ORIGINAL RESEARCH

BUILDING CAPACITY FOR THE APPROPRIATE MANAGEMENT OF WOUNDS IN A DEVELOPING COUNTRY

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Abstract

Background: Wounds are said to be complex when factors such as the aetiology, or the presence of co-morbidities make them difficult to manage and delay healing. The presence of a wound often results in painful distress, poor quality of life and high financial burden. Identifying and promptly commencing the appropriate therapy for wounds of various levels of complexity facilitates timely wound healing. Training of health care professionals who routinely manage patients with wounds will increase their capacity to improve their wound care practices, thereby improving the outcome of wound care. The Plastic and Reconstructive Surgery team organised a 2-day workshop for healthcare professionals across the state. This study aimed to evaluate the short-term outcome of a maiden wound care workshop, highlighting the potential role of this initiative in enhancing appropriate wound care therapy in resource-limited settings.

Methods: A review of the participants trained in the 2-day Advanced Wound Care Workshop was done. The Pre-test and post- test results were obtained using Google form questionnaires and data analysed. The results were presented as texts, charts and tables.

Results: A total of 23 participants registered for this maiden workshop, including 5 males and 18 females. The professional distribution of the participants was 14 nurses and 9 doctors. There was a significant difference in the median pre-test score of 45% with a range of 8.3% - 91.7%, compared to the median post-test score of 91.7% with a range of 75% - 100% (p 0.05). The feedback indicated 100% satisfaction in the knowledge and skill gained in selecting the appropriate wound care solution, and satisfaction with the training quality. The participants indicated that they were willing to recommend subsequent wound care workshops to their colleagues.

Conclusion: The maiden edition of the advanced wound care workshop improved the skills and knowledge of healthcare providers in managing wounds. This initiative showcases the potential impact of structured wound care workshops in promoting the routine application of appropriate wound care techniques.

Keywords: Wound care workshop, chronic wound, complex wound, wound specialist, wound therapy

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INTRODUCTION

An open wound refers to a breach in the integrity of the skin, or mucus membrane which may have the potential to lead to serious complications or even death if appropriate wound therapy is not promptly instituted .[1] There have been some differing views about the ideal therapies for various types of wounds, but the central goal has been to promote wound healing in a timely manner. Wounds can be classified in various ways including open or closed, acute or chronic, and simple or complex.[2] Complex wounds are those that have the tendency to progressively worsen due to factors such as the aetiology, or the presence of co-morbidities, if expert wound care techniques are not promptly instituted.[3]

In low-resource settings where there is a shortage of wound care specialists, wounds of varying levels of severity are routinely being managed by health service providers who have received no training in wound care. Wound care done by untrained health workers usually result in complications such as wound infection, delayed wound healing and development of contractures.[3,4] In some cases wound sepsis may progress to septicaemia which poses an increased threat to life and an increase in the financial burden of the patients with wounds who may be expected to make out-of-pocket payments for their healthcare services in developing countries.[5]

The need to prioritise strategies that promote appropriate wound care services in low- and middle-income countries cannot be overstated as the presence of a wound often results in painful distress, poor quality of life and high financial burden for the patients. Identifying and promptly commencing the appropriate therapy for wounds of various levels of complexity facilitates timely wound healing. Training of health care professionals who routinely manage patients with wounds will increase their capacity to improve their wound care practices, thereby improving the outcome of wound care.[6] To address this gap in wound care services, [the] Plastic and Reconstructive Surgery team organised a 2-day workshop for healthcare professionals across the state. This study aims to evaluate the short-term outcomes of this maiden workshop, highlighting the potential role of this initiative in enhancing appropriate wound care therapy in resource-limited settings.

METHODS

This is a descriptive study of the results and feedback from the 2-day Advanced Wound Care Workshop conducted on the 5th and 6th of November 2024 at the Rivers State University Teaching Hospital (RSUTH). RSUTH is a tertiary hospital that renders health care services to people from within and outside Rivers State.

Electronic fliers with the workshop content, resource persons and target participants were disseminated to various WhatsApp platforms for health care workers in Rivers state.

The workshop was targeted at doctors and nurses who routinely treat wounds in their practice. All the participants who registered via the link on the electronic flier were eligible to attend the workshop. The workshop was a combination of didactic lectures and practical sessions. The topics were centred around types of wounds and wound healing, prevention and management of wound infection, pain management in wound care and current best practices in wound care.

