DISCUSSION

Burn injury creates many and severe physiologic changes that disrupt the normal function of all body systems; in addition it creates catastrophic effect on psychological and social state of the victim. ***Linton*, *Mateson and Maebius (2000)*** mentioned that burn severity is based on size, depth, location, age, general health status, and mechanism of injury. ***Wasserman (2002)*** added that the total body surface area burned and depth of injury are the main determinants of the burn severity. Other factors such as pathological condition, pulmonary injury by smoke inhalation, wound localization play also a major role.

The aim of the current study was to assess burned patients needs at Benha teaching hospital through: Determine of physical, psychological, and social needs of burned patients .The sample consisted of 60 adult male and female patients with different degrees of burn.

To fulfill the objective of this study, finding will be presented in three main sections as the following:

Section (I): Description of socio demographic variables of the studied group**.**

Section (II): Description of the studied group as regards to burn related data, Site of burn ,Duration of hospitalization, pain degree, causes of pain, and physical, psychological, and social needs **.**

Section (III): Relation between burn, Type, site, and duration of hospitalization with pain degree**.**

- Relation between burn site with hospitalization, physical, psychological, and social needs**.**
- Relation between patients needs with degree, Types of burn, and sociodemographic data of studied group .

- **Socio demographic variables:**

The study results indicate that more than two third of the studied group were their age is ranged between (18 to 30) years old, whereas minority was found in age between (40 to50) years old. This result may be explained by the fact that adults are generally active and therefore they are exposed to hazardous situations at both work and home. This result is in agreement with ***Mohammed (2005)***in study about Patients and relative's satisfaction with nursing care provided At kaser El Eini hospital "Burn unit" an exploratory study, reported that more than one third of her study sample had age less than thirty years old and this constituted the highest percentages of the total sample .This also accepted by ***Abd El-Monaem (2002)***in study about Relationship between determinants of burn severity and physical, psycho-social functioning in patients with burns, the findings reported that the highest percent of burn victims were found among adults patients. Therefore ***Timby (2001)*** recommended that, because many adults become complacent about safety hazards, should be raise awareness in the schools, mosques, and other work places to teach people how to prevent burn and how to do first aids.

The study results revealed that the majority of the study sample was male. This could be due to as an Egyptian culture male are responsible for earning life. Therefore they are more exposed to hazards this result coincides with ***Hassan (2001)*** in study about Burn care: educational program for nurse's professional development who stated that the

majority of patients were male's patient. This result may be because by the fact that the male exposed to occupational hazards. Also, ***Black, (2009)*** agreed that adults with burn injuries are more likely to be male and in the 20 to 40 age group.

In the other hand, this finding disagrees with ***Ahmed (2003)*** in study about Impact of burn injuries on self image of adolescents, who stated higher ratio of female burn patients than male. Patients in this study indicated that women were at higher risk of burn injury. This could be explained in the light of their primary responsibility of caring for all family members. . In addition, ***Attia et al. (2000)*** explained that females do most of domestic activities. On the same line, ***Mzezewa et al. (2000)*** explained that women leads traditionally do cooking as they were burn during the usual times of preparing meals.

The study results show that the majority of the studied group was living in the rural areas and not work. This could be due to as Egyptian culture in rural areas they use fire as a source for seeking warm especially during cold nights, therefore they exposed to accidental burn injuries ***Smeltzer et al. (2008)*** stated that the majority of patients living in the rural area are at high risk for burn injury. This also accepted by ***Abd El-Monaem (2002)*** findings who reported that the highest percent of burn victims were lived in the rural area. ***Ahmed (2003)*** in study about Effect of nutritional regimen for moderate burn patients on graft take that more than two thirds of the sample was from rural areas. ***Ying (2000)*** reported that burns were more common among not working people. On the same line ***Abd El-Monaem (2002)*** findings who reported that the highest percent of burn victims 53.3% were not working.

