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# Knowledge and Attitude Regarding Telenursing among Staff Nurses at Selected Hospitals, Gurugram, Haryana

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## Abstract

Telenursing is an innovative approach to healthcare that leverages technology to provide remote nursing services. This study assesses the knowledge and attitude of staff nurses regarding telenursing in selected hospitals in Gurugram, Haryana. Using a descriptive cross-sectional design, data were collected from 50 staff nurses through structured questionnaires. Results revealed that 70% of participants had moderately adequate knowledge, while 68% expressed a positive attitude toward telenursing. However, significant knowledge gaps were noted, highlighting the need for structured training programs to enhance proficiency in this domain.

## Introduction

Telenursing, a subset of telemedicine, facilitates remote patient care by using telecommunications technology, bridging healthcare gaps, especially in resource-limited settings. The integration of telehealth services has proven invaluable during emergencies, such as the COVID-19 pandemic, by ensuring continuity of care while reducing exposure risks. Nurses play a critical role in the successful implementation of telehealth, making their preparedness a key factor in its effectiveness.

Despite its growing importance, telenursing adoption in India remains limited due to knowledge gaps and insufficient training. This study evaluates the knowledge and attitudes of staff nurses in Gurugram to address these barriers and promote the integration of telenursing in clinical practice.

## Objectives of the Study

1. To assess the knowledge of staff nurses regarding telenursing.
2. To evaluate their attitudes toward telenursing.
3. To identify any association between demographic variables and knowledge or attitudes about telenursing.

## Material and Methods

A descriptive cross-sectional study design was employed to assess the knowledge and attitude regarding telenursing among staff nurses at Civil Hospital, Sector-10, Gurugram, Haryana. This setting was chosen due to its accessibility, availability of participants, and administrative cooperation for data collection. The target population consisted of all staff nurses working at the selected hospital, while the accessible population included those who met the inclusion criteria during the study period. A total of 50 staff nurses were selected using a total enumerative sampling technique.

The inclusion criteria for participation were staff nurses aged 20 years and above, those employed in the hospital at the time of data collection, and those willing to participate. Nurses who were unwilling to participate were excluded from the study. A structured questionnaire, developed through an extensive review of literature and validated by experts in nursing and telehealth, was used as the data collection tool. It comprised three sections: Demographic data, a knowledge assessment with 20 questions on telenursing, and an attitude scale with 15 Likert-scale items. The knowledge scores were categorized as adequate

(16–20), moderately adequate (11–15), and inadequate (0–10), while attitude scores were classified as favorable (53–75), moderately favorable (38–52), and unfavorable (15–37).
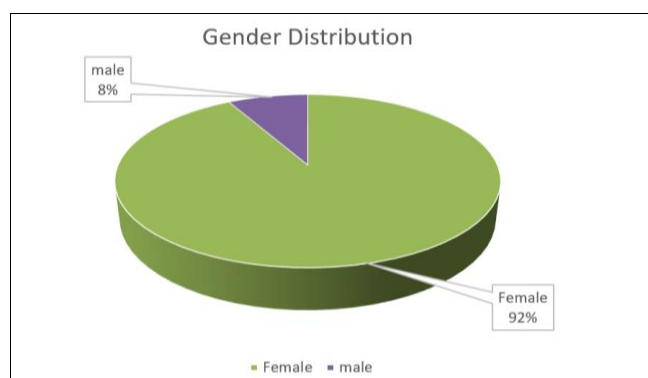
A pilot study was conducted with five staff nurses to test the feasibility and reliability of the tool. The reliability coefficient, calculated using Cronbach's Alpha, was 0.85, indicating the tool was reliable. Data collection was carried out over five days, from November 5 to 9, 2024, after obtaining formal permission from hospital authorities and ethical approval from Amity University, Gurugram. Informed consent was obtained from participants, and they were assured of confidentiality and their right to withdraw from the study at any stage. Questionnaires were distributed and completed in a conducive environment.

The collected data were organized in a master sheet for analysis. Descriptive statistics, including frequency and percentage, were used to summarize demographic variables, knowledge levels, and attitude scores.

