

The Role of Nursing in Digital Health Applications

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Abstract

This study aims to the impact of nursing on the health services provided in light of the presence of digital applications, the impact of nursing on the development of health services provided to patients and reviews in health facilities, the role of digital applications in the development of health services provided to visitors and reviews in health facilities, A questionnaire was prepared via Google Drive and distributed to the population aged 25-55 years, men and women, in the city of Mecca. As for the questionnaire, it was distributed via the social networking program (WhatsApp) for the purpose of distancing for fear of the presence of the Corona virus, 400 questionnaires were distributed, and 390 responses were obtained via email to the principal researcher. It concluded that this digital easier for patients and injured people to obtain appointments through digital health applications, and have helped in determining new diseases or whether existing diseases get worse, and it also facilitates the work of nurses, these applications helped limit the exacerbation and spread of diseases, and enabled, electronic medical records enable nurses to access patient information quickly and efficiently, which has reduced errors and improved care coordination between different healthcare providers by 100%.

Keywords: the role, of nursing, in digital health, applications.

1. Introduction

The use of digital technologies is growing rapidly. It is no secret that they have made significant changes to traditional healthcare practices, transforming them with digital innovations. The World Health Organization (WHO) defines digital health as “the field of knowledge and practice associated with any aspect of adopting digital technologies to improve health” ⁽¹⁾. With this rapid

advancement of digital technologies and their engagement in the healthcare systems, healthcare professionals are forced to be competent with digital health knowledge and competencies ⁽²⁾. As front-line healthcare professionals, nurses need to have informatics knowledge and competencies to provide better care in this growing digital health environment ⁽³⁾. Patient care decisions should be supported by timely clinical information, reflecting the best evidence possible ⁽⁴⁾. Nursing Informatics (NI) is a specialty in nursing practice with core competencies of nursing science, information science and computer science that enable safe and quality care in digitalized environments ⁽⁵⁾. It has advanced the nursing profession by bridging the gap from nursing as an art to nursing as a science ⁽⁶⁾. The potential of NI to enhance nursing practice, clinical problem solving, effective information management and ultimately improve the quality of care has been a long-standing expectation in the domain of nursing ⁽⁷⁾. Further, increasingly sophisticated and powerful information systems have the potential to affect the work of nurses in clinical practice, education, administration and research in digitalized environments ⁽⁸⁾. Therefore, present and future nursing professionals should have the capacity to use informatics knowledge and technology to facilitate critical decision-making for optimal patient outcomes. The movement of NI began approximately three decades ago when nursing education was limited to general nursing rather than specialization in certain countries worldwide ⁽⁹⁾. Nurses in a few developed countries have the opportunity to become specialists utilizing well-established NI applications integrated into digital health solutions while developing countries are under considerable strain to acquire informatics knowledge and competencies ⁽¹⁰⁾. Nurses in a few developed countries have the opportunity to become specialists utilizing well-established NI applications integrated into digital health solutions while developing countries are under considerable strain to acquire informatics knowledge and competencies ⁽¹⁰⁾. Certain challenges and barriers may hinder their digital health education, preparation, and adaptation ⁽¹¹⁾. As a responsive profession, present and future nurses must be prepared to take advantage of digital support for decision-making, nursing information management and knowledge development, as well as to envision new ways of carrying out work in a digital environment. Therefore, outstanding gaps in digital health capacity among nursing students and nurses have been a significant concern among nursing educators, healthcare administrators, policymakers and researchers at present ⁽¹²⁾.

2. Material and Methods:

The study began in (the city of Mecca in the Kingdom of Saudi Arabia), and the study ended with writing the data collection in September 2024. The researcher used descriptive analysis, an approach that uses quantitative or qualitative description of the social phenomenon (The role of nursing in digital health applications). The independent variable (The role of nursing in the presence of digital applications globally) and the dependent variable (The role of nursing in the presence of digital applications locally). This type of study is characterized by analysis, reason, objectivity, and reality. It is also concerned with individuals and societies, as it studies the variables and their impact on the health of the individual, society, and the consumer, and the spread of diseases and their relationship. For demographic variables such as age, gender, nationality, and marital status. Status and occupation ⁽¹³⁾, and use the Excel 2010 Office suite pie

chart to sort the results ⁽¹⁴⁾. The questionnaire is a wonderful and useful tool for collecting a huge amount of data, but the researchers were not able to conduct personal interviews with the participants in the online survey, due to social distancing rules at the time to prevent infection between participants and researchers and vice versa (Coronavirus sharing has not completely disappeared. of the community), and the questionnaire was only answered electronically, because the questionnaire consists of fifteen questions, all of which are closed-ended.