In the present study as regards patients marital status, more than half of the sample were single .This result could indicate the percentage of marriage among Egyptians that means that the age of marriage was increased. The highest frequencies of the studied group education of level were secondary school. These findings contradicted with ***Abd El-Monaem (2002)*** findings who reported that the highest percent of burn victims were married, and the majority of them were illiterate.

Burn related data:

Considering the types of the burn injury in the present study the most common source is thermal (fire) followed by scald (boiled water).This result is in agreement with ***Mohamed (2005)*** who reported that the majority of her study sample (ninety percent) had direct fire flam burns. On the same line many researcher findings are agreement ***Ahrens,(2007) Abd El-Monaem (2002),Wassermann (2002), Hassan (2001), Toylor, etal.(2001) Lari, et al. (2000) and Munnoch and colleagues,(2000)*** reported that thermal burn is the most common cause of burn injury. On the contrary, in their study found that chemicals were the commonest cause of burn as the majority of their patients who were employed in chemical industry. Hence it could be concluded that subject's type and cause of burn is very much influenced by the surrounding environment.

Moreover, the majority of the study sample reported that their burn injury was accidental. On the same line, ***Ahmed (2003)*** in study about Impact of burn injuries on self image of adolescents reported that the majority causative agent of burn injuries in her studied sample was flame and the majority of pattern of burn injury was accidental burn. In addition, ***Kypri, etal. (2001)*** who found that, cultural, support these results and socioeconomic factors, such as housing, heating and cooking

traditions influence the patterns of burn injury. According to the ***American burn Association (2008)***, more than 2.5 million people in United States experience accidental, thermal injury each year. ***Lemone, and Burke (2008) and Smeltzer, etal. (2008)*** found that the majority causative agent of burn injuries in the studied sample was flame and the majority of pattern of burn injury was accidental burn. In addition ***Black, and Hawks (2009)*** reported that the contact with fire (flame) occurs in more than 60% accidental injuries. Structural fires account for approximately 5%of burn-related hospital admissions. This also accepted by ***Mohammed, (2005)*** in study about Patients and relative's satisfaction with nursing care provided At kaser El Eini hospital "Burn unit" an exploratory study, who mentioned that the high percentage of mode of injuries were accidental in both sexes.

The study result revealed more than one third of the studied groups have more than 21%of total body surface area (TBSA), and 45.0%with third degree of burn. This result go on the other line with ***Mohammed (2005)*** research findings about Patients and relative's satisfaction with nursing care provided At kaser El Eini hospital "Burn unit" an exploratory study that the highest percentage of burn patients had burn injury covering more than 25%TBSA.Also, ***Abd El-Monaem (2002)*** research findings about Relationship between determinants of burn severity and physical, psycho-social functioning in patients with burns found that half of the studied sample had second degree burns and about one third of the patients had a combination of second and third degree burn. ***Hassan (2001)*** explained that could be dut to delay in transferring the patient. Immediately after burn injury to the burn center, or due to use some public substances which hinder the care provided to the patient and delay in providing first aid or using in correct modalities which lead to

transferring the minor burn injury to moderate or severe burn injury. This finding may be explained that the patients with severe burn injury could exposed to increase their potential life long scars disfigurement, deformity and contracture. Therefore could affect the ability to achieve their role in society.

Regarding burn associated injuries; and chronic diseases. This result is confirmed with ***Abd El-Monaem (2002),*** who reported that minor percent of her studied sample had associated injury, (1.6%) had fracture of the left upper arm. Although ***Brandt, etal. (2002)*** commented that fractures are the most frequent associated injury with burn. The study also shows that the highest percentage of the studied group have no associated chronic diseases.

