD	29.75±5.06	
Gender		
Male	2	5.0
Female	38	95.0
Qualification		
Diploma Nurse	16	40.0
Diploma Nurse with specialty	11	27.5
Bachelor	13	32.5

Table (2): Distribution of the Studied Nurses According to their Years of Experience and Attending a Training course (No= 40)

Item	No	%
<i>Years of Experience</i>		
<5	10	25.0
5<10	14	35.0
10<15	7	17.5
15& more	9	22.5
Mean ±SD	9.45±5.4	
<i>Training course</i>		
Yes	39	97.5
No	1	2.5

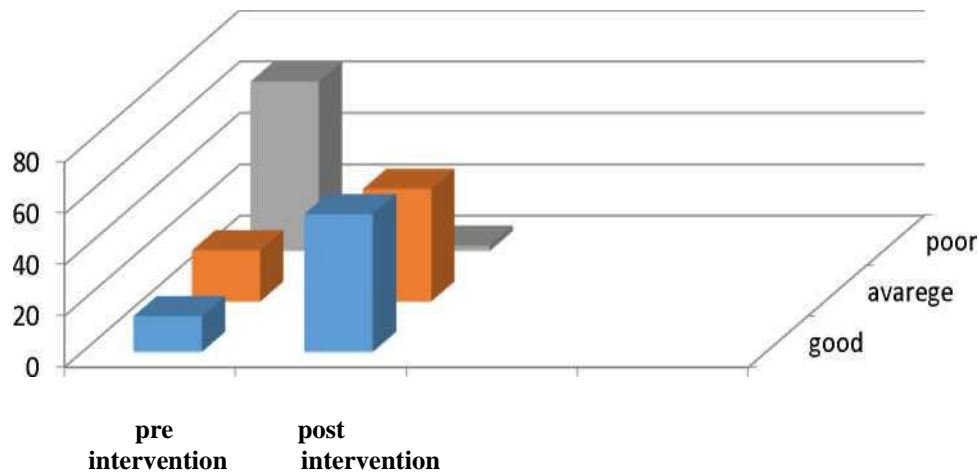


Figure (1): Percentage Distribution of the Studied Nurses According to their knowledge Regarding First aid for Children with burn(pre and post intervention (no= 40)

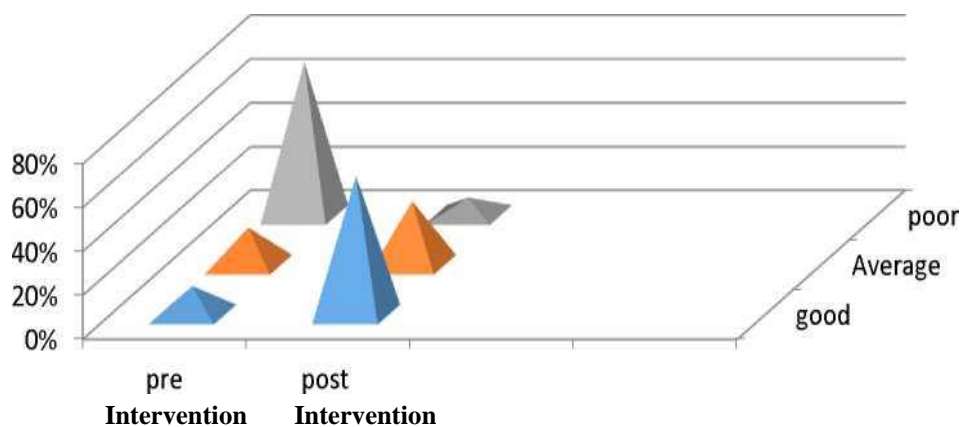


Figure (2): Percentage distribution of the studied Nurses According to their knowledge Regarding burn (pre and post intervention). (no= 40)

Table (3): Distribution of the Studied Nurses According to their satisfactory knowledge Regarding Discharge Instructions for children with bum (pre and post intervention). (no= 40)

