International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

A Study to Assess the Knowledge on Water Birth Among Staff Nurses Working in Selected Hospitals of a Tertiary Care Teaching Hospital, Kuppam, Andhra Pradesh

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ABSTRACT

Background: Water birth is a childbirth method in which a woman labours and/or gives birth in a pool of warm water, with the aim of promoting comfort, relaxation, and a more natural birthing experience. This approach is based on the principle that immersion in water can reduce pain perception, decrease maternal stress, and support physiological labour by enhancing relaxation and mobility. Water birth is increasingly recognized as a supportive option for low-risk pregnancies when conducted under appropriate clinical guidelines and skilled supervision. The use of warm water during labor may contribute to improved maternal satisfaction, reduced need for pharmacological pain relief, and smoother progression of labor. For the newborn, water birth is believed to provide a gentler transition from the intrauterine to the extrauterine environment. However, careful assessment, infection control measures, and timely identification of complications are essential to ensure safety. Counseling expectant mothers about water birth during antenatal care visits enables informed decision-making and appropriate birth planning. Skilled healthcare providers, adequate facilities, and clear protocols are critical for minimizing risks and ensuring positive maternal and neonatal outcomes. When integrated into a comprehensive maternity care framework, water birth can be a safe and effective option that supports maternal well-being and respectful, woman-centered care.

Methods: A Quantitative pre-experimental study was conducted in December 2025 among 60 security guards working in tertiary care hospital at Kuppam samples were selected by using convenient sampling technique, informed consent were taken before the study, security guards knowledge were assessed by using structured self-administered questionnaire.

Results: In regards to age, the majority of staff nurses 64 (42.7%) belonged to the age group of 26–30 years. In regards to gender, the majority 146 (97.3%) were females. In regards to educational qualification, the majority 106 (70.7%) were B.Sc. Nursing graduates. In regards to total years of clinical experience,

the majority 71 (47.3%) had 1–5 years of experience. Regarding area of current posting, the majority 97 (64.7%) were posted in other departments. With regard to type of hospital, the majority 116 (77.3%) were working in private hospitals. About 132 (88%) of the staff nurses had heard about water birth previously. Among them, 54 (36%) reported nursing education as their source of information. About 123 (82%) had never witnessed or assisted in a water birth. Regarding the perception of safe practice of water birth in India, 48 (32%) of the staff nurses felt that it depends on the healthcare setting. The assessment of knowledge regarding water birth revealed that 27 (18%) of the staff nurses had inadequate knowledge, 64 (42.6%) had moderate knowledge, and 59 (39.4%) had adequate knowledge. Thus, the majority of staff nurses possessed moderate knowledge regarding water birth. The association between knowledge and demographic variables showed a statistically significant association with age ($p = 0.04$), area of current posting ($p = 0.04$), type of hospital ($p = 0.01$), prior awareness of water birth ($p = 0.001$), experience of witnessing or assisting in a water birth ($p = 0.01$), and perception regarding the safe practice of water birth in India ($p = 0.00$). No significant association was found with gender, educational qualification, years of clinical experience, or source of information.

Keywords: Water Birth, Knowledge on Water Birth, Staff Nurses.

1. INTRODUCTION

Childbirth is a natural and significant life event that marks the beginning of motherhood and the continuation of human life. Over the years, various methods of childbirth have evolved to improve maternal comfort, safety, and satisfaction. Among these approaches, water birth has emerged as an alternative method of childbirth that promotes a more natural and woman-centered birthing experience. Water birth refers to the process in which a woman labours and/or delivers her baby in a specially designed tub or pool filled with warm water. The practice is based on the therapeutic effects of warm water, which can provide relaxation, reduce pain perception, and facilitate a smoother labour process.

Water birth is increasingly recognized as a component of modern maternity care and is gaining popularity in several countries worldwide. The concept originated in Europe and became more widely accepted following the work of obstetrician Michel Odent in the 1970s. Since then, many hospitals and birthing centres across countries such as the United Kingdom, Australia, New Zealand, and the United States have incorporated water birth services into their maternity care programs. Research has suggested that immersion in warm water during labour may reduce the need for pharmacological pain relief, shorten the duration of labour, promote maternal relaxation, and increase maternal satisfaction with the childbirth experience.

