ISSN: 2230-9926

Available online at http://www.journalijdr.com

IJDR

International Journal of Development Research
Vol. 09, Issue, 03, pp. 26275-26279, March, 2019

ORIGINAL RESEARCH ARTICLE **OPEN ACCESS**

EFFECTIVENESS OF PSYCHOLOGICAL SUPPORT ON HEALING OF BURN PATIENTS

***Dr. Mohammed N. Ismael**

Hammam Al- Alil Field Hospital/ Mosul/ Iraq

ARTICLE INFO

Article History:
Received 02nd December, 2018
Received in revised form
06th January, 2019
Accepted 22nd February, 2019
Published online 29th March, 2019

Key Words:

Psychological Support, Burn Patients, Self-Esteem, Distraction Methods, Pain.

ABSTRACT

In this study, the psychological support and the potential impact of its factors on the healing of burn patients were done hospitalized, in conjunction with medical treatment, psychological support was intensified for patients for two consecutive months. According to a specific program, special sessions were held by psychologists on 32 and 49 patients for the months of November and December, respectively. Sessions are psychological, focused and take 45-60 minutes per patient, include patient support, encouragement, focus on self-esteem as well as distraction methods used. Results showed that the death rate has decreased for November and December by 6.3% and 8.2% respectively, compared with October that the deaths rate was 37.5% of admitted patients. The results also showed a positive effect on children under the age of five with psychological support compared to adults in addition to the great role of family members in the improvement of their relatives.

Copyright © 2019, Dr. Mohammed N. Ismael. *This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.*

Citation: Dr. Mohammed N. Ismael. 2019. "Effectiveness of psychological support on healing of burn patients", *International Journal of Development Research*, 09, (03), 26275-26279.

INTRODUCTION

During the lifecycle, man is exposed to many accidents, where traumatic events leave behind a painful wound in the individual's being whenever he faces a threatening situation his life, burns as an injury generate great psychological and physical problems that threaten the internal balance of the individual simply to infect (20%) of the body area at the adult and (10%) of the body area of the child. Fire accidents are one of the most common injuries to humans and result in rupture and damage to the skin cells, which makes them a source of large physical and psychological disability associated with the individual temporarily or permanently, both on the functional or aesthetic level (Biryala, 2013). A burn is an injury to the skin or other organic tissue primarily caused by heat or due to radiation, radioactivity, electricity, friction or contact with chemicals. Thermal (heat) burns occur when some or all of the cells in the skin or other tissues are destroyed by hot liquids, hot solids, or flames. Burns are a global public health problem, accounting for an estimated 180000 deaths annually. The majority of these occur in low- and middle-income countries and almost two thirds occur in the WHO African and South-East Asia regions. In many high-income countries, burn death rates have been decreasing, and the rate of child deaths from burns is currently over 7 times higher in low- and middle-income countries than in high-income countries. Non-fatal burns are a leading cause of morbidity, including prolonged hospitalization, disfigurement and disability, often with resulting stigma and rejection (https://www.who.int/violence_injury_prevention/other_injury/burns/en/) Burn is still a devastating emergency with many physical and psychological disabilities and mortality and morbidity (Mahdi, 2016). Burn Injury was traditionally defined by percentage of total body surface area (%) affected see Figure (1). This definition excluded many other factors that impact on a person's well-being. The classification is dependent on a range of variables that describe the mechanism of injury, how the patient is affected by the injury, Total body surface area % affected and depth of Burn Injury. Other clinical variables include: age, site of burn, effect on airway, other injuries, co morbidities, and psychiatric and psychosocial considerations, there three main degrees of burn as shown in Figure (2) (Fiona Wood, 2009 and Montreal Children's Hospital, 2015). Severe burn injury has a great influence on patient´s psychic. Burn survivors suffer of several psychological problems such as body image disturbance, traumatic stress, depression, anxiety, grief, pain, itching etc. Both appearance and physical limitations interfere with person´s social relations, their ability to work and perform familiar responsibilities. Approximately 30% of burns survivors experience moderate to severe long-term psycho-social problems. Due to these reasons psychological support of burn victims is of utmost importance starting as soon as immediately or few hours following injury.