Item	Pre		Post		X2	P-Value
	No	%	No	%		
<i>Discharge instruction</i>						
Nutrition , diet system and safety in home to prevent bums	19	47.5	31	77.5	7.680	0.006*
Home care and following of exercise of movement to prevent deflation	13	32.5	39	97.5	37.143	0.000*
Help the child to do daily activity	14	35.0	30	75	12.929	0.000*
Give social support to the child and his family	17	42.5	35	87.5	17.802	0.000*
Give emotional support to the child and his family	18	45	30	75	7.500	0.006*
Give psychological support to the child and his family and rehabilitation	13	32.5	31	77.5	16.364	0.000*

*statistical significance differences

Table (4): Number and Percentage Distribution of the Studied Nurses According to their Total knowledge Regarding Management of the children with burn (no= 40)

Item	Pre		Post	
	No	%	No	%
Good	10	25.0	30	75
Average	14	35.0	7	17.5
Poor	16	40.0	3	7.5
X2	21.228			
P-Value	0.000*			

Table (5): Number and Percentage Distribution of the Studied Nurses Regarding their Practices for Children with burn (no= 40)

Item	Pre		Post	
	No	%	No	%
In competent	26	65.0	11	27.5
Competent	14	35.0	29	72.5
X2	11.314			
P-Value	0.001*			

Table (6): Correlation Between Total Knowledge of the Studied Nurses and their Total Practices Regarding Children with bum (no= 40)

Total nurses' performance	Total nurses' knowledge			
	Pre		Post	
	R	P	R	P
Pre guidelines intervention	0.201	0.001	-	-
Post guidelines intervention	-	-	0.803	0.020*

Correlation is significant at $p < 0.05$

4. DISCUSSION

Concerning the characteristics of the studied nurses, the current study results revealed that, about half of nurses were in the age group of 20<30years with mean age 29.75±5.06 years and more than three quarters of them were females. Meanwhile, less than half of the studied nurses held diploma of nursing. These results were supported by results of **Browne, et al.,(2016)**, who studied psychosocial adjustment of bum survivors and mentioned that the majority of the studied nurses were females and had diploma nurses. This may be due to the males were joined newly the nursing graduation from institutes and colleges of nursing.

On assessing the distribution of the studied nurses regarding to their years of experience, the current finding clarified that, more than one third of the study subjects were having experience between 5<10 years in nursing field and nearly all of them attended a training course about burn. These findings were supported by **Mussa and Abass, (2014)**, who studied assessment of nurses' knowledge regarding nursing care for patients with bum and mentioned that less than half of study sample were having experience 5-10 years. This may be due to the studied sample age.

In relations to first aide for burning child, the study finding clarified that, less than two thirds of studied nurses had poor knowledge regarding the first aid of bum in children pre instructional guidelines which improved post instructional guidelines. These findings were supported by the findings of **Brennan, (2015)**, who studied first aid and emergencies for burn child and mentioned that had poor knowledge regarding the first aid of bum in children and most of them call doctors in the cases that recorded the second type of pain degree, also, the authors clarified that the calling doctor in a case of the bum is oozing or seems infected (red, swollen, tender). Soak the Bum (Immediately put the burned area in cool — not cold — water or under a faucet, keep the injury in water for at least 5 to 15 minutes. Do not use ice). The researcher believes that one thing is not changing; it is still a doctor who is in charge of a patient's treatment and who wrote the plan for nursing intervention .

As regards the assessment of nurses' knowledge regarding bum, the current findings illustrated that more than three quarters of the studied nurses had poor knowledge regarding anatomy and physiology of skin, bum (definition, causes degree, severity, and complications) which improved post instructional guidelines. These findings were highly supported by the findings of **Matthew,(2016)**, who studied progress of clinical practice on the management of bum-associated pain and mentioned that the majority of the study sample identified the correct answer regarding anatomy of the skin. Previously, the study of **Australian New Zealand Burn Association,(2015)**, reported that the majority of the study sample recorded falls reading regarding bum in the term of definition and types.

