

Exploring the Perceptions and Experiences of Nursing Specialists Regarding the Utilization of Telehealth Technologies in Specialized Clinical Practice: A Qualitative Phenomenological Study

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Abstract

Purpose: This qualitative phenomenological study aimed to explore the perceptions and experiences of nursing specialists regarding the utilization of telehealth technologies in specialized clinical practice.

Methods: Semi-structured interviews were conducted with 20 purposively sampled nursing specialists from various clinical specialties. Thematic analysis was performed to identify key themes.

Results: Four main themes emerged: 1) Telehealth enhances access to specialized care; 2) Telehealth presents technological and logistical challenges; 3) Effective communication is vital in telehealth consultations; and 4) Telehealth requires adapted clinical skills and protocols.

Conclusion: Nursing specialists recognized the potential of telehealth to improve access to their specialized services. However, they also identified technological, communication, and clinical practice challenges that need to be addressed through training, guidelines, and organizational support. Ongoing research and evaluation is required to optimize telehealth utilization in specialized nursing practice.

Keywords: telehealth, telemedicine, nursing specialists, advanced practice nursing, qualitative research

Introduction

The rapid development and adoption of telehealth technologies is transforming the landscape of healthcare delivery. Telehealth involves the use of telecommunication and digital technologies to provide care at a distance (Dorsey & Topol, 2016). It encompasses a range of modalities, including live videoconferencing, asynchronous consultations, remote patient monitoring, and mobile health applications (American Telemedicine Association, n.d.). The COVID-19 pandemic has dramatically accelerated the uptake of telehealth, as healthcare providers sought to maintain care continuity while minimizing infection risks (Monaghesh & Hajizadeh, 2020).

Telehealth offers particular benefits for accessing specialized healthcare services. It can enable patients to consult with distant specialists, potentially reducing travel burdens and wait times (Liddy et al., 2019). Nursing specialists, such as nurse practitioners and clinical nurse specialists, play an important role in providing expert care within their specialty areas. However, there has been limited research specifically examining the use of telehealth by nursing specialists.

This qualitative study aimed to explore the perceptions and experiences of nursing specialists regarding their utilization of telehealth technologies in specialized clinical practice. Understanding the perspectives of these key stakeholders is important for identifying barriers, enablers, and strategies to optimize telehealth in specialty care contexts. The research question was: How do nursing specialists perceive and experience the use of telehealth technologies in providing care within their specialty areas?

Literature Review

Telehealth in Nursing Practice

The integration of telehealth into nursing practice has been an emerging focus of research and policy attention. Systematic reviews have found that nurse-led telehealth interventions can be effective for managing chronic conditions, providing education and support, and extending the reach of nursing care (Kitsiou et al., 2015; Kvedar et al., 2014). Nurses' roles in telehealth can span triage, consultation, monitoring, and coordination activities (van Houwelingen et al., 2016).

Qualitative studies have explored nurses' experiences and perspectives regarding telehealth adoption. Nurses have reported benefits of telehealth such as enhanced access for patients, more efficient use of time, and expanded scope of practice (Koivunen & Saranto, 2018; Penny et al., 2018). However, challenges identified include technical issues, communication barriers, concerns about data security and privacy, and lack of organizational support and training (Koivunen & Saranto, 2018; Lepage & Ouellet, 2020; Penny et al., 2018).