Optional pre-test and post- test questions, as well as post workshop feedback were obtained from the participants via Google form questionnaires, and data analysed. The Wilcoxon sign rank test was used to analyse the difference between the pre-test and post- test scores and the level of significance set at $P < 0.05$. The feedback responses were converted from a 5-point Likert scale to 3-point scale for analysis. The results were presented as texts, charts and tables.

RESULTS

A total of 23 participants from 9 hospitals attended the workshop. Only 18 participants and 14 participants submitted the pre-test and post-test Google form questionnaire respectively.

The participants comprised of 18 females and 5 males. Table 1. below shows the gender distribution.

Table I. Gender distribution of participants

Gender	Number
Female	18 (78.3%)
Male	5 (21.7%)
Total	23 (100%)

The professional distribution of the participants comprised of 14 nurses (12 females and 2 males) and 9 doctors (6 females and 3 males). Table 1. Shows the professional distribution

Table II. Professional Distribution of participants

Profession	Number
Nurses	14 (60.9%)
Doctors	9. (39.1%)
Total	23 (100%)

Participants' Performance

The median pre-test score was 45% with a range of 8.3% - 91.7%, compared to the median post-test score of 91.7% with a range of 75% - 100% (p 0.05).The difference between the pre-test and post-test scores was statistically significant at p = 0.003. Figures 1a and 1b show the percentage change in the participants' response to the question on the phase of wound healing where collagen is mainly deposited.

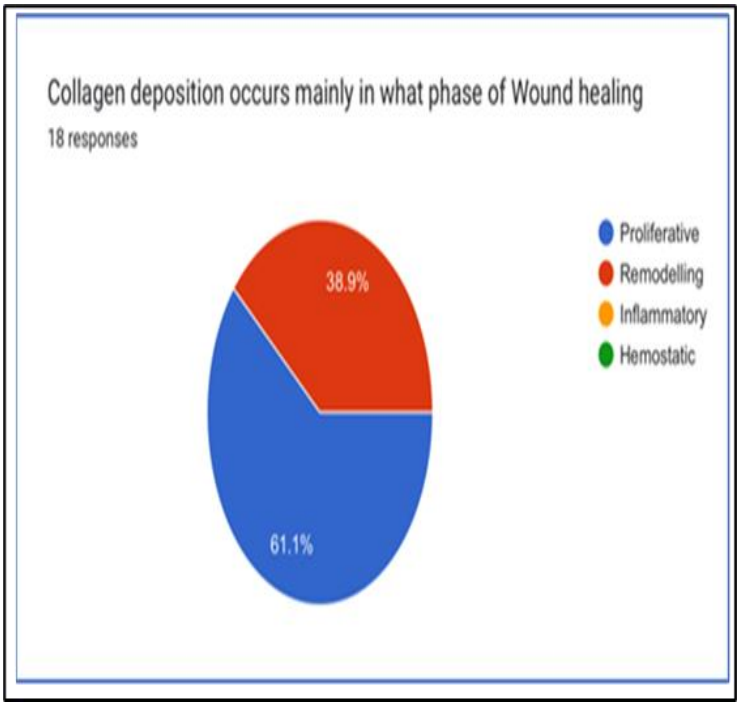

Fig.1a Pre-test collagen response

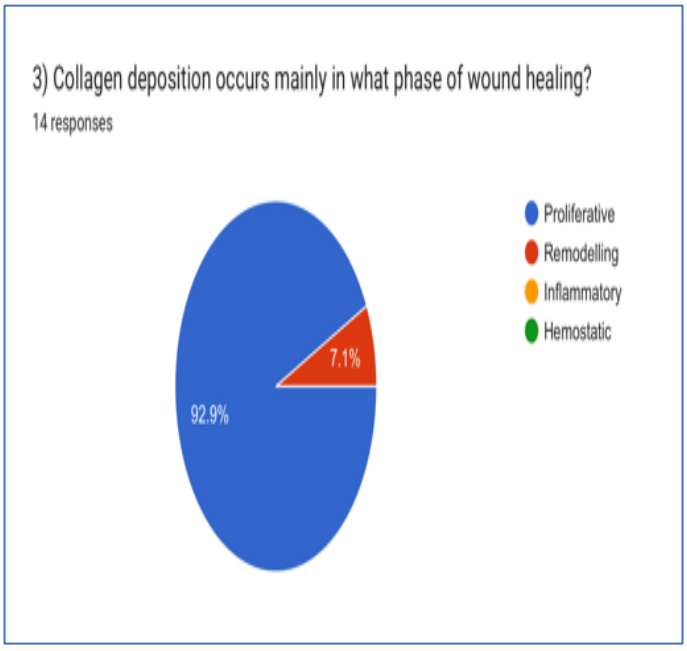

Fig. 1b Post-test collagen response

Figures 2a and 2b show the percentage change in the participants' responses to the dryness of wounds and wound healing.