The physiological benefits of water birth are attributed to hydrotherapy. Warm water helps decrease stress hormone levels, promotes the release of endorphins, improves blood circulation, and reduces muscular tension. Buoyancy provided by water allows women greater freedom of movement and encourages comfortable labour positions. In addition, immersion in warm water may contribute to reduced perineal trauma and a lower incidence of episiotomy. These benefits have led many women to consider water birth as a desirable alternative to conventional labour and delivery methods.

Despite its potential advantages, water birth remains a topic of debate among healthcare professionals. While many studies support its maternal benefits, concerns have been raised regarding neonatal safety. Potential risks include neonatal infection, water aspiration, respiratory complications, umbilical cord avulsion, and difficulties in emergency management during delivery. Therefore, proper selection of

mothers, adherence to established protocols, and competent healthcare professionals are essential to ensure the safe practice of water birth.

Staff nurses play a pivotal role in maternity care services. They are often the primary healthcare professionals involved in antenatal education, labour support, intrapartum monitoring, and postnatal care. Their knowledge and understanding of water birth are crucial for providing evidence-based information to expectant mothers, ensuring safe clinical practices, and supporting informed decision-making. Adequate knowledge among nurses can enhance confidence in assisting water births and contribute to positive maternal and neonatal outcomes.

However, water birth is still relatively uncommon in many parts of India. Limited clinical exposure, lack of standardized training programs, insufficient institutional facilities, and inadequate awareness among healthcare providers have restricted its widespread implementation. Studies have reported that many nurses possess only partial knowledge regarding the indications, contraindications, benefits, risks, and management of water birth. Such knowledge gaps may affect the quality of care provided to women considering this birthing option.

Educational initiatives and professional training programs have been identified as effective strategies to improve nurses' knowledge and competency regarding emerging maternity care practices. Assessing the existing level of knowledge among staff nurses is therefore essential to identify educational needs and develop appropriate training interventions. Improved knowledge can facilitate the adoption of safe, evidence-based, and woman-centered childbirth practices within healthcare institutions.

Therefore, considering the increasing global interest in water birth, the important role of nurses in maternity care, and the need for evidence-based knowledge regarding its benefits and risks, there is a compelling need to assess the knowledge of staff nurses regarding water birth. This study aims to evaluate the knowledge of staff nurses working in selected hospitals of a tertiary care teaching hospital at Kuppam, Andhra Pradesh. The findings of the study may help identify existing knowledge gaps and contribute to the development of educational programs that enhance nursing competence and promote safe maternal and neonatal care.

2. METHODS AND MATERIALS

A Quantitative descriptive study was conducted in December 2025 among 150 staff nurses working in selected hospitals of a tertiary care teaching hospital at Kuppam, Andhra Pradesh. The samples were selected using a non-probability convenient sampling technique. Informed consent was obtained from all participants before data collection. The knowledge of staff nurses regarding water birth was assessed using a structured self-administered questionnaire distributed through Google Forms. The tool consisted of two sections: demographic variables and questions related to knowledge regarding water birth. The collected data were analyzed using descriptive and inferential statistics.

3. OBJECTIVES OF THE PRESENT STUDY INCLUDES

1. To assess the level of knowledge among staff nurses regarding water birth.
2. To find the association between the level of knowledge regarding water birth among staff nurses with and selected demographic variables.

Collected data was entered into MS Excel 2013 and analyzed using Epi Info 7.0. Appropriate statistical methods used to find out the results based on the objectives.

4. RESULTS:

Section-A: Frequency and percentage distribution of the socio- demographic variables among staff nurses

Section-B: Frequency and percentage distribution of level of knowledge regarding water birth among staff nurses

Section-C: Association of the demographic variables with levels of knowledge regarding water birth among staff nurse

The results of the study were presented as Tables and graphs as per the objectives of the study.

