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The relationship between prompt treatment and preserving the lives of burn patients

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ABSTRACT
First aid should be administered as soon as possible after the accident for best results in burn care. A sufficient understanding of how to treat burns using first aid helps lessen the severity of the injury. Thus, the purpose of this study is to determine the extent of first aid professionals' knowledge, attitudes, and information sources regarding treating burn patients in Saudi Arabia. To evaluate the knowledge, attitudes, and information sources on first aid for burns among those sent to the Burns Center in Saudi Arabia, a questionnaire-based survey was carried out.. In this survey, the appropriate sampling method was adopted. The variables consist of one variable, namely the age of first aid providers. The study showed that there are no statistical indications of the age of the aid providers on the extent of knowledge of the correct or proper ways of providing services. The survey responded to a total of 400 individuals. The average age of participants was 30 years. The study showed that there was awareness of the initial procedures for dealing with burns, both with regard to recording all information about the injury and also the correct handling of burns, identifying the nature and degree of burning and dealing with the degree appropriately.The results of the study showed that the average responses of the sample of paramedics to the study are positive with regard to high rates of awareness of the correct controls and procedures for dealing with burns sufferers at the time of crisis, indicating an increase in the awareness of paramedics of the importance of following the right and proper steps in the initial diagnosis of burns.

Keywords: Burns, First Aid, First Degree Burns, Painkillers, Bandages

INTRODUCTION

Emergency Medical Services (EMS) offers treatment to patients in a range of environments, ranging from calm to hustle. Emergency Medical Service Providers (EMS) often encounter difficulties in reaching patients (to care for them) and getting them out of the scene (for transport). Examples include burns to homes, factories, or public places. Accordingly, they are difficult and require the availability of many subjective and personal skills in the second place and medical awareness of the methods of ambulance of the injured before they are transported at the scene if possible or transported and preliminary ambulance procedures are conducted urgently and correctly.1,2

Burns are an unexpected result of exposure to severe muscular, chemical, electrical, or skin burns. Burns vary in diversity and severity. Burns are usually classified into three degrees: First-degree burns,it affects the outer layer of skin (skin). It causes redness, pain and swelling. It's like a light sunburn. Usually heal within a week without leaving scars.8,12

Second degree burns, it affects the outer layer and the inner layer of the skin (dermis). Cause the appearance of painful red blisters. You may leave scars. Third-degree burns, Destroys the outer and inner layers of the skin, and may reach muscles and bones. The scorched area appears in white or black and may be dry. There is no pain due to nerve damage. Requires immediate medical attention.15

The primary task of paramedics is to distinguish between different types of burns and ways of dealing with them correctly from the first moment, since this good and correct treatment has many consequences. The first is the extent of the patient's ability to recover rapidly from burns as well as the extent to which more complications occur in the future.13,6

In order to develop standardized clinical treatment plans and offer reference opinions to health professionals involved in burn care, it is necessary to determine the extent to which paramedics are aware of how to create clinical consensus for the treatment of small to moderate burns caused by thermal factors by incorporating evidence-based medicine and expert opinions. A set of useful recommendations in four domains—pre-hospital first aid, non-surgical care, surgical treatment, and infection management—are included in this compatibility. It

is important to note that in order to create treatment regimens and further standardize clinical terminology, it is necessary to measure the awareness of paramedics in the right ways to deal with burn patients in the initial hours of injury, which is the main goal of this paper.9,11

DISCUSSION

When burn injuries were listed as a "major public health problem" in the WHO's burn prevention and care plan in 2008, they became a constant source of attention in the field of global public health. The severity of the issue is demonstrated by recent estimates of burn injuries from the WHO, which also show a striking incidence across age and socioeconomic groups. With a rate of 4.5 per 100,000 people, low- and middle-income countries account for almost 75% of burn deaths.17,7

One prevalent form of trauma that is avoidable is burns. This kind of shock is typical worldwide. Burns can occur from a number of things, some of which include cooking food in hot oil, drinking coffee and tea straight from a hot bowl, and using hot water directly from a water heater. The most effective strategy to lessen the impact of this health issue on society is through primary prevention, which is crucial. These first aid measures can help lessen burn complications since helping victims receive first aid is essential to treating burns. However, first aid lowers the expenses related to burn complications and the tissue damage they cause. This, in turn, lessens the need for surgical procedures to repair the tissue damage.8,16