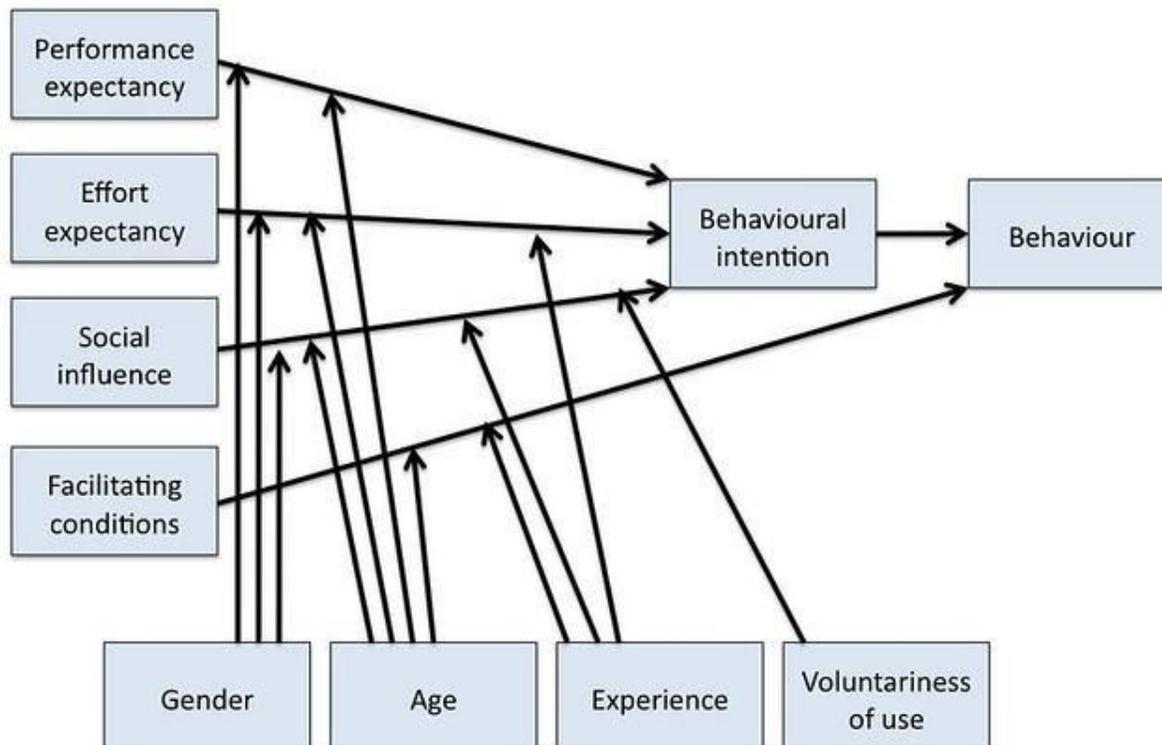
Telehealth in Specialized Nursing Practice

Research on telehealth utilization by nursing specialists remains limited. Some studies have examined specific specialty applications. For example, McFarland et al. (2017) described a telehealth model used by gynecologic oncology nurse practitioners to provide survivorship care. Moreno-Casbas et al. (2020) reported on a telemonitoring program led by heart failure specialist nurses. Qualitative research has found that nurse practitioners in rural settings valued telehealth for accessing specialist support and reducing patients' travel burden (Newman et al., 2019).

However, there is a lack of comprehensive studies directly comparing telehealth experiences and perceptions across different nursing specialties. Given the rapid uptake of telehealth during COVID-19, updated research is needed to understand the current realities of telehealth utilization by nursing specialists.

Conceptual Framework

This study was informed by the Unified Theory of Acceptance and Use of Technology (UTAUT) model (Venkatesh et al., 2003). The UTAUT proposes that user acceptance of new technologies is influenced by factors such as performance expectancy, effort expectancy, social influence, and facilitating conditions. Applying this framework, this study sought to understand how nursing specialists' perceptions of the benefits, ease of use, professional norms, and organizational and technical supports surrounding telehealth shape their experiences of utilizing these technologies in specialized practice.



Methods

Design

A qualitative descriptive phenomenological design was used to gain rich insights into nursing specialists' lived experiences and perceptions regarding telehealth utilization. Phenomenology is a methodological approach that focuses on exploring and describing the common meanings of individuals' experiences with a phenomenon (Creswell & Poth, 2018).

Sampling and Recruitment

Purposive sampling was used to recruit nursing specialists from a range of clinical specialty areas who had experience using telehealth to provide patient care. Nursing specialties were defined based on recognized advanced practice nursing roles and specialty certification. Recruitment occurred through professional nursing organizations and networks. Interested individuals were screened for the following inclusion criteria:

1. Current licensure and practice as a nurse practitioner, clinical nurse specialist, or other recognized nursing specialty role
2. Minimum of 1 year experience using telehealth modalities to provide specialty care
3. Willing and able to participate in an in-depth interview

The target sample size was 20 participants, with the goal of achieving reasonable representation across specialties and reaching data saturation.

