

A Study to Assess the Effectiveness of Pamphlet on Knowledge Regarding Telemedicine among Nursing Officers Working in Selected Hospital Kota (Rajasthan)

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Abstract: ***Background:** Telemedicine has emerged as a transformative approach to delivering healthcare services, especially in the wake of increasing demand for accessible, affordable, and quality healthcare. It leverages technology to bridge the gap between patients and healthcare providers, particularly in remote and underserved areas. Despite its growing relevance, awareness and effective utilization of telemedicine remain limited among both healthcare providers and patients. In many healthcare settings, especially in developing countries, challenges such as shortage of medical professionals, long distances to healthcare facilities, and high out-of-pocket expenses hinder timely access to care. Telemedicine offers a practical solution by facilitating real-time consultations, diagnosis, treatment, follow-up, and patient education through digital platforms. **Methods:** The research approach was quantitative in nature. **Results:** Mean percentage pre-test score (56.80%) is highest in the area of intervention regarding enhancement of knowledge related to telemedicine and (24.28%) is the least in the area of general information regarding telemedicine. Mean percentage post-test is maximum (98.97%) in the area of knowledge regarding telemedicine and least (84.62%) in the area of intervention regarding enhancement of knowledge related to telemedicine.*

Keywords: Assess, Effectiveness, pamphlet on Knowledge Regarding telemedicine, nursing officers

1. Background

The healthcare industry has witnessed significant technological advancements in recent years, with telemedicine emerging as one of the most transformative innovations. Telemedicine refers to the use of electronic communication and information technologies to provide clinical services to patients without an in-person visit. It includes a variety of services such as consultations, diagnoses, treatment plans, follow-ups, and monitoring, all delivered remotely.¹

Telemedicine plays a vital role in overcoming barriers to healthcare access, particularly in rural, remote, and underserved areas where medical facilities and specialists may be limited. It has proven especially beneficial in countries like India, where geographical and infrastructural challenges often prevent timely medical care. During the COVID-19 pandemic, telemedicine gained increased relevance as it allowed the continuation of care while reducing the risk of virus transmission.²

Globally, both developed and developing nations are increasingly adopting telemedicine to strengthen their healthcare systems. In India, for instance, the government's initiatives like e-Sanjeevani and various teleconsultation platforms have brought healthcare closer to millions. However, despite these advancements, several challenges remain, including digital literacy, technological infrastructure, legal regulations, and concerns about data privacy and clinical effectiveness.³

Educational interventions—such as pamphlets—can be an effective way to improve awareness and knowledge about telemedicine. Pamphlets are simple, cost-effective, and easy-

to-distribute tools that provide essential information in a brief and visually engaging format. When designed appropriately, they can significantly improve the understanding of healthcare concepts among professionals and the public alike.⁴

Therefore, this study aims to assess the effectiveness of a pamphlet in enhancing the knowledge of nursing officers regarding telemedicine in a selected hospital. The results of this study may help inform strategies for nursing education and promote the broader adoption of telemedicine services within hospital settings.⁵

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2. Need of the Study

Telemedicine has emerged as a transformative approach to delivering healthcare services, especially in the wake of increasing demand for accessible, affordable, and quality healthcare. It leverages technology to bridge the gap between patients and healthcare providers, particularly in remote and underserved areas. Despite its growing relevance, awareness and effective utilization of telemedicine remain limited among both healthcare providers and patients. In many healthcare settings, especially in developing countries, challenges such as shortage of medical professionals, long distances to healthcare facilities, and high out-of-pocket

expenses hinder timely access to care. Telemedicine offers a practical solution by facilitating real-time consultations, diagnosis, treatment, follow-up, and patient education through digital platforms.⁷

This study aims to address the gap by assessing the effectiveness of an informational pamphlet on telemedicine among nursing officers. Telemedicine has become an increasingly important component of modern healthcare, offering remote diagnosis, consultation, treatment, and monitoring through digital communication technologies.⁸

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3. Methods

Study setting and period

The setting is easily approachable to assess the effectiveness of pamphlet on knowledge regarding telemedicine among nursing officers at selected hospitals of Kota (Raj.), hence it was easy to get adequate samples for the said study. Data was collected from **16/09/2025 to 25/09/2025 at M. B. S. Hospital, Kota.**

Study Design and Population

In this study a pre-test post-test research design was carried out to assess the effectiveness of pamphlet on knowledge regarding telemedicine among nursing officers at selected hospitals of Kota (Raj.). **Target population** for the study was nursing officers at selected hospitals of Kota (Raj.).

Sample Size

Total 70 nursing officers at selected hospitals of Kota (Raj.)

Sampling Techniques and Approach

Non-probability convenient sampling technique was utilized to choose the example for this review. In the present study the investigator also used an evaluative approach for evaluation of the effectiveness of pamphlet on knowledge regarding telemedicine among nursing officers at selected hospitals of Kota (Raj.) and researcher also evaluated the association of demographic variable with knowledge.

