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Improving Telehealth Knowledge and Comfort in an Older Adult Population

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Improving Telehealth Knowledge and Comfort in an Older Adult Population

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Table of Contents

Abstract	3
Introduction	4
Background	4
Purpose	5
Project Site	6
Review of the Literature	6
Analysis of Literature	7
Theoretical Framework/Evidence Based Practice Model	12
Goals and Objectives	13
Methods	14
Ethical Considerations/Protection of Human Subjects	18
Results	18
Discussion	22
Conclusion	24
References	28

Abstract

Background: Telehealth usage is increasing a means of providing healthcare in a more efficient and cost-effective way. Older adults have been left behind from the telehealth movement and this can negatively impact their access to the healthcare system.

Purpose: An educational workshop was offered in a local older adult community with the goal of increasing their knowledge, literacy, motivation, and usage of telehealth.

Methods: The participants completed a pre-assessment survey to determine their baseline knowledge, experience, and perceptions about telehealth. They then participated in an educational workshop, which consisted of a 45-minute presentation given via Zoom with a 15-minute open discussion at the end. A post-presentation survey to determine if the workshop was successful in improving their telehealth knowledge, the likeliness of future usage, and feelings of support. The surveys were distributed using SurveyMonkey and descriptive statistics were used to analyze the data results.

Results: Six participants completed the surveys, but two did not complete the surveys. All improved in general telehealth knowledge and 50% agreed that they were more likely to use telehealth and 75% agreed that they felt telehealth could be beneficial for improving their health. Only 33.33% of participants reported interest in learning more about telehealth.

Conclusions: Older adults can benefit from telehealth education, as evidenced by this project which showed improvement in telehealth knowledge and an increase in the likeliness of telehealth use. Circumstances like the COVID-19 pandemic have made telehealth a big part of the healthcare system, so it is important for the older adult population to be knowledgeable and able to participate.

Keywords: telehealth, older adult, telemedicine, elderly, usage, willingness, education

Bridging the Gap Between Telehealth and the Less Tech-Savvy

Introduction

Telehealth has been advertised as a way to meet with a provider through the comfort of your own home, but in order to do this a patient needs access to technological devices such as a computer or smartphone, some level of technological literacy, and motivation to actually use the technology. Telehealth has been increasingly adopted into healthcare practices, but there are few studies that demonstrate this population has the digital literacy to successfully use telehealth services (Oh et al., 2021). As the older adult population continues to grow, increasing demand has been placed on our healthcare system, which telehealth can help to alleviate while improving the quality of life of the older adult population (Oh et al., 2021). This can only be achieved if there are educational telehealth resources for the older adult population.

Background

There has been limited research addressing how older adults perceive telehealth (Ahmad et al., 2020) and their feelings about its increasing usage in healthcare practice. Prior studies that have looked at patient satisfaction in general, showed that satisfaction improves when the patient leaves a visit with a prescription and/or diagnosis (Martinez et al., 2018). Several recent studies have examined patient satisfaction with telemedicine and have shown increased patient satisfaction because of the time saved with a telehealth visit, in addition to the patient's ability to walk away with a prescription and/or diagnosis (Martinez et al., 2018).

Older adults have fewer telehealth experiences and opportunities, and few studies have examined the digital literacy of the older adult population (Oh et al., 2021). It is essential to

assess the willingness and feasibility of telehealth usage in the older adult population (Jonker et al., 2020) to improve the overall health of this population.

Characteristics that make the older adult population vulnerable include: frailty, decline in memory, limited mobility, and increased loneliness which are all problems that telehealth aims to address (Oh et al., 2020). In addition to telehealth visits, digital literacy can provide older adults with online health platforms leading to increased health knowledge, social supports, and community engagement (Oh et al., 2020). Unfortunately, not enough telehealth education programs exist to support older adults in their understanding and usage of telehealth, despite studies that have shown motivation and user assistance as key indicators of an older adult's likeliness and ability to use telehealth (Kampmeijer et al., 2016).

Purpose

The goal of this project was to teach older adults about telehealth and provide them with resources to feel empowered to use it. The primary purpose of this project was to determine if telehealth education could be beneficial for improving telehealth knowledge, usage, and feelings of support in the older adult population. Older adults are not motivated to use telehealth if they don't know how to and don't have the support to do so (Kampmeijer et al., 2016). More telehealth education needs to be provided for older adults as it can improve the quality of life for this population and alleviate the burden on the healthcare system (Ahmad et al., 2020).

This project included a one-hour educational telehealth intervention that was aimed to improve knowledge, likelihood of use, and feelings of support in the older adult population in their telehealth usage. The goal was to teach this population about how to use telehealth services that are available to them, and to motivate them to use telehealth.