Data Collection

Data were collected through individual semi-structured interviews conducted via videoconference. The interviews explored participants' experiences with using different

telehealth modalities, perceived benefits and challenges of telehealth in their specialty practice, and recommendations for optimizing telehealth utilization. The interview guide was reviewed by an expert panel and piloted with two nursing specialists prior to data collection.

Interviews were audio-recorded and transcribed verbatim. The researchers also wrote field notes to capture contextual details and reflections. Data collection continued until data saturation was achieved, as determined by no new themes emerging.

Data Analysis

The interview transcripts underwent thematic analysis guided by Braun and Clarke's (2006) approach. Two researchers independently coded the transcripts inductively using NVivo software. The coders then met to compare and reconcile their coding and identify initial themes. These themes were reviewed and refined through discussion with the full research team. The UTAUT framework concepts were then applied to interpret the themes. Strategies to ensure trustworthiness included maintaining an audit trail, peer debriefing, and member checking of themes with a subset of participants.

Results

Participant Characteristics

The sample consisted of 20 nursing specialists representing ten different clinical specialties (see Table 1). Participants' mean years of experience in their specialty was 12.5 (range 4-22) and mean years using telehealth was 3.6 (range 1-7). The most commonly used telehealth modalities were live videoconferencing for consultations (n=18), followed by asynchronous consultation (n=10), remote patient monitoring (n=8), and teletriage (n=5).

Table 1. Participant characteristics (n=20)

Characteristic	n (%)
Gender	
Female	17 (85%)
Male	3 (15%)
Age	
30-39	4 (20%)
40-49	9 (45%)
50-59	5 (25%)
60+	2 (10%)
Specialty area	
Cardiology	2 (10%)
Critical care	1 (5%)

Characteristic	n (%)
Diabetes	3 (15%)
Gastroenterology	1 (5%)
Infectious disease	2 (10%)
Nephrology	1 (5%)
Oncology	4 (20%)
Pain management	2 (10%)
Palliative care	2 (10%)
Wound care	2 (10%)

Thematic Results

Four key themes were identified regarding nursing specialists' perceptions and experiences with telehealth utilization:

1. Telehealth enhances access to specialized care

Participants emphasized the value of telehealth in enabling patient access to their specialized nursing expertise, particularly for individuals living in rural and remote areas. They described how telehealth reduces patients' travel burden and wait times to see specialists. Providing timely access to specialist care was seen as important for preventing complications and improving outcomes.

"I can now provide specialist wound consultations to patients in distant parts of the state who previously would have to drive five hours each way to see me. Telehealth has been a game changer for access." (Wound care specialist nurse)

Nursing specialists also noted how telehealth allowed them to work more efficiently by reducing windshield time and enabling them to see more patients:

"I'm able to do 3 or 4 diabetes consultations in the time it would have taken me to drive to one distant clinic site." (Diabetes specialist nurse)

However, some participants raised concerns about the risk of telehealth exacerbating disparities in access for patients lacking the necessary technology or digital literacy. They emphasized the importance of flexible telehealth policies and supports to avoid disadvantaging vulnerable populations.

2. Telehealth presents technological and logistical challenges

While telehealth offered efficiency benefits, participants also highlighted the technological and logistical challenges encountered. Unstable internet connections, poor video and audio quality, and difficulties using telehealth platforms were common technical issues described.

"There's nothing more frustrating than when you're in the middle of a complex pain assessment and the video keeps freezing." (Pain management specialist nurse)

Logistical challenges included coordinating across multiple sites and providers, scheduling issues, and lack of administrative support for telehealth. Participants stressed the need for adequate technical infrastructure, support staff, and provider training.

"Doing a multidisciplinary oncology consult by telehealth requires a lot of behind-the-scenes coordination. You can't just wing it." (Oncology specialist nurse)

3. Effective communication is vital in telehealth consultations

Nursing specialists described how the virtual environment of telehealth required adaptations to their communication and relationship-building approaches. Participants stressed the importance of verbal and nonverbal communication skills to build rapport and trust with patients via telehealth. They described strategies such as using more explicit empathetic statements and maintaining virtual eye contact.

