

THE EFFICACY OF WORKSHOP ON BODY FLUIDS IN HEALTH AND DISEASE AND ITS IMPACT ON NURSES TRAINING

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ABSTRACT

Objective: To determine the efficacy of workshop on body fluids in health and disease and its impact on nurses training

Methodology: Nurses attended an interactive lecture-based workshop on body fluids in health and disease. Participants had to accept an invitation to the presentation prior to the training event. They completed a multiple choice question (MCQ) test, derived from topics covered in the presentation, prior to the lecture. The MCQ test was repeated after the lecture to assess retention and application of knowledge.

Results: Thirty-six nurses participated in the workshop. There was a significant improvement in mean test scores after the lecture when compared with pre-lecture scores (Mean=30.9, SD=4.4 vs. Mean=11.7, SD=3.4, $p < 0.001$). Pre-post data in according to the Kolmogorove- Smirnov test were normally distributed (Asy mp.sig.05, 0.02).

Conclusions: Lecture based interactive workshop on body fluids in health and disease helps improve nurses' knowledge. It also helps in overcoming deficiencies in nurses training.

KEY WORDS: Body fluids, Interactive workshop, Test, Knowledge, Nurses.

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INTRODUCTION

The body fluids contain various electrolytes, nutrients, gases, waste, and special substances such as enzymes and hormones which are dissolved or absorbed in body water. The composition of body fluids is an important factor in homeostasis. The balance of body flu-

ids is critical to health and the development of diseases. Maintaining adequate fluid balance is an essential component of health at every stage of life.¹⁻⁴ Whenever the volume or chemical make up of these fluids deviates even slightly from normal, it result in disease.³⁻⁷ In many disorders it is important for the health care team to know whether a patient's intake and output are approximately equal.⁸⁻²⁰

A multifaceted approach is needed to improve body fluid management. But recent reports have been very critical of the poor standards of practice and training of the health care team in the management of body fluid balance, resulting in a large amount of avoidable morbidity.²¹⁻²³ Surveys among doctors have revealed a poor knowledge of fluid and electrolyte balance. Measures are needed to improve training.^{21,22}

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Nurses are key to preventing, early detection, and treatment of fluid imbalances. As such they must have adequate knowledge on the subject to manage patients' appropriately.^{9,18,23} The nurses should keep themselves update regarding improvement of fluid management in the clinical setting.

A multifaceted approach to tackle current deficiencies in knowledge on improving body fluids in health and disease should include the provision of validated educational opportunities.²¹⁻²³ The workshops are generally perceived as useful for nurses. Therefore, the aim of this study was to evaluate the efficacy of workshop on body fluids in health and disease and its impact on nurses training.

METHODOLOGY

Study Design: This pre-post test experimental descriptive study was conducted in a University Teaching Hospital in the Kocaeli city center in Turkey on January 2009. Nurses working in hospital participated in a teaching workshop organized as part of in service Training Programme.

Interventions: Nurses attended an interactive lecture-based workshop on evaluation of the efficacy of workshop on body fluids in health and disease. Nurses had accepted an invitation to the presentation prior to the training event. A prelecture Multiple Choice Question (MCQ) test was completed by nurses to test their existing knowledge. The MCQ's were derived from topics covered in the presentation. Following the lecture the MCQ test was repeated to assess retention and application of knowledge derived from the interactive lecture. Nurses were

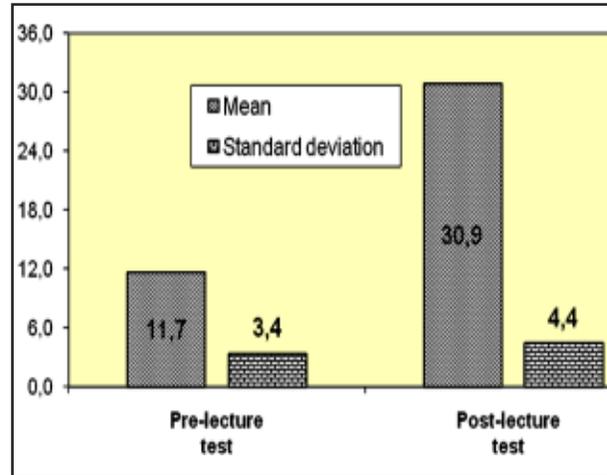


Figure-1: Pre-lecture and Post-lecture test scores.

unaware that they would be tested with an MCQ prior to the lecture or that the MCQ would be repeated at end of the workshop.