Project Site

The project site was an organization that supports older adults in neighborhoods outside of Boston. There are 200 to 225 member households who are ages 60 and older. This group aims to help these adults stay in their homes and neighborhoods by anticipating challenges of this senior population and providing them with opportunities and support so they can remain an integral part of their communities.

This older adult population is defined as hard-to-reach and therefore a vulnerable population by The Agency for Healthcare and Research Quality (2018). Speaking with the Executive Director of the organization, revealed many activities and supports for this population have been limited as a result of the COVID-19 pandemic. She reported that the community members could greatly benefit from a workshop that would hopefully improve their technological literacy and engagement. Since the goal of the organization is to facilitate members to live in their own homes, providing them with healthcare resources such as information about telemedicine, hopefully provides an opportunity to contribute to this mission.

Review of the Literature

A literature review was conducted using the PubMed Advanced search tool. The search terms “telehealth” and “older adult” yielded over 10,000 results. The search was changed to only include articles within the last 5 years, which generated 4,602 results. Additional search terms “telemedicine” and “elderly” were added, and this yielded 907 articles. The search was narrowed to only include systematic reviews, which yielded 14 results. Out of the 14 results, 11 were excluded because their studied population was too narrow and not closely related to this project topic. This left three systematic review articles that were included in the literature review for this paper.

The same key terms listed above were searched again, but with the addition of “usage” as a key search term. Only results within the last 5 years were included and this yielded 67 results. Seven articles were selected from these search results that had titles pertaining to the topic of this literature review. The search was repeated, but this time only using the key terms “elderly”, “older adult”, “telehealth” “willingness” and “education”. This only yielded one result, which was a study that was already included in a previous search. A total of 11 articles were chosen for the literature review based on these search results.

Analysis of Literature

For older adults to participate in telehealth, they must be willing and able to use it. A systematic literature review from 2015 found that the successful use of telehealth tools greatly depends on the older adults’ motivation as well as the support that they receive when using these tools (Kampmeijer et al., 2015). One component of older adults’ motivation to use telehealth will be to prove that it is useful to them.

This literature review highlights 45 publications that support the benefits of telehealth usage in the older adult population, including formal health promotion programs as well as informal services that can help monitor and improve the health of older adults (Kampmeijer et al., 2015). The universal facilitator of successful telehealth usage in older adults among these 45 publications was support for the use of these services, however telehealth promotion programs for older adults is limited, particularly in the United States (Kampmeijer et al., 2015). The review concludes that with a fast-aging population, it is particularly important that there are support programs in place to facilitate older adults with telehealth services.

Telehealth can be used to improve the health of older adults as well as reduce healthcare costs, but there has been limited research on whether older adults perceive that telehealth

services offer such benefits (Ahmad et al., 2020). This study poses that telehealth is a way to address this increased needs for care of a rapidly growing older population (Ahmad et al., 2020). They conclude that not only can telehealth alleviate the burden on the healthcare system, but it can improve the quality of life of this older adult population.

Telehealth can provide benefits for older adults including more access to healthcare, social platforms, health knowledge, and reduce feelings of loneliness through online interactions (Oh et al., 2021). Older adults with limited mobility can access health services without the need to leave their own home (Oh et al., 2021). Unfortunately, the older adult population is a cohort with fewer information, communication and technology opportunities and experiences and individual digital literacy of older adults needs to be assessed (Oh et al., 2021). This literature review found that few systematic reviews to date have been done that evaluate the digital literacy of older adults (Oh et al., 2021). Understanding the digital literacy of the older adult population will be important for allocating resources to address the specific educational and telehealth care needs of this population (Oh et al., 2021).

A study from Jonker et al. (2020) focuses on the increasing implementation of “ehealth” interventions in perioperative care settings. Despite the increase in usage of ehealth in perioperative care, the implication of this intervention has not been adequately studied in the older adult population (Jonket et al., 2020). They completed a systematic review of 7 single-center prospective studies with the main outcome of feasibility defined as “a patient’s perceptions of usability, satisfaction, and/or acceptability of the intervention” (Jonket et al., 2020). The conclusions were that ehealth interventions for older adult patients were feasible and should be developed with future studies of feasibility should include a clear definition of feasibility outcome measures (Jonket et al., 2020).

When used correctly, telehealth is an opportunity to expand access to healthcare and reduce healthcare costs since more than half of U.S. adults reported being unable to get the same or next day appointments with a physician (Martinez et al., 2018). Retail clinics have been used to compensate for increased healthcare demands, but telemedicine has a critical advantage over retail clinics since it provides access to medical care without leaving home or work (Martinez et al., 2018). In 2015, the average required time for an outpatient appointment averaged 121 minutes, with only 15 of those minutes actually being spent with a physician (Martinez et al., 2018).