SECTION-A: FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES.

TABLE: 1- FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE SOCIO-DEMOGRAPHIC VARIABLES AMONG STAFF NURSES:

N=150

SL.NO	DEMOGRAGHIC VARIABLES	FREQUENCY	PERCENTAGE
1	**Age (in completed years)**		
	(a) Below 25	77	51.4
	(b) 26–30	36	24
	(c) 31–35	17	11.3
	(d) Above 35	20	13.3
2	**Gender**		
	(a) Male	4	2.6
	(b)Female	146	97.4
	(c)Others		
3	**Educational Qualification**		
	(a) GNM	42	28
	(b) BSc. Nursing	106	70.6
	(c)Post BSc. Nursing	0	0
	(d) MSc. Nursing	2	1.3
4	**Total years of clinical experience**		
	(a) Less than 1 year	40	26.6
	(b)1-5 years	71	47.4
	(c) 6–10 years	22	14.6
	(d) Above 10 years	17	11.4
5	**Area of current posting**		
	(a) Labour room	21	14
	(b) Postnatal ward	24	16
	(c) Antenatal ward	8	5.4
	(d) Other (specify)	97	64.6
6	**Type of hospital**		
	(a) Government	18	12
	(b) Private	116	77.4
	(c) Teaching	16	10
	(d) Non-teaching	0	0

7	**Have you ever heard about "water birth"**		
	(a) Yes	132	88
	(b) No	18	12
8	**If yes, source of information**		
	(a) Mass media	42	28
	(b) Nursing education	54	36
	(c) Workshop/seminar	8	5.4
	(d) Colleagues	46	30.6
9	**Have you ever witnessed or assisted in a water birth**		
	(a) Yes	27	18
	(b) No	123	82
10	**Do you feel water birth can be safely practiced in India**		
	(a) Yes	45	30
	(b) No	16	10.6
	(c) Not sure	41	27.4
	(d) Depends on setting	48	32