Tool for data collection

Based on the objectives of the study, a structured knowledge questionnaire was prepared by the researcher for the present study. The interview consisted of a sequence of questions for

collecting information about a particular topic from respondents.

4. Data Collection Techniques

Main Study

Permission was obtained from the concerned authority. The investigator conducted the **main study from 16/09/2025 to 25/09/2025 at M. B. S. Hospital, Kota.** In the wake of acquiring the consent examiner met the subjects and builds up the affinity, 70 nursing officers at MBS hospitals of Kota were selected by convenient sampling technique. A written informed consent was taken separately from each subject. Appropriate orientation direction was given to the respondent about the point of the examination, length, nature of the poll and sufficient consideration was taken for shielding the respondent from the potential dangers including look after privacy, security and identity.

The demographical tool and structured Interview questionnaire were administered for experimental group by using close ended questionnaire to assess the effectiveness of pamphlet on knowledge regarding telemedicine among nursing officers at selected hospitals of Kota. Data was collected and observed from samples. Immediately after pre-test, pamphlet on knowledge regarding telemedicine among nursing officers at MBS hospitals of Kota was given for sample in the experimental group. Evaluation of the pamphlet was done by conducting post-test, 7 days after the implementation of awareness programme.

Data processing and analysis

Data were coded and entered into SPSS Version 26 software for analyses. Descriptive analysis including frequency distribution, proportion and mean was performed to sum up the attributes of the review subjects. The data obtained was analyzed using frequency, percentage, mean, median, mean percentage, standard deviation in terms of descriptive and inferential statistics.

5. Results

Section I:

Description of socio segment variables of samples under study

- 1) Majority (40%) of subjects were within the age group of 26-30 years while 02.87% of subjects were inside the age gathering of 21-25 years, 35.71% of subjects were inside the age gathering of 30-36 years and remaining subjects (21.42%) were within the age group of 36 and above years.
- 2) In sample male and female were (60.00% and 40.00%).
- 3) Majority of subjects (45) 64.28% lives in urban areas while remaining subjects (25) 35.71% were live rural areas.
- 4) Majority of subjects (61) 87.14% had no previous knowledge about telemedicine while remaining (09) 12.85 subjects had some previous knowledge about telemedicine.
- 5) Majority of subjects 33 (47.14%) were had previous source of information via health care personnels; while remaining 23 (32.85%) respondents were possessing previous source of information via colleagues, 05

(7.14%) respondents were possessing previous source of information via mass media and remaining 09 (12.85%) respondents were possess previous source of information via book.

- 6) Majority 42 (60.00%) of subjects had no clinical exposure in telemedicine while remaining subjects 28 (40.00%) had clinical exposure of telemedicine.

Section II: Effectiveness of Pamphlet in Terms of Gain in Knowledge Score

- 1) Majority of the respondents (95.71%) had scores below 18 and only 4.28% had scores between 19- 24 and none of them had scores above 24 in pre-test. In the post-test, none of them had scores below 19.
- 2) On comparing the pre-test scores with the post-test scores, it was found that all the Nursing officers scored higher in post-test than the pre-test.
- 3) This indicates that pamphlet was effective in increasing the knowledge scores of Nursing officers regarding **telemedicine**.
- 4) Majority of subjects (92.85%) had scores ranging between (24-30) in post-test whereas in the pre-test none of them had scored above 21.
- 5) Respondents' post-test knowledge scores range (19-30) was higher than their pre-test knowledge score range (0-21).
- 6) The information in table likewise portray that the mean post-test data scores (24.91) was higher than their mean pre-test data scores (12.76).
- 7) The SD of pre-test (SD=1.59) is more dispersed than their post-test SD (SD=1.12).
- 8) Mean percentage pre-test score (56.80%) is highest in the area of intervention regarding enhancement of knowledge related to telemedicine and (24.28%) is the least in the area of general information regarding telemedicine.
- 9) Mean percentage post-test is maximum (98.97%) in the area of knowledge regarding telemedicine and least (84.62%) in the area of intervention regarding enhancement of knowledge related to telemedicine.

Section III: Association between Pre-Test Knowledge Score with Select Socio-Demographic Variables

The Chi-square test computed between knowledge and selected variables revealed that there was a significant association between the knowledge and selected Socio-demographic variables. In the present study it is evident that the demographic variables such as Gender and education; the determined chi square value is less than the critical value at $p < 0.05$ level of significance. **So null hypothesis is accepted and research hypothesis is rejected.** In Demographic variables such as Age, Area of residence, sources of information regarding telemedicine and Sources of information and Clinical exposure in telemedicine; the calculated chi square value is higher than the critical value at $p < 0.05$ level of significance. **So null hypothesis is rejected and research hypothesis is accepted.**

6. Conclusion

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