Providing first assistance can lessen the extent of the burn and the ensuing tissue damage, which is the first step towards managing burns properly.1.

the most significant issues that require consideration. Because of this, childcare workers need to know a lot about first aid. Mothers are especially vital. The methodological review's findings demonstrated that caregivers' familiarity with earlier research was only minimal. The results of the studies included in this systematic review, however, were inconsistent, which may have been caused by variables influencing caregivers' familiarity with first aid for pediatric burns.

A cross-sectional study conducted in the United Kingdom and the United States of America revealed that few children receive burn-appropriate first aid.15

According to the results of another study conducted in Australia, only 22% of burned children received appropriate first aid. This problem may be the result of caregivers' lack of knowledge of burns first aid. One reason for caregivers' lack of knowledge may be linked to weak sources of incorrect information and information. The results of a study conducted in the United Kingdom showed discrepancies in organizations' recommendations for first aid in burns.17

In addition, the results of another study showed that the accuracy of burn first aid information on websites in the United States, New Zealand and Australia is low.16

Therefore, health managers and policymakers must provide a platform for accurate and correct first aid information for burns. The results of a systematic review also showed that interventions such as face-to-face training could improve children's caregivers' knowledge of first aid for burns.12

Results of a study (2022, D'CUNHA) showed that there are some problems facing paramedics with regard toThe level of knowledge of burned care providers is the first and primary role of burn first aid providers that the study showed was average.

The 2021,HOLBERT study also indicated that there is a decrease in first aid providers' awareness of the correct and proper arrangement of procedures for dealing with burns sufferers during crises.

Burns cause significant harm to the skin and surrounding tissues, signaling a critical medical emergency that has to be treated right away. 1,2 Burns can result in severe injuries that can affect a person's appearance, psychological well-being, and ability to operate in daily life. 3,4 Applying first aid for burns as soon as possible is essential to minimizing tissue damage and lessening pain. 5. A sufficient understanding of how to treat burns using first aid helps lessen the severity of the injury.13

Optimal management of acute burns

Always start with first aid. Using cold water immediately from the early hours of the injury can significantly affect burn results and reduce health care complications and costs. 6 Many studies have evaluated the level ofAwareness and attitude of the world's different populations14

in relation to first aid. Despite the fact that first aid is simple, the majority of these research have revealed a lack of public awareness regarding burn first aid. The majority of people treat burn injuries with various topical medications that have no scientific basis. The substances that are most frequently utilized are ice, eggs, oil, honey, vinegar, flour, toothpaste, and herbal medications. Complications from burns are increased when first aid techniques are not used properly. 5, 7 Low blood pressure is caused by the use of ice, which narrows blood vessels since some of the ingredients employed are non-sterile and encourage bacterial proliferation on the wound's surface, especially in youngsters. On the other hand, the findings of certain research indicated that individuals who took part in thethe aid course.8–10

Methods

The present research paper relies on the analytical descriptive approach since it is the appropriate approach to detect the relationship between paramedics' awareness of the first aid provided to burn patients and the potential to contribute to their future life-saving by drawing on models distributed to a sample of paramedics to disclose their information on the handling of burn patients and drawing findings on their response and linking them with the results of previous studies in the same area of transcriptions and percentages.

Design

Statistical analysis: frequencies and percentages of class variables were calculated and averages and standard deviations of continuous variables were calculated.Statistical analysis was conducted using the SPSS v 16 program (Social Science Statistical Package) using non-standard metric analysis. Trust periods were set at 95%, and the $p \leq 0.05$ value was considered statistically significant.

Study setting

Analytical descriptive study was conducted based on a questionnaire form and distributed to a sample of paramedics in emergency departments in the burns unit during the period June-2024 to August-2024

RESULTS

Characteristics of study participants:

A total of 400 participants responded to the survey were All of them are previously burned providers. The age has been determined as an intermediate variable to indicate whether there is a relationship between the medic's age and his first aid information to be provided to burns sufferers.