Corresponding author: **Dr. Mohammed N. Ismael**
Hammam Al- Alil Field Hospital/ Mosul/ Iraq

This support should pertain to both the patients and their families (Jan Koller, 2014). One of the non-pharmacological and highly effective methods for reducing pain perception is distraction. When the pain drug treatments are insufficient and drugs are associated with side effects, the non-pharmacological treatments, such as distraction, would be effective in pain control Furthermore, the non-pharmacological methods of pain control are easy and inexpensive with minimum side effects (Hossein Ebrahimi, 2018), Maria, Paulo and others (2017) in their study indicated that the burn leads to physical and psychological changes related to body image and self-esteem involvement, changes in lifestyle and also towards treatment, including unsatisfactory procedures that could cause pain, suffering, anxiety, and depression. It is noteworthy that a study showed a decrease in pain effects during dressing application, contributing to the reduction of 44%, 32%, and 27% of cognitive, affective, and sensorial pain, respectively (Soliane, 2017). Sousa, Sonavane and Kurvey (2013) mentioned in their study that quality of life is composed of many facets including disease symptoms, functional capacity, impairment, role performance, perceived well-being and satisfaction.A significant measure of the degree of recovery from major burn injury is health related quality of life. this has been defined as a multifactorial construct that involves an individual's degree of satisfaction and level of functioning in sevral core domains, including physical-behavioral function, psychological well-being, social and work role performance, and personal perception of health (Avinash, 2013).

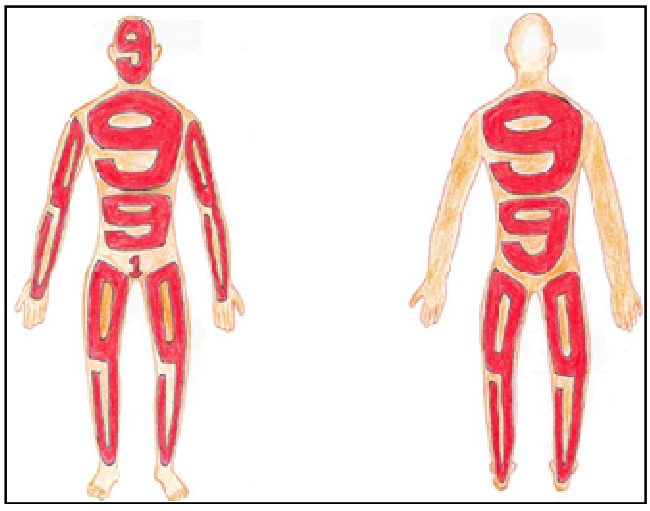

Fig. 1. Nine Rule Total Body Surface Area (5)

Fenlon and Nene (2007) confirmed that burns treatment for children is similar to that for adults, but there are significant physical, psychological, and social differences. Psychological management must not be overlooked. Children do not see pain and illness in the same way as adults, and their psychological responses differ. Techniques such as play therapy, hypnosis, and distraction are all valuable and add to the benefits of drug treatment without increasing the burden of side-effects (Stephen, 2007) Jackie, kirk and Susan (2006) indicated that the psychosocial issues in the burn patient are profound. Psychological recovery parallels physical recovery. A psychological survey needs to be addressed and the patient's psychological status upheld. Emotional devastation is the culmination of the injury, hospital stay, and consequences of the burn. One of the most accurate predictors of mental-health symptomology after a burn is psychological health before the injury. Psychological counseling and support groups are important; however, burn camps and school are unique ways to touch a child's life. Surviving the burn, the patient is reborn physically, psychologically, and spiritually. The first year is generally the most difficult. It is a time of vocational and emotional adjustment. Others may view the patient as disabled, even though the patient does not consider himself or herself as such. This may be due, in part, to patients relinquishing control to others.

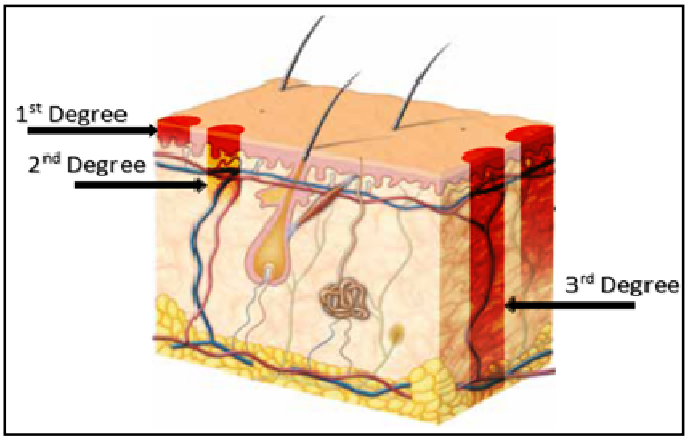

Fig. 2. Three Degree of Burn (6)

Practitioners need to encourage patients to make decisions regarding their care, thereby exerting their independence. Social support assists patients in dealing with pain and incapacitation. This, in turn, promotes the best quality of life after burn experience. Psychiatric consultation is appropriate for all burn patients to provide psychological support and medication as needed. The continuum of care can be carried out in the community mental-health setting, providing services of counseling, active listening, and psychological support. Support groups and peer counseling round out the lengthy period of recovery. The goal of therapy is to maximize the patients' skill at returning to their life, altered as little as possible by the issue of the burn injury (Jackie, 2006), Norman and Judkins (2004) proved that psychological factors play an important part in the pain experience (Aidan, 2004).

