

# A Study to Assess the Knowledge on Importance of Hydration during their Working Hours in Terms of Creating Awareness in a Selected Hospital, Bangalore

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## ABSTRACT

**Background:** The knowledge and practice of nurses in terms of water intake during working hours at Apollo Hospitals, BG Road, Bangalore had not yet been studied in depth.

**Aim:** The aim of the research is to assess the knowledge on importance of hydration during working hours pre and post awareness among the nursing staff

**Design:** This study was conducted at Apollo Hospitals, BG Road, Karnataka Region. Information about knowledge and practice of staff nurses towards water intake during working hours were obtained using a well-structured online questionnaire (Google forms).

**Tools:** Online Questionnaire (Google forms)

**Results:** Around 300 nurses took part in the online questionnaire. A majority of the nurses believed that the daily water intake comes from various sources like plain water, beverages, and a mix of foods. Clear colour of urine was the most common indication of proper hydration (86.4%) and 77.8% of the nurses considered tiredness as a common symptom of dehydration. Knowledge about over hydration was very poor among nurses.

**Conclusion:** Implementation of training program about safe practice of fluid intake illustrate a positive effect on nursing staff.

**Recommendations:** Training program should be carried out for nurses related to safe practice of fluid intake as a part of regular nursing education programme.

**Keywords:** Daily water intake, knowledge, dehydration, practice, hydration level, working hours, staff nurses, awareness, hospital

## INTRODUCTION

Nurses are involved in highly demanding work that requires optimum physical and mental function. The challenges and difficulties that frontline staff face on a daily basis are aggravated by the requirement to work long hours.[1] An appropriate body water content, and thus hydration status, is essential for physical health and mental wellbeing. Dehydration of around 2% of total body mass may be detrimental to physical, vasomotor, psychomotor, and cognitive performance. It may also result in increased errors of visual vigilance as well as reduced latency of visual working memory response.[2] Mild dehydration, due to water loss equivalent to 1.4% of body mass can result in lowered mood, increased perception of task difficulty, and reduced ability to concentrate. A modest restriction in fluid intake has been associated with increased subjective feelings of fatigue, headache, tension, anxiety, and deterioration in cognitive performance, including short term memory impairment, have also been associated with modest restriction of fluid

intake.[3] Nurses are often unable to drink water adequately during their shift, and we feel they are not hydrated well enough. However, there is a lack of research empirically examining the hydration status and its effect on staff during their working hours. Good hydration may ultimately benefit not only the nurses themselves, but also their patients and the health-care systems in which they work.[4]

### Aim

This study is sought to understand the importance of hydration among nurses during their working hours and make them aware of the benefits of hydration.

### Need of the Study

The investigator, through their experience, found that, staff nurses are unable to drink adequate amount of water during their work shifts and hence the need for this study.

- To measure their understanding of the need of hydration during working hours.
- To create a research-based training programme on the importance of hydration.
- To assess the training's effectiveness

### Objectives

1. To assess the knowledge on importance of hydration during their working hours
2. To develop a training module on importance of hydration
3. To evaluate the impact of the training

### Assumptions

There is no relationship between the knowledge level on hydration and importance of water intake

## METHODOLOGY

**Research approach:** Quantitative Approach was used

**Research design:** Prospective Descriptive design was adapted for this study

**Research variables used:** Hydration level among Staff Nurses

**Settings of the study:** Apollo Hospital BG Road, Karnataka Region

**Duration of the study:** Three months

**Data collection method:** Online Questionnaire (Google Forms)

**Target population:** All Nursing staff working at Apollo Hospitals, BG Road

**Tool used for data collection:** Structured questionnaire was used to collect data after validation

### Description of the tool

- a. Personal Information
- b. Questionnaire tool on Knowledge on hydration level
- c. Hydration Habits

**Sample Size** -300

**Sampling Method:** Non-probability sampling type (Purposive Sampling) was used in this study

**Inclusion criteria:** Staff nurses working in Apollo Hospitals BG Road, willing to participate in the study

**Exclusion criteria:** Staff nurses who were not willing to be a part of the study and those on long leaves and notice period

The study was conducted after obtaining permission from the institutional head and ethical consideration.

## RESULTS

The data was analyzed by descriptive and inferential statistics

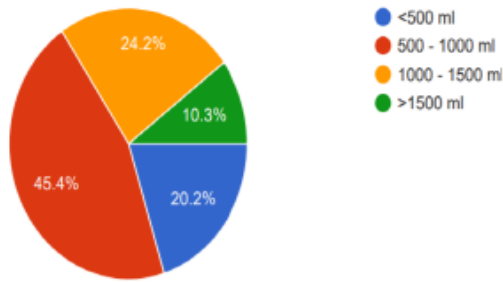
### A. Consumption pattern

A pre study was conducted among nurses to create awareness regarding the importance of hydration during working hours. A survey was conducted for about 300 nurses at Apollo Hospitals, Bannerghatta Road, Bangalore. Various parameters like age, area of work, fluid intake per day, etc., were considered. From a study conducted among the nurses, we observed that more than 45% of the nurses working here consume only 500-1000ml of fluids each day. Around 24% of the nurse's drink about 1000-1500ml of fluids per day