Table 1.0 : Demographics of participants

Age

age	percentage	Repetitions
20-25	25%	100
26-30	37.5%	150
31-40	17.5%	70
Over 40	20%	80
total	100%	400

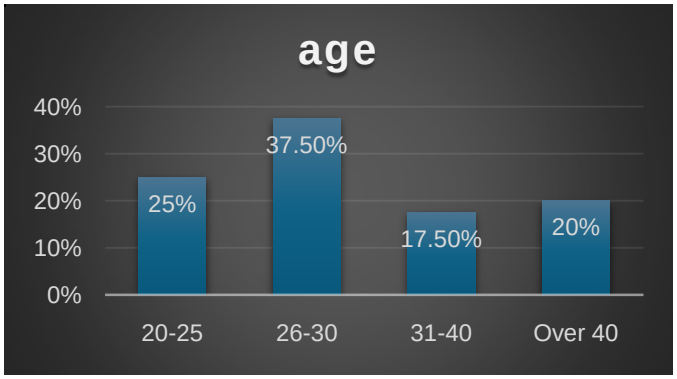

Figure 1.0 : Demographics of participants

The figure shows the responses of the sample according to the age variable and is the approved variable to see whether there are differences of statistical connotations attributable to age in the extent to which paramedics are aware of the correct and proper ways of dealing with burns at different levels of burns.

Table 2.0 : Paramedic responses to item(Burning condition must be assessed first)

Burning condition must be assessed first	percentage	Repetitions
Strongly agree	32.5%	130
Agree	37.5%	150
Neutral	17.5%	100
Disagree	20%	20
Strongly Disagree	0%	0
total	100%	400

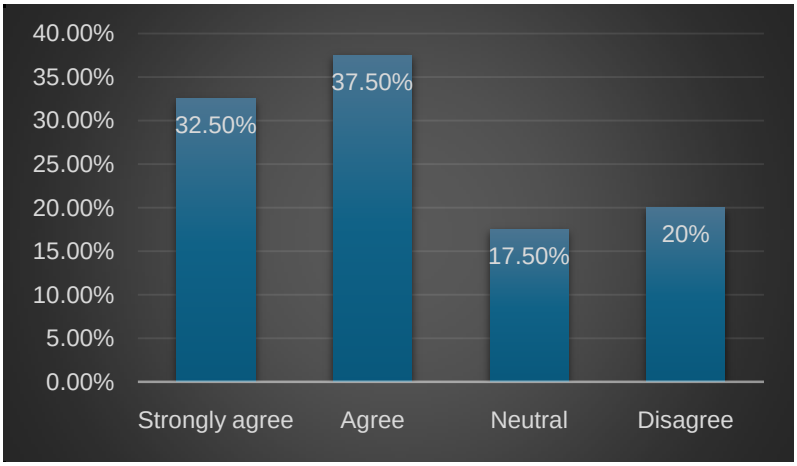

Figure 2.0 : Burning condition must be assessed first

The current format illustrates the responses of the sample study from paramedics to the item that the burning condition should be assessed in principle and accurately and clearly written before assistance is initiated. There is a consensus of the sample that this procedure should be carried out as a precautionary measure to determine the degree of burning and this is similar to the study (HALIMAH,2024) which indicated that the assessment of the burn condition to ensure the proper and appropriate procedures to deal with the situation

Table 3.0 : Paramedic responses to item (In case of first-degree burns, the burn must be cooled first to help calm the pain)

In case of first-degree burns, the burn must be cooled first to help calm the pain	percentage	Repetitions
Strongly agree	52.5%	210
Agree	35%	140
Neutral	10%	40
Disagree	0%	0
Strongly Disagree	0%	0
total	100%	400