Management and follow up of burned patients

1. Burned patients are received at hospital emergency who were transported by either their relatives or from other hospitals and health centers.
2. First aid procedures are applied for all critical burned patients as (securing airway, enhance breathing and mainly apply an I.V. line, either by direct cannulation, venous cutdown or C.V. line.
3. Pain management is carried out at time of receival (morphine or tramadol) injections.
4. Care must be taken to remove all burned clothes and uncover the patient to assess the degree and percentage of burn to total body surface area TBSA "RULE OF NINES". Paying attention to cover the patients as soon as possible in order not to loose body temperature.
5. Primary wash of burned area is done by warm normal saline with primary debridement followed by applying silver salphasalazine (flamazin cream) which acts as soothing and anti-bacterial agent.
6. In case of 3rd degree circumferential burn which may cause underlying Compartment Syndrome, the patient is sent directly to operation theatre to perform

Escharotomy or even fasciotomy in cases who are needed to release the underlying Compartment Syndrome.

7. Calculate and administer the I.V. fluid which is usually ringer lactate as needed applying the parkland formula for adults and children accordingly:

   Parkland = Patient weight(kg)*Burned Area (%) *4 = Fluid in cc/1st day …… (1)

   In which half of parkland volume is given in the 1st 8 hrs. After accident and the other half is given in the 2nd 16 hrs.
8. Consider urinary Foley's catheterization and fluid input, output is monitor.
9. As a rule, anti-biotics are not given in first 24 hrs. From incident and May given to patients only in case of burn infection which may happen in 2-3 days after incident.
10. Burned patients are admitted to burn ward according to standard criteria.
11. All in ward patients under go daily wound DBR and wash by plenty NS and chlorhexidine follow with by dressing, all procedures done by sterile surgical sets under aseptic technique with the aid of sedatives administration.
12. Flamazin™ cream or Mebo™ ointment are used in wound dressing as a local agent for its anti-bacterial and tissue regeneration effect.
13. In case of burn infection, specific anti-biotics are given according to hospital protocol and (culture and sensitivity).
14. Careful monitoring of vital signs, electrolyte balance, renal function and anemia periodically and correction accordingly.
15. Taking care of daily nutrition monitoring with high protein oral diets and oral fluids.
16. Encourage the patients to perform active physiotherapy as (chest physiotherapy, limbs and joints physiotherapy) to prevent possibility of joint stiffness and tissue contracture.
17. Patients bed draping and coverings are daily changed after each patient debridement session, those covering and draping are washed daily with anti-septics.
18. Restriction of patient visitors and relatives accompanied to minimum.
19. As the patient condition improves, he is discharged home with strict recommendations regarding wound and patient care, given appointments to consult our hospital according to certain schedules (Hans, 2005 and Medecins Sans Frontieres, 2018).

Mental Health Standards

There are general criteria for mental health, the most important of which are:

1. The degree to which the individual accepts the facts concerning his or her physical and mental abilities and state - the degree of satisfaction or dissatisfaction with himself as he is now.
2. Degree and type of relationship with the surrounding society, whether this community is his family or work environment.
3. Degree of his turn to life and do his share of work and accept this work.
4. Degree of ambition, courage and consistency of individual direction, ie, the extent to which an individual enjoys the energy to plan for a better life.
5. The degree of the individual's ability to balance between his physical and psychological needs and the requirements of his community and the limits defined by society as rules of control (Marcelina Hassan, 2013).

Objectives of the psychological support program

One of the most important goals of psychosocial support programs is to work on psychological compatibility by modifying what can be modified in behavior and in accepting the environment of the new natural and social environment imposed on those who have been subjected to change of their physical means, by working to accept the money can be amended quickly and be done by:

1. Creating social ties with the new environment. The human atmosphere in the serious environment is more important than the geographical environment. Hence, work begins to meet some of the expectations of the internal emotional needs to increase psychological immunity against psychological collapse due to the burdens and requirements of the new environment.
2. In shock, conscious rational thinking is interrupted, and unconscious language is activated through dreams, nightmares, and defensive reactions. Let us remember that the unconscious is the speech of the other, so through the cities of the hand of support, acceptance and participation of our brothers, who have resolved this shock victim, we are working on the principle of social justice, and noble human sense and thus support the awareness of reality (Marcelina Hassan, 2013).

