

## Review Article

# INTENTION TO USE TELEMEDICINE IN PALLIATIVE CARE

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## Abstract

Telemedicine is becoming ever more prevalent in healthcare, especially after the Covid-19 pandemic which meant restrictions on people visiting healthcare facilities in person. This paper briefly examines the role of telemedicine in the Saudi health service, especially since the introduction of several applications by the Ministry of Health. Using the Technology Acceptance Model, the proposed study aims to identify how useful Saudi nurses perceived telemedicine to be, how easy they perceive it to be, how these factors affect their intention to make use of telemedicine and how these two factors (perceived usefulness and perceived ease of use) relate to each other. Data for this study was gathered by means of an online survey and a sample of Saudi nurses was obtained by recruiting on social media and asking participants to find others. The descriptive and inferential statistical analyses of the data were achieved through SPSS. The findings revealed that around 42 nurses who have experience of using telemedicine in Palliative care. In conclusion, survey result showed more positive response rate for using technologies in the palliative care. Perception of the patients was very positive and satisfactory; they felt that the use of telemedicine through tablets and video calls was an easy, advantageous and understandable option.

## Introduction

While telemedicine carries many opportunities in the healthcare sector, its uptake in various healthcare systems remains inadequate. This situation is attributed to various factors. One of the main barriers to the implementation of telehealth is the fact that it exhibits limitations in the performance of comprehensive physical examination. In this case, assessment conducted online does not give a healthcare provider adequate information to use as the basis for diagnosis of a client's condition. Consequently, telehealth does not provide access to relevant and adequate patient information that can be used as the basis for diagnosis. Secondly, telehealth is prone to security breaches, which can subject a healthcare provider to legal challenges. The attitude of healthcare providers towards telehealth also constitutes one of the barriers for its implementation. In Saudi Arabia, the Ministry of Health introduced a myriad of applications in telehealth services to respond to the COVID-19 pandemic, including Tabaud, Seha, Tetamman, and Mawid, among others [1].

The aim of research is to explore the influence of perceived usefulness and perceived ease of use of on the intention to use telemedicine in palliative care among nurses working in Saudi Arabia. In this case, the following research questions will be addressed:

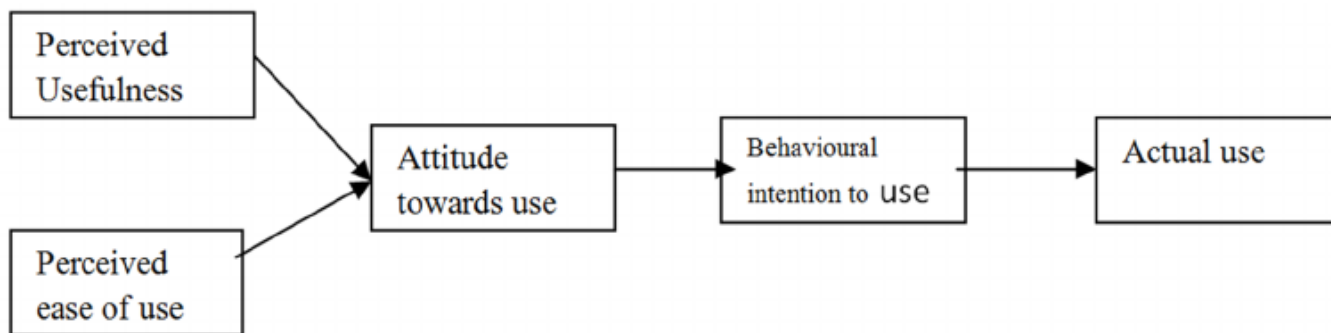
1. What is the level of perceived usefulness of

telemedicine in palliative care among nurses working in Saudi Arabia?

2. What is the level of perceived ease of use of telemedicine in palliative care among nurses working in Saudi Arabia?
3. What is the relationship between perceived ease of use of telemedicine and intention to use the technology in palliative care among nurses in Saudi Arabia?
4. What is the relationship between perceived usefulness of telemedicine and intention to use the technology in palliative care among nurses in Saudi Arabia?

## Literature Review

In Saudi Arabia, efforts are being made to encourage healthcare practitioners to accept the technology. According to a study carried out by Kaliyadan et al. (2020) to explore the attitude and practice of licensed physicians regarding telemedicine in Saudi Arabia, it was established that the general attitude toward the technology is positive [2]. However, many physicians are concerned that diagnosis made from telemedicine is not reliable. Physicians are also concerned that lack of clarity concerning the use of the technology by their patients contributes to their hesitation in adopting the technology. An earlier study by Alaboudi et al. (2016), aimed at exploring the barriers and challenges in the adoption of Saudi telemedicine,



identified three main barriers to the adoption from the perspectives of healthcare decision makers: reimbursement for telemedicine services, conformity of telemedicine services to core mission and vision, and challenges with access to sustainable financial support [3]. A study by Alshammari (2019) aimed at exploring the preferences, perceptions and experiences of telemedicine among Saudi users of information and telecommunication technologies established that the limitation of telemedicine in providing opportunity for personal connection between physicians and patients was lack of trust, which accounted for the low level of acceptance of technology among various users of information and technology services in the country [4].