## Results and Discussion
### Demographic of the participants
The study included 50 staff nurses with a mean age of 28.4 ± 6.3 years. The majority of participants were female (92%), while males constituted only 8%. Most nurses (68%) held a B.Sc. in Nursing, with 32% having 1–3 years of experience and 28% having ≥7 years of experience. Over half (54%) reported earning more than ₹30,000 per month, highlighting a mix of varying experience levels and income groups.
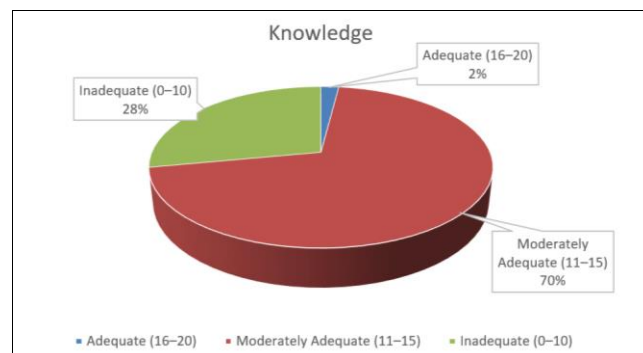


**Fig 1:** Gender Distribution of Participants; A pie chart depicting 92% females and 8% males

## Knowledge Assessment
The analysis of knowledge levels revealed that only 2% of participants had adequate knowledge about telenursing, while the majority (70%) demonstrated moderately adequate knowledge. About 28% of participants had inadequate knowledge, indicating significant gaps in comprehensive understanding of telenursing concepts and practices.

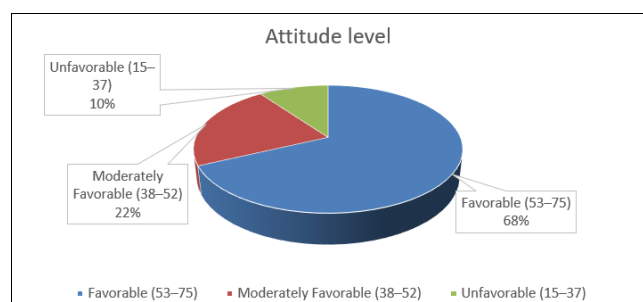| Knowledge Level | Frequency | Percentage |
|---|---|---|
| Adequate (16–20) | 1 | 2% |
| Moderately Adequate (11–15) | 35 | 70% |
| Inadequate (0–10) | 14 | 28% |



**Fig 2:** Knowledge Levels of Participants; A Pie chart illustrating the proportion of adequate, moderately adequate, and inadequate knowledge levels

## Attitude Assessment
Regarding attitudes toward telenursing, the majority (68%) expressed favorable attitudes, while 22% demonstrated moderately favorable attitudes. Only 10% held unfavorable attitudes toward the implementation and use of telenursing in healthcare settings.

| Attitude Level | Frequency | Percentage |
|---|---|---|
| Favorable (53–75) | 34 | 68% |
| Moderately Favorable (38–52) | 11 | 22% |
| Unfavorable (15–37) | 5 | 10% |



**Fig 3:** Attitude Levels Toward Telenursing; A pie chart depicting the distribution of favorable, moderately favorable, and unfavorable attitudes

## Key Findings
- High awareness of telenursing was observed among 90% of participants.
- Positive attitudes were predominant, with 68% exhibiting favorable perceptions toward telenursing.
- Significant knowledge gaps were identified, as only 2% of participants demonstrated adequate knowledge.

The findings highlight the need for targeted educational initiatives to bridge the knowledge gap and enhance the practical understanding of telenursing. While attitudes are largely positive, increased training and exposure to telenursing applications can further strengthen nurses' preparedness and acceptance of this innovative healthcare approach.

## Conclusion

The study reveals that although awareness about telenursing is high among staff nurses in Gurugram, significant knowledge gaps persist. Attitudes toward telenursing are predominantly positive, reflecting a readiness to adopt this technology with proper training. Structured educational programs and hands-on training are recommended to enhance nurses' knowledge and practical application of telenursing.

## Acknowledgment

## References

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