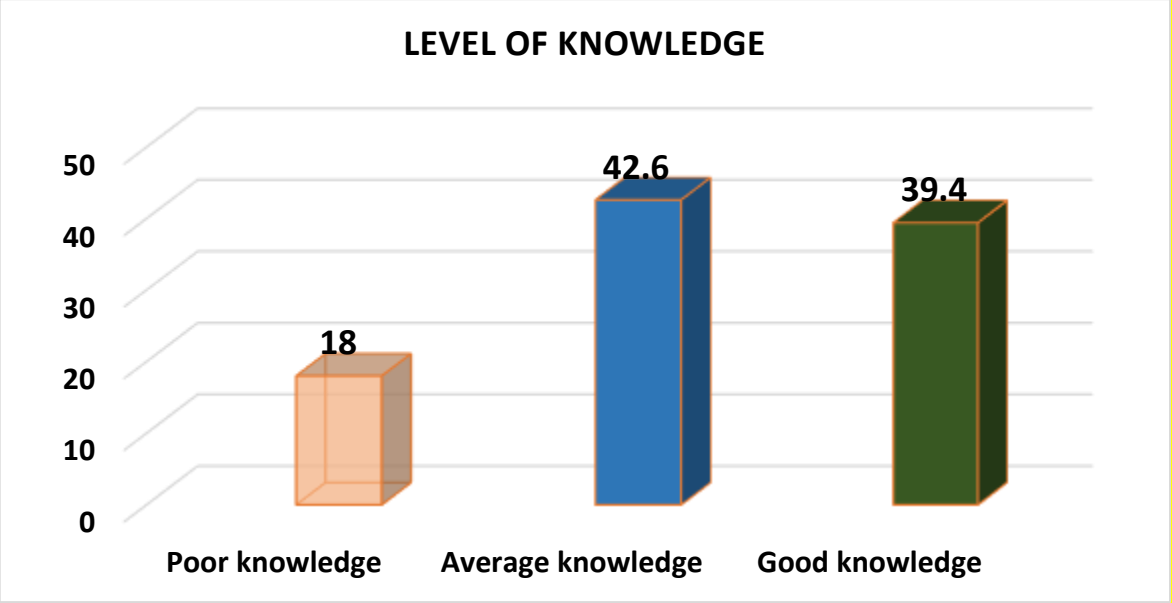
Table 1 shows that about 77 (51.4%) of the staff nurses were below 25 years of age, 36 (24%) belonged to the age group of 26–30 years, 17 (11.3%) were between 31–35 years, and 20 (13.3%) were above 35 years of age. Majority 146 (97.4%) of the staff nurses were females, while 4 (2.6%) were males. Regarding educational qualification, majority 106 (70.6%) had completed B.Sc. Nursing, 42 (28%) had completed GNM, 2 (1.3%) had completed M.Sc. Nursing, and none had completed Post Basic B.Sc. Nursing. With regard to clinical experience, 71 (47.4%) staff nurses had 1–5 years of experience, 40 (26.6%) had less than 1 year of experience, 22 (14.6%) had 6–10 years of experience, and 17 (11.4%) had more than 10 years of experience. Regarding area of current posting, majority 97 (64.6%) of the staff nurses were working in other departments, 24 (16%) were posted in postnatal wards, 21 (14%) in labor rooms, and 8 (5.4%) in antenatal wards. Majority 116 (77.4%) of the staff nurses were working in private hospitals, 18 (12%) were employed in government hospitals, 15 (10%) were working in teaching hospitals, and none were employed in non-teaching hospitals. About 132 (88%) of the staff nurses had heard about water birth, whereas 18 (12%) had not heard about it. Regarding the source of information on water birth, 54 (36%) staff nurses reported nursing education as their source of information, 46 (30.6%) reported colleagues, 42 (28%) reported mass media, and 8 (5.4**%)** reported workshops or seminars. About 27 (18%) of the staff nurses had witnessed or assisted in a water birth, while 123 (82%) had no such experience. Regarding perception on the safety of water birth in India, 48 (32**%)** of the staff nurses felt that safety depends on the setting, 45 (30%) believed that water birth can be safely practiced in India, 41 (27.4%) were not sure, and 16 (10.6%) felt that it cannot be safely practiced in India.

SECTION-II: FREQUENCY AND PERCENTAGE DISTRIBUTION OF LEVEL OF KNOWLEDGE REGARDING WATER BIRTH AMONG STAFF NURSES

TABLE-2. Frequency and percentage distribution of level of knowledge regarding water birth among staff nurses

N=150

SL.NO	LEVEL OF KNOWLEDGE	F	%
1	Poor knowledge	27	18
2	Average knowledge	64	42.6
3	Good knowledge	59	39.4



Interpretation

The study findings indicated that most of the staff nurses, 64 (42.6%), had an average level of knowledge regarding water birth. In comparison, 59 (39.4%) exhibited good knowledge, whereas 27 (18%) had poor knowledge on the subject.

SECTION-C: ASSOCIATION OF THE DEMOGRAPHIC VARIABLES WITH LEVELS OF KNOWLEDGE REGARDING WATER BIRTH AMONG STAFF NURSE.

The association between the level of knowledge regarding water birth among staff nurses and selected demographic and professional variables was analyzed. The findings revealed that there was a statistically significant association between the level of knowledge and age in years ($p = 0.04$), area of current posting ($p = 0.04$), and type of hospital ($p = 0.01$). Further, significant associations were also observed with prior awareness of water birth ($p = 0.00$), experience of witnessing or assisting in a water birth ($p = 0.01$), and the perception regarding the safe practice of water birth in India ($p = 0.00$). Hence, the corresponding research hypothesis RH02 was accepted.