Statistical Analysis: Statistical analysis was performed using the SPSS (SPSS for Windows, version 12.0). Mean was used to determine of test scores. The Kolmogorove-Smirnov test was used to determine if data were normally distributed. The Student paired t-test was used to determine if the differences between the pre-lecture and post-lecture test results were significant. Differences were considered significant at $p < 0.05$.

RESULTS

Thirty-Six nurses participated in the workshop. There was a statistically significant improvement in test scores after the lecture when compared with pre-lecture scores (Table-I, Fig-1). Pre-post data (Table-I) in according to the Kolmogorove- Smirnov test were normally distributed (Asymp.sig.05, 0.02)

Tables-I: Pre-lecture and Post-lecture test scores

	Pre-lectureTest (n=36)	Post-lectureTest (n=36)
Mean (standard deviation)	11.7(3.4)	30.9(4.4)
95% Confidence interval	10.5-12.9	29.4-32.4
Kolmogorove-Smirnov test	0.7	1.4
Asymp.Sig	0.5	0.02

Maximum test score = 40
Paired sample Student's test (2-tailed) $p < 0.001$.

This study was undertaken to evaluate the efficacy of workshop on body fluids in health and disease and its impact on nurses training. To assess knowledge, pre- and post-test were performed. Teaching behaviour and learning climate were evaluated by questionnaires. Post-graduate training in general practice aims to develop clinical competence. However, little is known about its effect on trainees' development of competence. Nurses in this study were at nursing training grades and, having qualified four years earlier are expected to have a reasonable understanding of body fluids in health and disease. But the mean pre-lecture test score (Mean=11.7, SD=3.4) was low. This indicates that it is not enough at nursing training grades.^{9,18,23} Workshop on body fluids in health and disease did improve nurses' knowledge as indicated by the significant improvement in post-lecture test scores (Mean=30.9, SD=4.4). Studies on this theme are similar to the results found.²¹ This study shows that using interactive sessions with lectures and multiple choice questions leads to a higher level of nurses' knowledge on body fluids in health and disease. Overall nurses acknowledged the importance and relevance of the subject and felt the workshop was worthwhile.

Amongst the limitations of this study was the small number of nurses who participated. This sample is, therefore, representative of nurses within University Hospital. This study tested immediate recall of knowledge and it remains to be seen whether the knowledge gained as a result of the event will be retained by the nurses and whether their in health and disease fluid management habits will improve as a result. It would be useful to examine nurses' knowledge base and in health and disease fluid management habits sometime after such an event to determine the need for continued and repeated training into this important subject.

In addition, the improvement in the MCQ score could be at least partially attributed to an 'order effect'. It is possible that improvement in post-lecture scores could have happened

without the structured workshop, simply because the nurses had the opportunity to think about the questions again and give a more considered answer. This could have been avoided if participants subjected to the MCQ test were randomised to no intervention and to structured learning groups.

CONCLUSION

Many studies have shown that using interactive sessions with lectures and multiple choice questions improved participants' knowledge on the topic. The findings of this study suggest that greater emphasis needs to be placed on nurses' education of body fluids in health and disease. Providing nurses with information about management of body fluids is essential since it can promote nurse adherence to good practice, self assessment and self reporting of body fluids in health and disease. The information gained in this study will be valuable as a basis for further research and help guide improvements in the management of body fluids with the ultimate goal of enhancing safe and quality care on body fluids. The results of the study would help educational planning for body fluids in health and disease management competencies.

We believe implementing workshops similar to this may be a feasible, effective way to enhance the knowledge and spread good practice of nurses on body fluids in health and disease. In addition it would be reasonable to assume, that a similar method could be adopted to teach nursing students about management of body fluids. Results of this study could be used to guide the development and implementation of continuing education programmes for nursing staff to enhance nurses' knowledge and skills on body fluids.

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