Introduction

The skin is the largest organ system. It is composed of three layers, the epidermis, dermis and subcutaneous tissue. The epidermis is the outer, thinner layer. The dermis is a deeper, thicker layer that contains the hair follicles, sweat glands, sebaceous glands, and sensory fibers ***(Ahrens, et al. 2007).***The skin is the first defense against infection and injury. It protects the body from the hazards in the environment, prevents loss of body fluids, regulates body temperature, and provides sensory contact with the environment through pain, touch, pressure, and temperature ***(Hollenberg, et al. 2008).***

Burns causing tissue damage that can range from a superficial burn to the skins surface (epidermis) to serious deep injury that involves nerve, blood vessels, muscles, and bones ***(Bergeron and Baudour. 2009).*** Burns are classified in a number of ways. One way is to categorize burns based on agent that caused the injury (source of burn). Thermal burns are caused by exposure to or contact with flame, hot liquids, similquids, semisolids or hot objects. Chemical burns are caused by contact with strong acids, alkalis, or organic compounds, the concentration volume, and type of chemical, as well the duration of contact, determine the severity of a chemical injury. Electrical burn injuries are caused by heat that is generated by the electrical energy as it passes through the body. It can result from contact with exposed or faulty electrical wiring or high voltage power line ***(Black and Hawks. 2009).***

Radiation burns are the least common type of burn injury and are caused by exposure to a radioactive source. These types of injuries have been associated with nuclear radiation accidents, the use of ionizing radiation in industry, and therapeutic irradiation. Inhalation injury are

exposure to as phyxiants and smoke commonly occurs with flame injuries, particularly if the victim was trapped in an enclosed, smoke-filled space ***(Dejong et al.2007)***.

The depth of burn will determine to what degree or wither any skin grafting is needed or destruction of skin can occur .Burns were classified as first, second or third degree, burns have been subdivided into partial and full –thickness wounds ***(Zimmerman.2003).*** **S**uperficial burn involves only the epidermis (the outer layer of the skin).It is characterized by reddening of the skin and perhaps some swelling, and of pain at the site of burn. it is also called first-degree of burn. Partial thickness burn involves of damage the epidermis and dermis (second layer of the skin). There will be deep intense pain, noticeable reddening, blister, and a mottled appearance to the skin. It will heal themselves, producing very little scarring.It is also called second-degree burns ***(Limmer and Keefe 2009)***. Full thickness burn involves damage of all the layers of the skin are damaged, there are usually areas that are charred black or brown or that are dry and white. These burns are called third degree burns ***(Karen and Carlson 2009).***

Burn size may be estimated using the rule of nines or Lund and Browder method. Used to measure the total percentage of burned body surface area. ***(Slota, 2006).*** The Lund and Browder method, different percentages are assigned to body parts depending on the patient's age ***(Linton.2007)***.

Burn injury affects body locally and systemic ,in local effect, the burned tissue releases chemicals that cause increased capillary permeability, which permits plasma to leak into the tissues. Injury to cell membranes permits excess sodium to enter the cell and allows potassium to escape into the extra cellular compartment. These shifts in fluids and electrolytes cause local edema and a decrease in cardiac output. Fluid evaporates through the

wound surface, further contributing to the declining blood volume ***(Price, et al. 2009).***

In systemic effect, hypoprotenemia may develop as a result of shifting of plasma protein from the capillaries. An illus may occur as a result of decreased blood flow to the intestine. After serious burn, immunity is depressed so, the burned patient is less able to resist infection. Also, the burned patient may suffer from inhalation injuries, including carbon monoxide poisoning and smoke suffocation ***(Santos. 2009).***

First aid: Stop the burning process immediately after performing a scene size-up. This may require the patient to stop, drop, and roll to extinguish the flames. Flush minor burns with cool or running water for several minutes. Remove smoldering clothing and jewelry .Do not remove any clothing that is melted onto the skin. Continually monitor the airway. Cover the burn area with dry, clean dressing. And provide oxygen and care for shock ***(Bergeron and Baudour.2009).***

Care of burned patient is often described in terms of three stages: emergent, acute, and rehabilitation. The emergent stage begins with the injury and ends when fluid shifts have stabilized. The acute stage begins with fluid stabilization and ends when the burn wounds are closed. The rehabilitation stage follows the acute stage and lasts as long as efforts continue to promote improvement or adjustment ***(Wallace et al.2008).***

Burn injuries produce highly emotive responses because of their association with loss of life, pain and scarring. The psychological impact can be devastating for the patient, relatives and those required dealing with the aftermath ***(Dolan and Holt 2008)***. Burn injury is often a devastating event with long-term physical and psychosocial effects. Burn scars after deep dermal injury are cosmetically disfiguring and force the

scarred person to deal with an alteration in the body appearance (***Patterson and Everett. 2004)***. The goal in all burn therapy is to return the patient to maximum independent functioning. This goal may be complicated by psychopathology present before the burn and by the complex array of psychosocial concerns that the burn injury itself gives rise to, including fear of altered body integrity and diminished role performance. Unmet psychosocial considerations often have a detrimental effect on the patient, and delaying wound closure ***(Flynn and Bruce. 2007)***. patients may face social stressors including family strains, return to work, sexual dysfunction, change in body image, and disruption in daily life. Social support is an important buffer against the development of psychological difficulty ***(Zielinsk. 2004).***

Significance of the study:

Burn injuries are the third leading caused of accidental death in all age groups. Each year approximately 2.5 million people in the United States suffer burns that require medical attention, each year, 100,000 people are hospitalized and 4.500 die as a result of their injuries ***(Urban and Green lee, 2005 and American Burn association, 2008)***. In Egypt, it is difficult to attain the precise number of burn injuries due to lack of accurate national reporting system .Therefore, a recent national statistics that denote the number of burn injuries in Egypt was not available ***(Mohamed, 2005).*** In Benha teaching hospital documented the admitted number of burned patients in year 2005 (205), 2006 (230), and 2007(221) patient respectively into burn unit of Benha teaching hospital ***(Statistical Department of Benha Teaching Hospital, 2007).*** Burn is effected direct and indirect patients condition in the form of physical, psychological and social status of the patient's well financial losses and costs which burned

patient, family as well as society.So,this study hopefully determine physical, psychological and social needs for these types of patients.

Aim of the Study

The aim of this study is to:

Assess burned patients needs in Benha Teaching Hospital through: Determining of physical, psychological, and social needs of burned patient's.

Research Questions:

This study will answer the following questions:

1-What are the physical needs for burned patients in Benha Teaching Hospital?

2- What are the psychological needs for burned patients in Benha teaching Hospital?

3- What are the social needs for burned patients in Benha Teaching Hospital?