IV. DISCUSSION

The present study assessed the knowledge regarding water birth among staff nurses working in selected hospitals of a tertiary care teaching hospital, Kuppam, Andhra Pradesh. Regarding Objective 1, the findings revealed that 26 (18%) staff nurses had inadequate knowledge, 61 (42.6%) had moderate knowledge, and 57 (39.4%) had adequate knowledge regarding water birth, indicating that although most participants possessed moderate to adequate knowledge, a notable proportion still lacked sufficient

knowledge. These findings are consistent with previous studies that reported moderate levels of knowledge among nurses regarding alternative birthing practices due to limited exposure and training opportunities. **Regarding Objective 2,** the study found that the largest proportion of staff nurses had moderate knowledge (42.6%), followed by adequate knowledge (39.4%), highlighting the need for continuous educational programmes, workshops, and in-service training to strengthen nurses' understanding of water birth, including its benefits, risks, indications, contraindications, and clinical management. Regarding Objective 3, a statistically significant association was found between the level of knowledge regarding water birth and selected demographic and professional variables, including age ($p = 0.04$), area of current posting ($p = 0.04$), type of hospital ($p = 0.01$), prior awareness regarding water birth ($p = 0.00$), experience of witnessing or assisting in water birth ($p = 0.01$), and perception regarding the safety of water birth in India ($p = 0.00$). These findings suggest that greater professional exposure, awareness, and practical experience contribute to higher levels of knowledge among staff nurses. Therefore, the research hypothesis (RH01) was accepted. Overall, the study emphasizes the importance of enhancing nurses' knowledge through regular educational interventions and clinical exposure to ensure the safe and effective implementation of water birth practices and to promote evidence-based, woman-centred maternity care.

NURSING IMPLICATIONS

Nursing Practice

- Enhances evidence-based maternal care.
- Enables nurses to educate pregnant women regarding water birth.

Nursing Education

- Supports inclusion of water birth concepts in nursing curricula.
- Encourages workshops and continuing nursing education programmes.

Nursing Administration

- Facilitates development of institutional policies and protocols.
- Promotes specialized maternity care training.

Nursing Research

- Encourages further studies on water birth practices.
- Supports comparative and longitudinal research.

LIMITATIONS

1. Prolonged effect of the study could not be measured.
2. The study required extensive cooperation from staff nurses.

RECOMMENDATIONS

- Similar studies can be conducted among nursing students and staff nurses.
- Studies can be replicated with larger sample sizes.
- True experimental studies can be conducted.
- Comparative studies can be undertaken among urban and rural populations.
- Similar studies can be conducted among medical students and other healthcare professionals

V. CONCLUSION

The present study concludes that staff nurses working in selected hospitals of a tertiary care teaching hospital at Kuppam possess predominantly moderate knowledge regarding water birth. Although most of the nurses were aware of water birth, only a limited number had direct clinical exposure or hands-on experience with the practice. This indicates a gap between theoretical awareness and practical application. The study also established that demographic and professional variables such as age, area of posting, type of hospital, prior awareness, and exposure to water birth significantly influence the level of knowledge among staff nurses. Nurses working in relevant maternity areas and those with prior exposure demonstrated better knowledge compared to others.

Overall, the findings emphasize the need for structured educational programs, in-service training, workshops, and clinical demonstrations on water birth to enhance nurses' knowledge and confidence. Strengthening nurses' understanding of water birth will help in promoting evidence-based maternity care practices and ensure safe implementation of alternative birthing methods in appropriate settings.

VI. ACKNOWLEDGMENT

The author expresses sincere gratitude to the management of PES Institute of Medical Sciences and Research for providing the necessary facilities and support to carry out this study. The author extends heartfelt thanks to the Principal, Dean, and faculty of PES College of Nursing for their guidance, encouragement, and valuable suggestions throughout the research process. Special appreciation is extended to the Institutional Research Committee (IRC) and Institutional Ethics Committee (IEC) for their approval (PESIMSR/HEC/C-197/2025-30/12/2025) and support. The author is also grateful to all participants and experts who contributed to the validation of the tool and successful completion of the study. Finally, the author acknowledges with gratitude the constant support and encouragement received from family and friends.

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