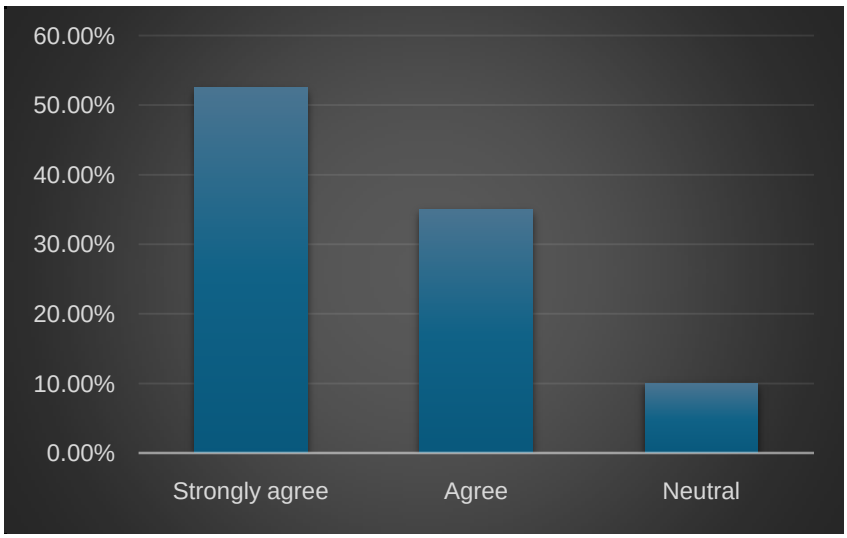

Figure 3.0 : In case of first-degree burns, the burn must be cooled first to help calm the pain

The current form shows the responses of the study sample of paramedics on an item in the case of first-degree burns, the burn must be cooled first to help calm the pain). Since there is a consensus of the sample that this procedure should be carried out as a basic procedure while dealing with burns sufferers, this is similar to the study (D'CUNHA, 2022) as well as the study (HOLBERT,2021) which indicated that primary burns are one of the most painful burns for those who suffer from them, which increases with a large cure from second or third degree burns

Table 4.0: Paramedic responses to item (Burning bubbles should not be touched)

Burning bubbles should not be touched	percentage	Repetitions
Strongly agree	25%	100
Agree	37.5%	150
Neutral	17.5%	70
Disagree	20%	80
Strongly Disagree	0%	0
total	100%	400

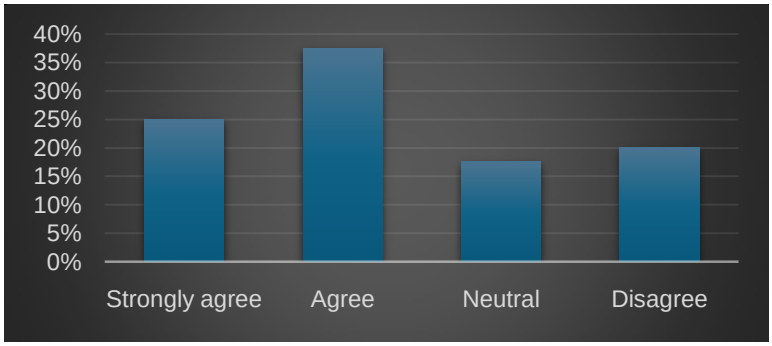

Figure 4.0 : Paramedic responses to item (Burning bubbles should not be touched

The current format shows the responses of the study sample of paramedics to an item in which the burning bubbles should not be touched. There is a consensus of the sample that this procedure should be carried out as a basic measure in dealing with burns sufferers. This is similar to the study (FALLATAH,2022) as well as the study (SABRY, 2021) which indicated that touching bubbles directly may lead to further negative effects.

Table 5.0 : Paramedic responses to item (Snow should not be used directly on burned areas)

Snow should not be used directly on burned areas	percentage	Repetitions
Strongly agree	20%	80
Agree	62.5%	250
Neutral	12.5%	50
Disagree	5%	20
Strongly Disagree	0	0
total	100%	400