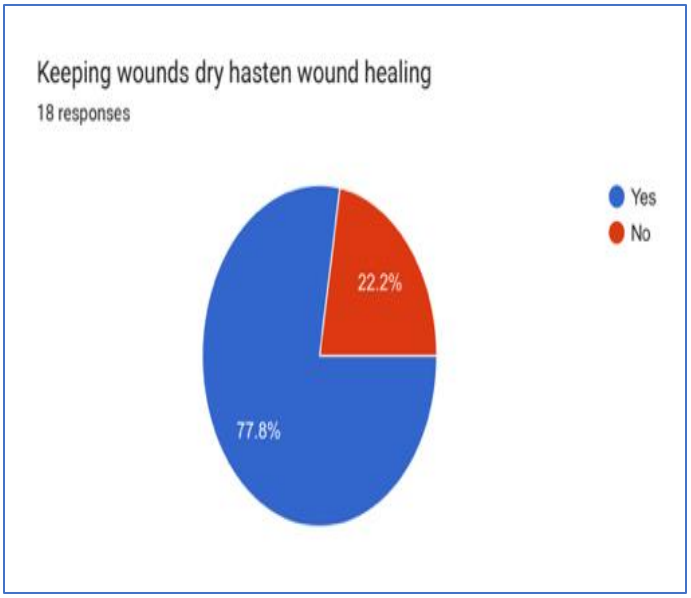

Fig. 2a Pre-test response on dry wounds

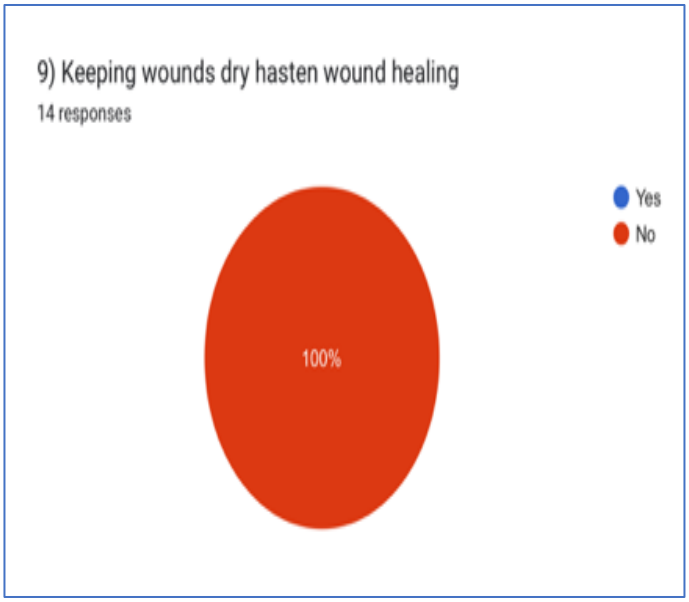

Fig. 2b Post-test response on dry wounds

Figures 3a and 3b show the percentage change in the participants' responses to the question on Eusol as an essential wound dressing agent.

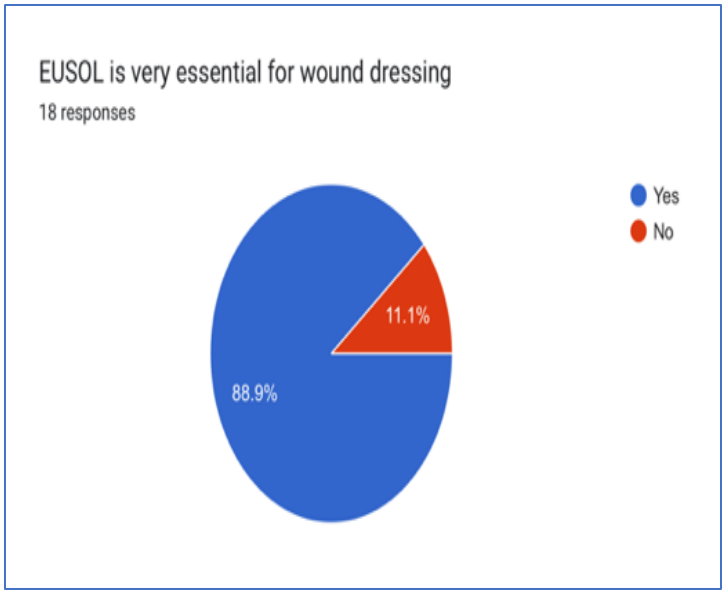

Fig. 3a Pre-test response on Eusol.