The study result revealed that the highest percentage of burn infection among studied group was (58.33%) with concerning non-invasive and invasive sings of infection mainly local and systemic signs, as hotness, tenderness, swelling, purulent exudates and conversion of the wound from partial-thickness to full-thickness .This could be explained by auto infection and from environment contamination which include linen, bed, other patients or visitors and also from hospital staff during dealing with patients, could not use aseptic techniques as observed by the researcher during collecting data. This result is in agreement with ***Attia, (2002) and Mohamed (2004)*** in their research findings who indicated that the presence of infection and other organisms are common in burn injury. This consistent with ***Smltzere and Bare (2004)*** who's emphasized that the incidence of nosacomial infection in burn injuries is higher than most other patients. Also, agree with ***Hassan (2001)*** who found that infection is circulating in the burn unit and this consistent with ***Phipps (2003)*** who mentioned that recently most invasive burn wound infection are gram-negative organisms.

The study result revealed that approximately two thirds of the studied group (65.00%), have skin grafts, although the majority of the studied group admitted to the hospital with first or second degree of burn. That could be due to they developed infection during hospital stay. On the same line ***Abd El-Monaem (2002),*** *and* ***Attia, (2002)*** mentioned that the majority of their studied sample have wound infection, and need for skin grafting. Skin graft whether temporary or permanent is valuable in the management of open burn wounds. ***Brandt, etal. (2002)*** pointed out that skin graft after burn injury is needed in 59% of patients. One of the important roles of nursing management of burn patient after grafting is daily inspection. Daily inspection is essential to detect early signs of infection, and if the site becomes infected, the dressing should be gently removed or soaked off, the wound can be thoroughly cleaned and antimicrobial agent applied *(**Smetzer and Bare, 2000).**finally* ***Fauerbach, etal (2000)*** in study performed for burned patients found that 68.6%of the sample are needed skin graft.

Regarding to the length of hospitalization , the study clarified that more than half of the studied group, their duration of hospitalization was more than three weeks. This result is in agreement with ***Ahamed (2003)*** *and* ***Attia, etal****.,* ***(2000)*** that less than two thirds (61%) of burned patient stayed from 30 to less than 60 days in the hospital with mean length of hospitalization 50.22±33.33 days. on the same line ***Ying, (2000)*** who reported that burned patients stayed more than three weeks. The study revealed that there is high statistical significant difference between duration of hospitalization and degree of pain .That with increasing duration of hospitalization,pain is increased. It was clear that those who were stayed more than three weeks, experienced severe pain.While those who are stayed less than two weeks experienced only mild pain. That

could be due to those who are stayed less than two weeks have had first degree of burn. It could be also due to severe pain were positively related to amount of analgesic medication administered during first period of hospital admission, in addition to psychological support from their family and the patients not perceptive the changes in their body because they were in the denial stage. while their pain sensation could increased during shock stage.

The findings of the present study clarified that face and hands are the most common location of burns this high percentage followed by upper arm in burn injury 39.00%. Many studies ***Abd El-Monaem (2002),. Fauerbach, etal (2000) and Munnoch, etal.(2000*)** in their study results are in agreement that the most common location for burns was face, followed by hands, fore arms,neck,chest and thighs. The least injured part was the perineum**.** on the same line ***Mohammed, (2005)*** explained that, hand burn generally evoke fears related to functional independence, where as burn face related to loss of identity, more over, faced and hand burns are the most difficulty burns to reconcile since these body parts represent. In addition ***Ahamed (2003)*** mentioned that the patients, who had burn injuries in the visible sites as hands and face, are the majority of the studied samples are having low and very low self-image. While, ***Mzezewa etal. (1999)*** found in a study performed on burned patient that the anatomical sites which is most frequently burn were the trunk (39%), head (31%), and the lower extremities.

Regarding to duration of hospitalization and site of burn, it was obvious that those who had burn in face, hands and upper arm and leg are stayed more than three weeks in the hospital. This could explained that those sites are the most common and serious sites of burn injury because their dominant functions in the activity of daily living. The present study

showed no significant relation between the site of burn and physical, psychological, and social needs but there was only highly significant relation between physical need and site of burn at (hands and face). The finding by ***Abd El-Monaem (2002),*** confirm that there was no significant relation between the location/site of burn and physical as well as psychological and social functioning. Where the most visible sites in the present study were in the face as compared to the neck, hand, leg below knee and feet. These results can be explained as the previous mentioned sites can be covered with clothes except the face.