Psychological Treatment and Rehabilitation: With increased survival of patients with significant burns, the new focus is on the psychological challenges and recovery that these patients must face. Most burn centers use social workers, volunteer counselors and psychologists as part of the multidisciplinary burn team. The psychological characteristics include stressors of the intensive care environment, uncertainty about income, and a struggle for survival. The intensive care environment can be both overstimulating and under stimulating with the monotony of lying in a hospital bed for weeks.

Treatment includes the following points:

1. Protect patient's natural defences and coping strategies
2. Drug management for pain control and to help with sleep
3. Non-pharmacological techniques for pain management
4. Educate and provide support to family members
5. Educate and provide support to staff
6. Drug management of anxiety, pain, sleeplessness, and depression
7. Brief counselling
8. Teach non-drug approaches to pain management (relaxation, imagery, hypnosis, virtual reality) (Shelley, 2004 and Jackson, 2015).

Psychological Support Program

The study was conducted on burn patients who entering to the Hammam Al-Alil field hospital in Mosul with the beginning of November 2018, where psychological support was intensified

in parallel with medical treatment, with the assistance of psychologists and specialists according to a specific program. Regular sessions were conducted with each patient before, during and after treatment, each session takes 45 to 60 minutes per day as shown in figure (3). In these sessions the psychologist focuses on the self-esteem for adults, necessity of not desperation and not surrendering of patient, increasing the patient's hope, helping them develop ideas and not to limit their thinking about the accident and its causes. As well as through educational programs and entertainment for children which helps them accept that what has happened can be repaired and distraction to relieve pain as shown in Figure (4).The study included comparing the results of the months of November and December 2018 after psychological support and the results of October 2018 before psychological support for patients. The impact of psychosocial support was studied, the calculation of the results for the months of November and December 2018 were done statistically comparing with the results of October for the same year depending on the number of patients entering each month and calculating the number of dead and patients who are treated. Where patients were classified for their sex and their ages both above and under 5 years. The total number of burn patients who were admitted to the hospital in October, November and December 2018 are 40, 32 and 49 respectively. The patients were classified according to their sex and their ages (above and under 5) as shown in Table (1).

Table 1. Patients Entered the Hospital

	Month	Total Patients	Male		Female	
			Under 5	Above 5	Under 5	Above 5
1	October 2018	40	8	3	3	26
2	November 2018	32	7	7	4	14
3	December 2018	49	9	14	7	19

Fig. 3. Psychological Sessions Hospitalized

RESULTS AND DISCUSSION

After the management of burn patients (medical treatment) and daily dressing, the effect of the psychological support is appeared clearly on the healing of patients in November & December months in comparing with October. From the results (Before and After Intensifying Psychological Support): In October 2018, results gave a very clear picture of patient surrender and lack of self-confidence as well as lack of self-esteem in addition to refuse their reality after the incident and not to get out of the shock caused by the incident, this was demonstrated by the number of deaths for the patients that their TBSA % is close relative to the number of deaths in November and December respectively as Table (2) and represented in Figure (5) where the principle of attachment to life was evident and to adapt to reality, a sense of hopeful, confidence in the possibility of recovery, and accept themselves with work to improve their reality for the better. In October, the results showed that out of eleven children, four children died, in November, the results showed that all children improved and in December, the results showed one child died out of sixteen children.

Fig. 4. Educational Programs for Child

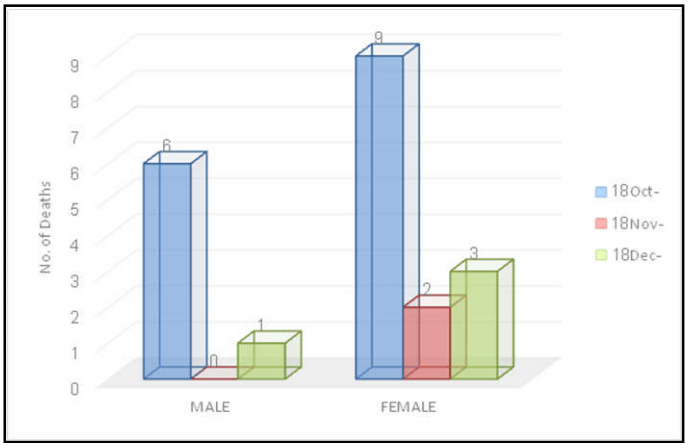

Fig. 5. Death Cases Before and After Intensifying Psychological Support

Table 2. Death Cases of Burn Patients

	Month	Total Patients	Number of Death Cases			
			Male		Female	
			Under 5	Above 5	Under 5	Above 5
1	October 2018	40	3	3	1	8
2	November 2018	32	0	0	0	2
3	December 2018	49	1	0	0	3