3. Results and discussion:

The participation rate in a questionnaire entitled (Nursing roles in digital health applications) was 100%, and the rejection rate among them was 0%. As for the percentage of participants' ages, it was as follows: from 25-44 years old, 25%, while from 45-55 years old, 50%, and the gender of the participants. The percentage of males was 14.3%, and the percentage of females was 85.7%, and their educational status was as follows: holders of a bachelor's degree 50%, holders of a diploma certificate 37.5%, holders of a master's degree 12.5%, and as for their professions and jobs, they were all 100% government employees, male and female. As for their responses to the questionnaire questions, they were as follows: First question: Digital health applications help in reminding of appointments scheduled in hospitals or health centers? Question 2: Do digital health applications help in obtaining all digital health services? Question Three: Digital health applications store personal health information, record vital signs, and calculate calories? The responses were all 100%. Question Four: Technology meets the demands of care? Yes, 85.7%, No, 0%, and I don't know, 14.3%. Question five: Medical applications are a new breakthrough in digital health technology? Question Six: Make it easier for patients and injured people to obtain appointments through digital health applications? Question Seven: Some evidence indicates that the use of digital medicine can help identify new diseases or whether existing diseases are getting worse? Question Eight: Digital health applications ease and facilitate nurses' work? Question 9: Do health digital applications help in controlling healthy habits? Question 10: Healthy digital applications help improve dietary behaviors? Question eleven: Digital health applications help reduce the exacerbation and spread of diseases? Question 12: One of the benefits of digital health applications is the chains of interaction through smart applications and nurses? Question 13: Electronic medical records enable nurses to access patient information quickly and efficiently, which reduces errors and improves coordination of care between different health care providers? Question 14: With all relevant patient data at their fingertips, can nurses make informed decisions about patient care? Last question: Telenursing reduces the shortage of nurses and shortens distances, saves travel time, keeps patients away from the hospital, and do telenursing workers record a high degree of job satisfaction for them? All responses were 100% yes. (table no.1)

Table:no-1: The role of nursing in digital health applications according to the opinions of participants

The role of nursing in digital health applications	Yes	No	I don't know
Make it easier for patients and injured people to get appointments through digital health applications?	100%	0%	0%

Some evidence suggests that the use of digital medicine can help identify new diseases or whether existing diseases are getting worse?	100%	0%	0%
Digital health applications ease and facilitate nurses' work?	100%	0%	0%
Do digital health applications help reduce the exacerbation and spread of diseases?	100%	0%	0%
Electronic medical records enable nurses to access patient information quickly and efficiently, reducing errors and improving coordination of care between different health care providers?	100%	0%	0%

There is a study entitled (Are Nurses Ready for Digital Health?) ,Madhuwanth in 2022⁽¹⁵⁾, He mentioned that there is Growing concern about nurses Readiness to use digital health Technologies in health care. A little bit of the main concerns are nurses' knowledge and skills and attitudes towards digital health, Need more improvement. Development A Consolidated list of NI competencies, and Integrating NI into nursing curricula Proposal. Some challenges and obstacles in NI Education and Practice in digital Healthy environments hinder nurses' work Adapting to digital health. supply Training and facilities required for improvement their skills in NI and future research in this field from NI recommended. The results of this the review can be used as a basis for more research in the field of NI and nursing care. Future researchers need to identify areas in which needs further evaluation and development effective strategies to advance the field of NI.

4. Conclusion:

According to the participants' opinions, we find that digital applications have made it easier for patients and injured people to obtain appointments through digital health applications, and have helped in determining new diseases or whether existing diseases get worse, and it also facilitates the work of nurses, these applications helped limit the exacerbation and spread of diseases, and enabled, electronic medical records enable nurses to access patient information quickly and efficiently, which has reduced errors and improved care coordination between different healthcare providers by 100%.

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