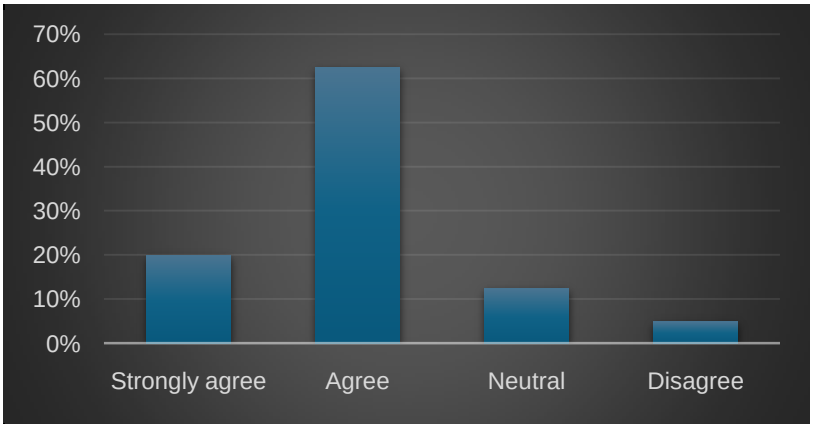

Figure 5.0: Snow should not be used directly on burned areas

The current figure shows the responses of the study sample of paramedics to an item in h (snow should not be used directly on burned areas). Since there is a consensus of the sample that this procedure should be carried out as a basic procedure while dealing with burns sufferers, this is similar to the study (D'CUNHA, 2022) as well as the study (HOLBERT,2021) which indicated that the use of snow directly on burns may lead to further negative effects later, especially with people in homes not aware of this risk but must be followed and noted permanently and continuously

Table 6.0 : Paramedic responses to item (In case of second-degree burns, the burning area must be covered with a damp bandage)

In case of second-degree burns, the burning area must be covered with a damp bandage	percentage	Repetitions
Strongly agree	37.5%	150
Agree	20%	80
Neutral	22.5%	90
Disagree	20%	80
Strongly Disagree	0%	0
total	100%	400

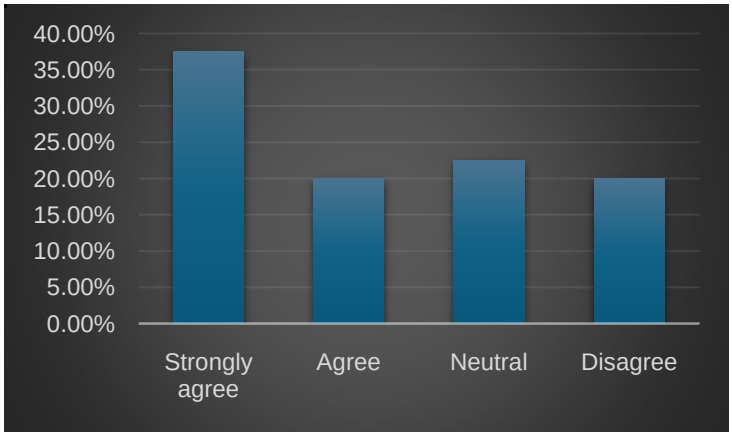

Figure 6.0 : Paramedic responses to itemin case of second-degree burns, the burning area must be covered with a damp bandage)

The current form shows the responses of the sample of the study of paramedics to an item. The condition of second-degree burns, the burning area must be covered by a wet bandage. There is consensus from the sample that this procedure should be carried out as a basic procedure while dealing with burns sufferers. This is similar to the study (FALLATAH,2022) Also a study (SABRY, 2021) that indicated that touching bubbles directly may lead to further negative effects later

Table 7.0 : Paramedic responses to item (Burnt clothes stuck on the skin should not be removed)

Burnt clothes stuck on the skin should not be removed	percentage	Repetitions
Strongly agree	40%	160
Agree	37.5 %	150
Neutral	22.5%	90
Disagree	0%	0
Strongly Disagree	0%	0
total	100%	400