In general, efforts have been made by researchers to explore the level of adoption of telemedicine in Saudi Arabia. Significant efforts have also been made to explore the factors impacting the adoption of the technology in the country's healthcare system. However, research efforts on the perspectives of nurses concerning the use of telemedicine remain inadequate. Besides, there is a need for more research on the use of telemedicine in palliative care. The proposed study seeks to explore the influence of perceived usefulness and perceived ease of use on the intention to use telemedicine among nurses.

### **Conceptual Model**

The conceptual model for research study into the acceptance of telemedicine by Saudi nurses is based on the Technology Acceptance Model (TAM). The model by Davies (1989) of TAM seeks to explain the factors influencing people's intention to use a product. According to the model, two main factors influence an individual's intention to use new technology: perceived ease of use and perceived usefulness. In the present case, it is assumed that nurses who perceive telemedicine as a difficult technology to use are likely to be reluctant to adopt it; and nurses who perceive the usefulness of telemedicine as inadequate are more likely to exhibit resistance in using it (Figure 1).

### **Methodology**

This research study was based on quantitative method following the survey research design. It is a descriptive research unlike the longitudinal studies which only allow researchers to study the relationship between predictor and outcome variables over an extended period.

### *Target Population*

The research study target only nurses who have worked in palliative care are eligible for inclusion in the study. Nursing professionals with no palliative care experience was not qualified for inclusion into the study. Nurses were also being eligible for inclusion in the study if they have worked in the profession for at least one year. Nurses recruited from different parts of the Kingdom of Saudi Arabia. The desired sample size was based on the current population of nurses working in Saudi Arabia. In 2018, the population of nurses in Saudi Arabia was estimated to be 184,565 [5]. Based on this figure and 1.96 confidence interval, the desired sample size comes to with a 95% confidence level.

### *Sampling*

Snowball sampling method was chosen where participants asked to recruit others, also used in the recruitment exercise. This technique is preferred because it is associated with a high response rate. A high response rate is important since it enhances the validity and reliability of the research exercise. Snowball sampling is also preferred in the proposed study since it is effective in the recruitment of participants from different places within the Kingdom of Saudi Arabia.

### *Data Collection and Analysis*

The survey questions will be sent to the 42 participants via online platforms. For instance, the survey questions will be sent to the participants through their online accounts on platforms such as Twitter, Facebook, and Instagram. The percentage of answers was 100% that is no one skipped the survey questionnaire. The data analysis was done by using Statistical Package for the Social Sciences (SPSS) to conduct descriptive and inferential statistical analyses. The other findings of the study have been disseminated by publishing in the relevant nursing journals.

### **Findings and Discussion**

A survey was conducted from nurses who were working in the Kingdom of Saudi Arabia having at least six months of working experience. Around 42 nurses who have experience of using telemedicine in Palliative care. In this section, the survey results have been discussed according to the responses of participants. A questionnaire was prepared in which total 18 questions were asked related to the palliative care and the intention of nurses to use

telemedicine. The first four questions of survey was about demographics of nurses such as; asking about participant's age, gender, education and nationality.

It is found from the survey that nurses would like to use these technologies in palliative care. Around 54.76% (23) were shown agree response and 35.71% (15) were shown strongly agree response. Besides, 9.52% (4) were shown disagree with this, as they would not prefer the use of technologies in palliative care.

Statistically, we have observed that survey result showed more positive response rate for using technologies in the palliative care. The purpose of above findings in to analyses the intention of nurses to use telemedicine in palliative care which has shown positive response more instead of negative or disagree response. It is because, the nurses' lies between the ages of 25-34 are more exposed with technologies in the digital era.

In the kingdom of Saudi Arabia, palliative care focuses on terminally ill patients in order to improve their quality of life and death from a holistic approach. In addition to working with their families during the illness and the mourning phase [6]. The focus of this care is the prevention and relief of suffering. On the other hand, telemedicine can be used to provide health care remotely through a variety of telecommunications tools. It could be used in palliative care, with this medium becoming more important since the SARS-CoV-2 pandemic began [7].

Different hospitals of Saudi Arabia were surveyed, where 42 nurses were distributed a questionnaire to be filled. And all nurses answered by giving their responses. Most of the nurses showed that the use of technologies have improved their job performance. Also, technologies make their work easy and flexible to use. In general, greater inter-professional cooperation of nurses was observed with a good acceptance of technologies, especially of the video conferencing. Since, with this the contact is greater than with telemedicine.

## Conclusions

In conclusion, video consultations are being used to a greater extent in the Kingdom of Saudi Arabia being considered the best solution to reduce the risk of spreading the virus during this global pandemic, also reducing the use of health resources. In this pandemic situation, developing a plan that adequately responds to the needs of patients and prevents the spread of the virus is essential. This plan

entails functions belonging to specialized palliative care teams, such as: having sufficient equipment with the to carry out care; be clear and know the goal of care; support and educate the patient in managing her symptoms; offering psychological support and bereavement care to patients and their families; and support the rest of health professionals exhausted by the current situation. The perception of the patients was very positive and satisfactory; they felt that the use of telemedicine through tablets and video calls was an easy, advantageous and understandable option. Along the same lines, it was found that nurses presented high satisfaction with telemedicine. In the same way, importance was given to the feeling of closeness that patients perceive from professionals in their virtual care synchronously.

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