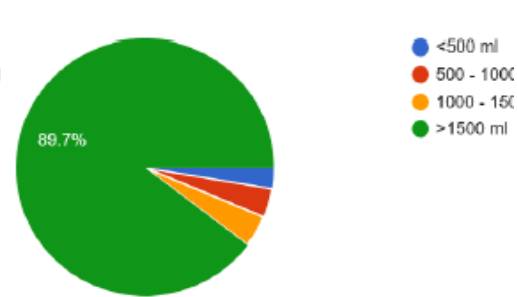
but only around 10% of the staff drinks more than 1500ml of fluids per day. Unfortunately, we also saw that about 20% of the working nurses drink less than 500 ml of fluids every day. A post study was also conducted, and nurses were imparted with

more knowledge regarding the importance of hydration while at work and we observed that more than 89% of the nurses had started consuming fluids at work per day when compared to the 10.3% during the pre-study survey.

**Pre study**

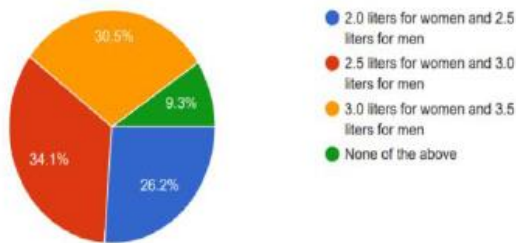


**Post study**

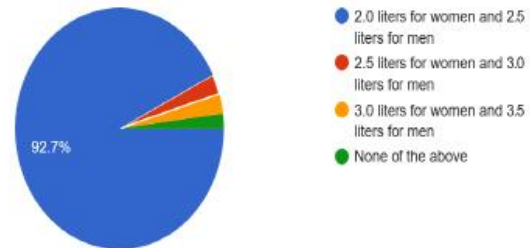


**B. Knowledge on recommended daily intake and sources of water intake**

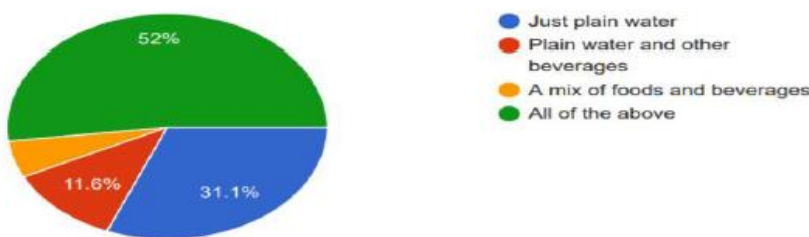
**Pre study**



**Post study**



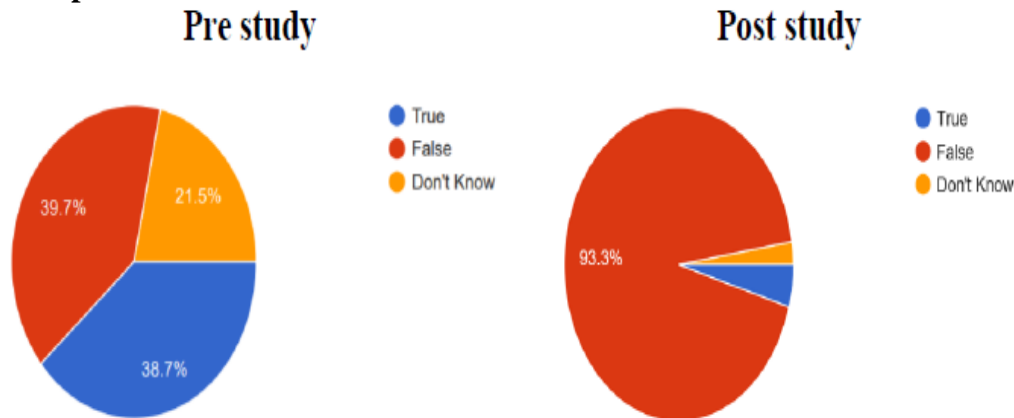
**Sources of Water**



A questionnaire tool was utilised to record the knowledge regarding hydration in nurses. According to the European Food Safety Authority (EFSA), we can see that the daily recommended water intake of water by women is approximately 2L for women and 2.5L for men on a daily basis. In the survey we also found that a fraction of participants responded that the daily water intake for men is 3L and that for women it is 2.5L while some considered the

daily water intake for women is 3L for women and 3.5L for men. As a part of the online questionnaire, a survey was conducted where we wanted to determine the various sources from which water intake could be increased by an individual. We observed that about 31% of the daily water intake comes from plain water, around 11% is from plain water and other beverages, 52% comes from a mixture of plain water, food and beverages and the rest comes from a mix of foods and beverages.