This shows the important efficiency of psychological support for children and the extent of the child affected by the

psychological situation. It should also be noted that the chance of survivors in pain control was greater because the techniques of the distraction Because intentional concentration is limited and a person cannot attend more than one stimulus at a time, distraction creates a realistic environment for patients to absorb themselves during painful actions, thus taking focus away from discomfort.The results showed great importance in supporting of the family to the patient manifested in raising his morale, his response to treatment, reduce anxiety, reduce emotions and enhance self-confidence, the most of patients who received psychological support from their families, where their health improved at a very typical time and their reaction was very positive.

Conclusion

After applying the psychological support program, it was concluded that:

1. Death rates in November and December decreased significantly by 6.3% and 8.2% respectively, compared with October, in which the deaths rate was 37.5% of admitted patients, the reason is the magnitude of the effect of psychosocial support, which gives a direct incentive to stay alive.
2. The rate of child survivors is higher than in adults, in November and December, it was 100% and 93.8% respectively while it was 63.6% in October, this is because their psychological responses differ from adults, distraction and play techniques are valuable with the benefits of medical treatment.
3. Modern distraction methods such as digital games and virtual reality have a very positive effect on the healing of burn patients and reduce the pain resulting from change of dressing.
4. Psychological support reduced the length of stay of burns patients in the hospital, this is due to increased self-confidence, self-esteem, reduced anxiety, increased desire to continue life and satisfaction due to psychological support.
5. Family members of the patient have a direct impact on the encouragement of patient to make a decision regarding his care.

REFERENCES

Aidan T., Keith C., "Pain in The Patient with Burns", Continuing Education in Anesthesia, Critical Care & Pain, Vol.4, No.2, PP 58, 2004.

Avinash D., Sushma S., Aruna K., "Psychological issues in Adult Burn Patients", *Delhi Psychiatry Journal*, Vol.16, No.1, PP 24-25, 2013.

Biryala H., "Body Image in People with Deformities Caused by Burns", PP 15-37, 2013.

Fiona Wood, "Burn Injury Model of Care", Western Australian Department of Health belongs to the State of Western Australia, PP 12, 2009.

Hans H., Swee C., Erik F., "War Surgery", Field Manual, 2nd Edition, PP 700-710, 2015.

Hossein Ebrahimi, Hossein Namdar, Mansour Ghafourifard, Mohammad Ghahramanpour, Saeed Musavi, "Effect of Virtual Reality Method and Multimedia System on Burn Patients' Pain During Dressing", *Journal of Clinical and Analytical Medicine,* PP 486, 2018.

https://www.who.int/violence_injury_prevention/other_injury/burns/en/.

Jackie S., Kirk R., Susan L., "The Psychology of Burn Care", *Journal of Trauma Nursing*, Vol.13, No.3, PP 105-106, 2006.

Jackson K., Lauderback H., "Psychosocial Aspects of Burn Management in a Changing Model of Care", *Austin Journal of Emergency and Critical Care Medicine*, Vol.2, No.5, PP 1-2, 2015.

Jan Koller, Textbook for students of general medicine and dentistry, Comenius University Bratislava, "Burns", PP 92, 2014.

Mahdi E., Mina A., Soghra R., Mohammad A., "The Healing Effect of Amniotic Membrane in Burn Patients", World Journal of Plastic Surgery, Vol.5, No.1, PP 39, 2016.

Marcelina Hassan, "Psychological Support is a Community Necessity", PP 18-22, 2013.

Medecins Sans Frontieres, "Clinical Guidelines - Diagnosis and Treatment Manual" PP 285-292, 2018.

Montreal Children's Hospital-Mcgill University Health Center, "The Management of Burn Trauma in Children and Teens", PP 13, 2015.

National Programme for Prevention, Management and Rehabilitation of Burn Injuries (NPPMRBI) under Ministry of Health and Family Welfare Government of India, "Practical Handbook of Burns Management", PP 15, 2010.

Shelley A., David R., "Psychosocial Aspects of Burn Injuries", *British Medical Journal*, Vol.329, No.7462, PP 391-393, 2004.

Soliane Q., Maria E., Paulo R., Jerusa C., Mayara d., Maurício J., "Use of virtual reality for treating burned children", *Brazilian Journal of Nursing*, Vol.70, No. 5, PP 1292, 2017.

Stephen F., Siddharth N., "Burns in children", Continuing Education in Anesthesia, Critical Care & Pain, Vol.7, No.3, PP 76-79, 2007.

****