The face is the anatomic structure that is prominent when addressing another person, the resultant scar and deformity may cause a patient to withdraw from society. Also, the secret of facial beauty is in the harmonious proportion of facial features. In deep burns of the face, the harmony balance and symmetry are lost when the skin and the muscles of facial expression are damaged, and any facial disfigurement will inevitably cause loss of self esteem and change in self-image because a persons self concept is an important aspect of psychological functioning

Surprising result that although face burns represent the most common site, it had no effect on the psychological status of the present studied patients. In addition; nearly all of them respond that accept what happened of their body appearance because this is a test from God.

In the present findings there was no significant relation between the degree of burn and physical, psychological, and social needs. Patients with less severe burn may suffer an equally serious negative physical and psychological impact because they did not experience a near loss of life. In addition patients with first-degree burns are more quickly discharged from the burn unit with a plan for daily visits to the outpatient's burn

clinic to receive dressing changes, physical therapy, an evaluation of the burn wound and pain control. Patient with first-degree burn who reported lower functioning at the time of discharge may have been experiencing more pain that influenced their psychological and physical functioning conversely, patients with third-degree burns who reported higher functioning at the time of first orientation may have had little pain present, a situation that could even support denial of the injury. The finding ***by Raymond, etal. (2008) and Abd El-Monaem (2002) .***

Confirmed that there was no significant relation between the degree of burn and physical and psychological, social functioning. However, patients with first-degree burn had the least function and patients with third degree had more functions .This might be due the pain associated with the first-degree burn, which deceases the patients physical and psychological functioning. In addition, minor first- degree burns may have serious impact on the patient. While third-degree burn is not associated with pain, so the patients do better in physical , psychological, and social functions.

The present study showed no significant relation between the types of burn and physical as well as psychological needs. But only significant relation with social needs.However, the patient with fire burn had the lowest physical function. This result is in agreement with ***Hojat,(2008) ,and Abd El-Monaem (2002)*** their results are in agreement that no significant relation between the types of burn and physical, psychological, and social functioning. Commented that flame burn causes the most severe burns as it leads to more extent and depth. While scald burns may be superficial or deep in a limited area.

Current study found that no significant relation between the demographic characteristics with physical, psychological as well as social needs .The results of the present study revealed no significant relationship was found between marital and patients needs This result was shown disagreement with ***Watson, et al.(2005) and Abd El-Monaem (2002),*** that there was no significant relation between marital status with physical and psychological needs, but significant relation between marital status with patients social needs. These results may be explained as Egyptians have a strong family relations and usually they are emotionally supportive at any time, especially at critical times. ***Smeltzer and Bare (2004)*** stressed that acknowledging that the feelings are real and valid can do much to help the patient. Also, encouraging visits by family, friends provide an opportunity for the burn patient to maintain relationships. These also emphasize that the greater the patient's perception of the social support from family and friends, the more positive is the body image and the higher the sense of self-esteem.

The study also indicated that no significant relationship between any of needs with level of education, This result agreement with ***Dauber, etal.(2009),***who confirmed that there was no significant relation between patients needs with level of education i.e. after patients stabilization haemodynamically as well as at per- discharge stage.

There was no significant relation between age,gender,marital status, residence ,level of education and occupation of patients in the studied group and their physical; psychological as well as social needs this could explain the nature and culture of the Egyptian people. This results confirmed with Abd ***El-Monaem (2002),*** **who** reported was no that the no significant relation between residence and age with patients physical, psychological and social function. Indicated that adults and

middle age persons were living in rural area and found to be more likely to develop clinically significant psychological disorders as they have much more concerns over their family status, marital status and future employment. This can be explained as the nature of Egyptian is living extended families, i.e the more age the person, the more extended family and friend's relations. In addition, the nurse should encourage visits by family and friends, which in turn will provide an opportunity for the burn patient to maintain relationships.