### C. Consumption of Caffeinated drinks

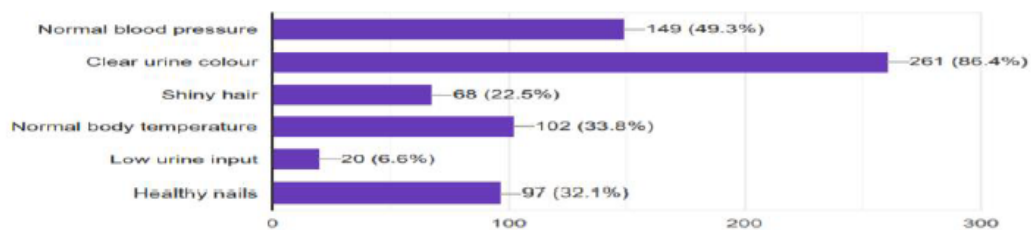


We as human beings hydrate ourselves in different ways during different times of the day. As a part of the online questionnaire, a survey was conducted among the nurses at Apollo Hospitals BG Unit, Bangalore where we wanted to determine if caffeinated drinks dehydrate us or not. We observed that about 38% of the nurses said that consumption of caffeine leads to dehydration and about 39% of the

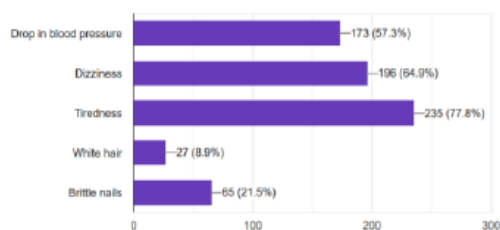
nurses disagreed to the statement. About 21% of the nurses were neutral and said they didn't know. In the post study survey conducted after giving awareness to the nurses regarding the same, we found that a majority (93%) of the nurses disagreed that consumption of caffeine dehydrated them, and the remaining nurses agreed to the statement.

## DISCUSSION

### D. Hydration status

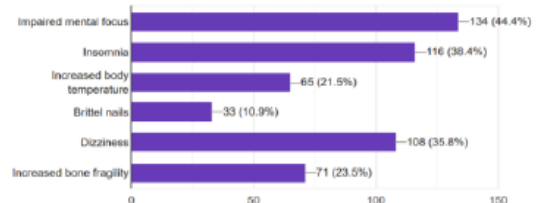


#### Proper hydration



#### Dehydration

The results of this study have revealed many misconceptions among nurses. Knowledge regarding adequate water intake during pre-study was fairly



#### Over hydration

poor. A majority of the nurses were of the incorrect belief that everyone must drink eight glasses of plain water every day. In the contrary, around 20-30% of water intake

comes from solid foods and 70-80% from beverages that includes plain water. They were also of the wrong belief that caffeinated drinks hydrate the body. Thirst is the body's main regulatory mechanism to stimulate fluid intake so as to maintain proper hydration levels. Thus, it is extremely important that we as human beings are able to identify our hydration status as well as symptoms of dehydration and over hydration. 86.4% of the staff felt that clear urine colour was the main indication of proper hydration, while only around 49.3% of the staff considered normal

body temperature and blood pressure as indications of proper hydration. Also, 77.8% of staff regarded tiredness as one of the main indications of dehydration whereas drop in blood pressure and dizziness were considered as symptoms of dehydration among only 57.3% and 64.9% respectively. The indicators of over hydration were not greatly recognised by the nurses. Only 44.4% considered impaired mental focus, 35.8% considered dizziness and 23.5% considered increased bone fragility as the main indicators of over hydration

## TRAINING AND CONCLUSION



Session by Dr. Priyanka (HOD of Nutrition and Dietetics) On Importance of Hydration

It has been said that a normal healthy adult must consume around 8-12 glasses of water per day, and it is more so important for us to consume water during our working hours so as to prevent dehydration and other illnesses. A survey was conducted among nurses as a part of the online questionnaire, and we found that most of the nurses (~95%) said that at work adequate hydration is important for proper brain performance. The results of this study have identified many areas where knowledge can be improved such as intake of adequate water on a daily basis, symptoms of dehydration beyond urine colour and the risks and indicators of over hydration through awareness and training programmes. The outcome of this research gave an approximate data regarding the

knowledge and practice of staff nurses towards intake of water during their work hours in the hospital. Further research can be conducted by exploring the knowledge and practice of staff nurses across other hospitals in Bangalore

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**Ethical Approval:** Approved

## REFERENCES

1. Aiken, L. H., Clarke, S. P., Sloane, D. M., Kochanski, J. & Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout and job

- dissatisfaction. Journal of the American Medical Association, 288(16), 1987-1993. 10.1001/jama.288.16.1987
2. Appelbaum, S. H, Marchionni, A., & Fernandez, A. (2008). The multi-tasking paradox: Perceptions, problems, and strategies. Management Decision, 46, 1313-1325. 10.1108/00251740810911966
  3. Archibald, C. (2006). Promoting hydration in patients with dementia in healthcare settings. Nursing Standard, 20(44), 49-52. 10.7748/ns2006.07.20.44.49.c6561
  4. Bowen, G. A. (2008). Naturalistic inquiry and the saturation concept: A research note. Qualitative Research, 8, 137-152. 10.1177/1468794107085301
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