Most telemedicine studies are often isolated to a particular medical practice or insurance plan, but the research from Martinez et al. (2018) characterized telemedicine patients in a large and geographically diverse population. Their study found that patient satisfaction is often associated with physician's drug prescribing practices (Martinez et al., 2018). The results showed a high patient satisfaction rate with the use of telemedicine, especially when it was used as a substitute for retail clinics or urgent care (Martinez et al., 2018).

Pittman et al. (2019) did a study on veterans using an E-screening tool compared to a paper screening form and found that the tool improved accessibility, rate of screening completion, and both veterans and providers reported satisfaction with the tool. The authors point out that despite the need and support required for technology-based healthcare delivery, implementation has been challenging (Pittman et al., 2019). They attribute this to a limited understanding of what mechanisms and contextual factors influence the adoption and implementation of healthcare technology (Pittman et al., 2019). There is a need for research to help understand which factors facilitate or prohibit telemedicine.

To address this, Pittman et al. (2019) conducted a quality improvement project to assess the implementation of a computer-assisted assessment system in a VA healthcare setting. The study showed that perceived lack of leadership was a barrier to the technology's implementation, and it was important to account for some added work load for staff members (Pittman et al., 2019). Overall, the technology posed no barriers in any of the practice settings, however addressing staff engagement and change management is necessary for implementation efforts (Pittman et al., 2019).

A consistent message in this literature review is that more needs to be done to assess the implication of telehealth in the older adult population. A study from Knapova et al. (2020) says that technology use among older adults has been on the rise in recent years, however predictors and mechanisms behind the acceptance and use of telemedicine for older adults are unclear. Their systematic study aimed to address this by describing telehealth usage in Czech older adults including factors that influence their telehealth use and readiness (Knapova et al., 2020).

One of the main predictive factors was the rate of their technology use in general, for example cell phone use (Knapova et al., 2020). Telehealth readiness was also influenced by the need for cognitive closure, meaning that individuals with more need for closure perceived more telehealth barriers (Knapova et al., 2020). The study also found that the persons close to older adults have an influence on their attitudes and behaviors, with older adults who are surrounded by people using telehealth more likely to use it (Knapova et al., 2020).

One study from Lee et al. (2020) aimed to evaluate the self-confidence, perceived benefits, knowledge, and barriers of using mobile health applications in adults aged 50 and older. The study found that participants with more experience using mobile health devices reported higher levels of self-confidence, however over half of the study participants did not have

adequate knowledge using mobile technology, including participants who reported high levels of self-confidence (Lee et al., 2020). Many older adults are unable to use mobile health devices because of a lack of knowledge and experience (Lee et al., 2020). Services to encourage reliable use of mobile devices in the older adult population are required to help improve confidence and better articulate benefits of these devices and services (Lee et al., 2020). It is important to note that adults with higher levels of education had more experience using mobile health applications and had higher literacy and self-confidence levels (Lee et al., 2020).

Betthausen et al. (2020) conducted a study evaluating mobile health devices focusing on using these applications to improve the mental health of veterans. Mobile health applications provide opportunity for continuous monitoring and tracking of mental health behaviors and symptoms. Overall, the study found that with education and support in using the device, the application was feasible and acceptable to clients at the Veterans Affairs Medical Center (Betthausen et al., 2020). Seventy-nine percent of participants reported acceptability of the application and reported liking specific features such as day-to-day monitoring and having an overall sense of connection with clinicians with a small percentage (6%) reporting concerns regarding personal privacy (Betthausen et al., 2020).

A study from Giacobbi et al. (2018) that focused on mobile health device usage in West Virginia found that a West Virginia resident was 82% less likely to use a mobile health device compared to the rest of the United States. However, they found that factors beyond socioeconomic and demographic variables can dictate choices surrounding use of these applications (Giacobbi et al., 2018). Other factors that influence the use of mobile health technology are cultural influences (Appalachian communities have lower healthcare usage in

general) and environmental factors such as lack of access to Internet also play a role (Giacobbi et al., 2018).