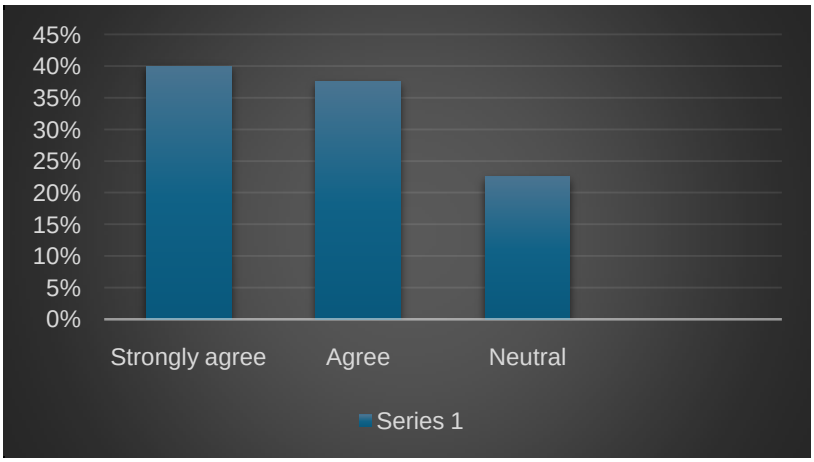

Figure 7.0 : Burnt clothes stuck on the skin should not be removed

The current format shows the responses of the sample study of paramedics to an item that should not remove burned clothing stuck in the skin. There is consensus from the sample that this procedure should be carried out as a basic measure while dealing with burns sufferers. This is similar to the study (FITRIA,2022) as well as the study (MAHFOUZ,2021) which indicated that touching bubbles directly may lead to further negative effects later

Table 3: the mean, standard deviation, and relative importance of sample responses

The item	The mean	Standard deviation	relative
Burning condition must be assessed first	3.54	0.918	%70.89
In case of first-degree burns, the burn must be cooled first to help calm the pain	3.96	1.023	%59.24
Burning bubbles should not be touched	3.67	1.398	%53.31
Snow should not be used directly on burned areas	2.96	1.363	%59.24
In case of second-degree burns, the burning area must be covered with a damp bandage	3.46	0.668	%49.11
Burnt clothes stuck on the skin should not be removed	3.54	0.922	%70.89

The results of the study showed that the average responses of the medics to the study are positive with regard to high rates of awareness of the correct controls and procedures for dealing with burns sufferers at the time of crisis, including the beginning of the correct diagnosis of the infected and the diagnosis of the burn and its degree. Accordingly, the nature of each infected person is dealt with separately and based on his personal and subjective needs in order to ensure that he period of safe treatment and skip or avoidance for future complications.

CONCLUSION

This study reveals high rates of first aid knowledge of burns and satisfactory practices among participants in Saudi Arabia, demonstrating increased interest in working on targeted educational and awareness campaigns. That's what it's like to achieve these results.

In burn care, we recommend implementing evidence-based burn first aid practices, regulating the use of antibiotics, and providing specialized training especially for acid attacks. Collaboration between policymakers, health care workers and community leaders is vital in advocating and achieving these goals and promoting knowledge and best practices of burns first aid.

The study provides a set of recommendations, the most important of which is

Burns Treatment: Important Steps for Recovery

The treatment of burns depends on the severity of the injury and its location. The first and most important step is to properly provide first aid. After that, specialized medical care may be required.

Cooling area: Place the scorched area under cold running water for 15-20 minutes.

Remove clothing: Remove any clothing or jewelry around the burned area gently, unless glued to the skin.

Burning Cover: Cover the burn with clean and dry bandage.

Pain Relief: Use mild painkillers such as paracetamol, according to the doctor's instructions.

Seek medical help: If the burn is severe or covers a large area of the body, or if it is in the face, hands or feet, consult the doctor immediately.

Medical treatment of burns:

Wound cleaning: The doctor cleans the wound and removes the dead tissue.

Antibiotic therapy: The doctor may prescribe antibiotics to prevent infection.

Bandages: Burning is covered with special bandages that help to heal.

Surgery: In severe cases, surgery may be required for skin grafting.

Physiotherapy: physiotherapy helps restore movement and function to the affected area.

Factors affecting burn healing:

Burning intensity: Deep burns take longer to heal.

Burning site: burns to the face, hands and feet may have greater functional effects.

Age and general health: People who are elderly or suffering from chronic illnesses may have more difficulty recovering.

Important burn care tips:

Keep the wound clean: Change the bandages regularly in accordance with the doctor's directions.

Avoid infection: Wash your hands thoroughly before and after wound care.

Avoid scratching the wound: scratching the wound may lead to infection and delay healing.

Avoid sunlight: Protect the affected area from direct sunlight.

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