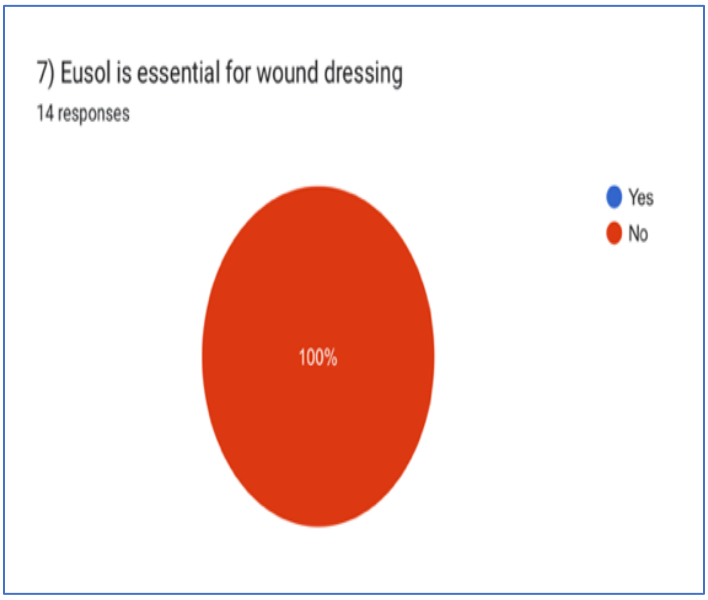

Fig. 3b Post-test response on Eusol

Participants' Feedback

A total of 18 participants (78.3%) and 14 participants (60.9%) completed the optional pre-tests and post-test assessments, respectively. The post- test results showed that all participants (100%) agreed that they were satisfied with the educational content of the workshop. All participants (100%) agreed that the skills gained from the practical session was very useful to their clinical practice. Overall, the participants (100%) indicated that they were satisfied with the knowledge gained from the workshop. All the participants (100%) indicated that they will advise their colleagues to register for the next edition of the workshop.

DISCUSSION

Several options of wound management have been in existence from time immemorial. The current knowledge available to wound care experts is based on the understanding that wounds have diverse aetiology and exhibit various characteristics that influence the choice of the appropriate management. The introduction of some techniques and dressing agents such as the application of negative pressure wound therapy and the use of silver based dressings are some of the strategies that have facilitated the healing of some complex wounds.[7,8] Some participants in this study that comprised of both doctors and nurses, first learned about these and more current trends in wound management through their participation in the advanced wound care workshop.

The females were the majority in this workshop with a population of 18 (78.3%) compared to the male population of 5 (21.7%). This finding is similar to a study carried out in Spain to assess the level of the knowledge of management of chronic wounds amongst nurses, which showed 87% female and only 13% males participants, thereby reflecting a higher female population amongst wound therapists.[9] In this study, the majority of participants were nurses accounting for 14 (60.9%) and while doctors were 9 (39.1%). This can be explained by the team approach to wound care in many healthcare settings where the implementation of the wound care plan prescribed by the doctor is routinely carried out by the nurses.[3,4]

This study showed that the participants gained a better understanding of the process of wound healing and the role of collagen as almost all the participants answered correctly about the phase of wound healing where collagen is mainly produced in the post test assessment. A widely-held belief that keeping wounds dry hastens wound healing was corrected, as several studies have shown that epithelial migration is faster in a moist wound thereby promoting earlier wound healing.[10] The post-test results showed that all the participants understood that dryness does not hasten wound healing.

All the participants who partook in the post- test assessment agreed that their expectations were met by the knowledge and skills gained during the advanced wound care workshop. They also indicated that they would recommend subsequent wound care workshops to their colleagues. Participants' feedback on their level of satisfaction after workshops serve as a guide to assess the immediate outcome and effectiveness of the workshop.[11]

LIMITATION

The small number of the participants is considered a limitation, but this might have been influenced by the fact that the workshop was a new initiative. Strategies that increase the awareness about subsequent wound care workshops may help to increase the participant population in the workshop.

CONCLUSION

The findings of this study show that the maiden edition of the advanced wound care workshop improved the confidence and knowledge of healthcare providers in managing wounds. This initiative showcases the potential impact of structured wound care workshops in promoting the routine application of appropriate wound care techniques.

CONFLICT OF INTEREST

The authors have no conflict of interest.

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