The current study clarified that most of the study nurses provided psychological support to the child and his family and provide rehabilitation and emotional support to the child and his family. This finding was in accordance with the finding of **Browne, et al.(2016)**, who studied psychosocial adjustment of bum survivors, and reported that the majority of study sample provide psychological and emotional support for burn patients and their families. They added that once individuals sustain a bum, their long-term psychosocial adjustment is a function of their present coping responses, social resources, bum severity and time since bum. It was expected that these variables could also be used to identify individuals at risk for psychosocial maladjustment. These variables explained 40 per cent of the variance in psychosocial adjustment. Severity of the burn and time since the bum were not related to psychosocial adjustment. The researcher believes that the psychological and emotional support to the child also may interfere with the accurate reporting of symptoms and may even mimic physical condition, and help the child and his family increase coping skills and resiliency.

It was clear from the current findings that the majority of the studied nurses had good score of total knowledge regarding burn post guidelines intervention compared with pre intervention, with statistically significance difference between the pre and post instructional guidelines ($P < 0.01$). This finding was in an agreement with the finding of **Ali,(2010)**, who studied the assessment of nurses attitude and practices regarding control of infection during care of bum Injuries and mentioned that most of the studied nurses had poor total score of knowledge regarding bum and its management and complications. This may be due to shortage of the staff comparing with the number of patients and many of non nursing duties in the study setting take much time from nursing staff to achieve this non nursing duties for example carrying the blood investigation to the lab which is fare from their care settings ...etc

Concerning Practices of the studied nurses about care of bum for children, it was clear that more than two thirds of them were incompetent for the first degree of bum, also, for the second & third degree of bum. In addition the current study illustrated that more than two thirds were incompetent regarding bum care meanwhile more than one third of them were competent regarding bum care pre instructional guidelines intervention compared with most of them were competent post instructional guidelines intervention with statistically significant differences ($p < 0.001$) between pre/post instructional guidelines intervention regarding children with bum. These findings were in accordance with the finding of **Alice and Richard (2016)**, who study bums management in intensive care unit(ICU): Quality of the evidence in management of bum and founded that the majority of the studied sample had incompetent level in management of the bum while the minority of them had competent level regarding practices of burn care also, the authors recorded that there was very little quality evidence to guide clinical practice in early management of the severely burn patient children.

Also, It was observed from the current study that there was a positive correlation between total knowledge of the studied sample and their total practices regarding children suffering from bum. The current study findings were supported by similar study of **Bonham, (2016)**, who studied pain in children with bum, suggested Nursing Guidelines and mentioned that there was a statistically significant difference between study sample demographic date namely, age, experiences and their practices regarding bum management, and recorded verses finding as revealed that nurses' knowledge and practice scores regarding objects handling and its disposal, also waste handling were low. This might ensure that nurses working in burn unit always in need of updating their knowledge. Also, by Comparing the practice with the performance of nurses who the core of knowledge most commonly encountered, in addition when the nurses improved their knowledge, the practices and attitude will be improved because of their believes about the objectives from their care regarding burn.

5. CONCLUSION

Based on the results and research hypothesis of this study, it can be concluded that, instructional guidelines intervention improved the nurses' knowledge and performance regarding children suffering from bum. where the majority of the studied nurses had good score of total knowledge regarding bum post instructional guidelines intervention compared with

pre instructional guidelines intervention in addition it was found that more than two thirds of the studied nurses were not competent pre instructional guidelines intervention compared with less than three quarters of them were competent post instructional guidelines intervention with statistically significant differences between pre/post instructional guidelines intervention regarding children with bum. In addition to this study concludes that the study result support the study hypothesis.

6. RECOMMENDATIONS

In light of the study findings, the following recommendations are suggested:

- Continuous training to enhance nurses' knowledge and performance regarding care of bum for children.
- An orientation program for the newly assigned nurses about the first aid and care of the children with bum
- Dissemination of instructional guidelines regarding care of children suffering from bum for nurses in bum center settings in Egypt.
- Further studies should be carried out on a larger number of nurses all over Egypt for evidence and generalization of the results.

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