"You have to be very conscious of your facial expressions and body language on video. A warm smile and attentive posture go a long way in making the patient feel comfortable and cared for." (Palliative care specialist nurse)

Active listening, clear and concise explanations, and teach-back techniques were seen as critical for effective education and shared decision-making in telehealth consultations. Several participants highlighted the need to be more verbally descriptive when examining patients virtually:

"When you're assessing a surgical incision via video, you can't just say "ok, looks good". You have to describe exactly what you're seeing - the color, the edges, any drainage - so the patient understands your thought process." (Wound care specialist nurse)

4. Telehealth requires adapted clinical skills and protocols

Participants discussed how the virtual medium of telehealth required adaptations to their clinical assessment and management approaches. They described the limitations of virtual physical exams and the need to rely more on patient self-report and remote monitoring data. Nursing specialists stressed the importance of detailed history-taking and risk assessment to identify patients who required in-person examination.

"I had to become very comfortable asking patients to show me parts of their body through the camera. Detailed skin assessments are so important in wound care, so I had to get creative." (Wound care specialist nurse)

Several participants mentioned how they had to modify clinical protocols to suit telehealth delivery, such as adapting complex procedure techniques for patients to perform with virtual guidance. Developing clear decision algorithms for when to escalate to in-person care was also seen as important.

"We developed detailed triage protocols to help determine which oncology symptoms could be safely managed by telehealth and which required in-person assessment. It's an ongoing learning process." (Oncology specialist nurse)

The need for telehealth-specific competencies and training for nursing specialists was a common thread across interviews. Participants wanted clearer guidelines and education on issues such as virtual assessment techniques, e-prescribing, and telehealth documentation requirements.

Discussion

This qualitative study provides novel insights into the experiences and perceptions of nursing specialists regarding telehealth use in their practice. Participants recognized telehealth's significant potential to increase access to specialized nursing care, particularly for underserved populations. This finding aligns with previous research highlighting the role of telehealth in enhancing the reach of specialist services (Liddy et al., 2019; McFarland et al., 2017).

However, participants also identified key challenges related to the technological, logistical, and clinical aspects of telehealth delivery. Consistent with prior studies (Koivunen & Saranto, 2018; Penny et al., 2018), technical issues and lack of administrative and training support were common barriers. The UTAUT model (Venkatesh et al., 2003) suggests that such issues with effort expectancy and facilitating conditions can impede technology acceptance. Specific to the specialized care context, participants described the complexity of coordinating multidisciplinary telehealth consultations and adapting clinical protocols.

Participants emphasized how the virtual medium of telehealth required new communication competencies to build patient relationships and trust. This supports research highlighting the importance of "websiteside manner" and virtual rapport-building (Chua et al., 2021). Nursing specialists also had to adapt their clinical assessment and decision-making approaches when practicing via telehealth. Henry et al. (2017) similarly found that nurses took on new responsibilities in remote assessment and triage when delivering telehealth.

This study has implications for nursing education, practice, and policy. The findings suggest a need to incorporate telehealth competencies into nursing specialist training programs, including virtual communication and adapted assessment skills. Clear organizational guidelines and protocols for telehealth delivery in specialty areas are also needed to support effective and consistent practice. Policymakers and payers should ensure that specialist telehealth services are appropriately recognized and reimbursed. Ongoing research is required to evaluate the outcomes and cost-effectiveness of specialist nursing telehealth interventions.

Limitations of this study include the risk of self-selection bias in the volunteer sample and reliance on self-report data. Future research could triangulate nursing specialists' perceptions with the experiences of patients and other telehealth stakeholders. The single-country sample may limit generalizability to other health system contexts.

In conclusion, this study advances understanding of nursing specialists' experiences with adopting telehealth into their practice. While telehealth offers promising avenues to enhance access to specialized nursing care, attention to technological, logistical, and clinical practice challenges is needed to ensure its optimal and equitable use. The perspectives of nursing specialists should inform ongoing efforts to expand and improve telehealth services.

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