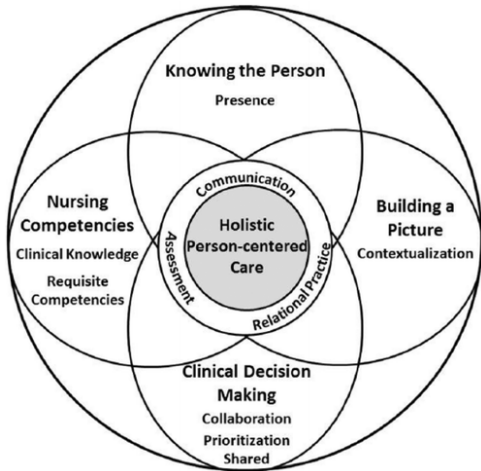
Older adults are more likely to use telehealth services if they are motivated (Kampmeijer et al., 2016). Motivation is influenced by support from people around them, and older adults are more likely to use telehealth services if they see their peers using it (Lee et al., 2020). Digital literacy is another key element that influences an older adult's motivation and ability to use telehealth services (Oh et al., 2021). In other words, educational programs need to exist to support older adults in the adoption of telehealth to improve their overall health (Kampmeijer et al., 2016).

Theoretical Framework

Research shows that older adults are much more likely to successfully use telehealth if they feel supported (Kampmeijer et al., 2015). The rapid advancement of telehealth in practice has happened without enough research of empirical knowledge to support nursing telehealth practice (Nagel & Penner, 2016). The Conceptual Model of Telehealth Nursing (CMTN) from Nagel and Penner (2016) will be used to underpin this DNP project proposal. A visualization of this model is presented below in Figure 1.

Figure 1

Conceptual Model of Telehealth Nursing



Like with many nursing models, the goal of this model is to provide the holistic person or patient-centered care. This can be achieved by combining nursing competencies, knowing the patient, clinical decision making and building a picture. Other elements including communication, assessment, and relational practice play into this model as well. This telehealth model reinforces that the goal is to provide patients with holistic person-centered care, despite the fact that care is provided through a virtual visit.

Goals, Objectives and expected outcomes

The educational intervention aimed to understand the digital literacy of the members as well as their motivation and likelihood to use telehealth services. To motivate older adults to use telehealth, they need to know how and why it can be useful to them. The educational workshop educated members about the benefits of telehealth and about different methods of telehealth including mobile device services and online patient web portals. Table 1. Illustrates specific project goals, objectives and outcomes.

Table 1

Project Goals

Goal	Objective	Outcome
Improve telehealth knowledge in the older adult population.	A (45-minute) presentation with a 15 minute opendiscussion was presented to the members on February 22, 2022 via a live PowerPoint Zoom presentation.	Survey results will showed that telehealth knowledge increased by 50% after the workshop.
Increase likeliness of telehealth use among older adults.	There will be open dialogue during the project presentation that allows the DNP student to receive feedback from the members regarding knowledge gaps that should be addressed.	Survey results will Showed that 50% of patients were more likely to use telehealth after the workshop.
Older adults will feel more supported and encouraged to use telehealth.	The surveys intended to gather pre and post intervention data to determine if the educational project was effective in meeting the defined goals.	Survey results will showed that 25% of participants felt comfortable finding telehealth resources after the presentation.

Methods

The site for this project was an organization for adults over 60 years old who live in Eastern Massachusetts. The organization usually serves 200-225 member households per year. It is a grassroots organization with a “neighbors helping neighbors” mentality that is intended to provide a network for older adults in the community. It provides services including food delivery, exercise classes, social activities, and educational classes pertaining to aging. A convenience sampling of 4 participants was recruited from the site.

The intervention was an educational workshop that consisted of a PowerPoint lesson for the members of an older adult community. This was presented over Zoom due to ongoing COVID-19 precautions that the organization was abiding by at the time. Prior to the implementation of the project, the DNP student confirmed with the Executive Director that

members had practice and easy access to use Zoom. The presentation included photos of common telehealth platforms and live demonstrations on how to use the platform to find information like lab values and test results.

The presentation also included evidence-based information about the benefits of telehealth usage, and additional time was spent to address concerns that the members had about using telehealth. There were 15 minutes allotted after the presentation for open discussion to address questions/concerns that were not addressed during the presentation.

The one-group posttest-only design was used to determine the effectiveness of the educational workshop for older adults. Due to the pandemic, many of their services have transitioned from in-person to virtual, so many of their members are familiar and equipped to use technological platforms like Zoom. The project was advertised for a few months, and ultimately six members agreed to participate.

The Executive Director who agreed to serve as the DNP Student's project site and coordinate the advertising and help with the facilitation of the workshop. The project was advertised on the community's monthly newsletter. All the members were English speaking, but it was important to be mindful of challenges that can be associated with an older adult population such as difficulty hearing or cognitive challenges that could make the project confusing. Instructions on the project were clear and concise, and questions were addressed during the presentation so that the members had a better understanding of the purpose of the project.

Survey Monkey was used to create electronic versions of the surveys. The surveys remained anonymous since the DNP student never had access to the email addresses of the respondents. Additionally, the Director who sent out the survey links did not have access to the survey results. One day before the presentation, the DNP student had the Director send out the

pre-survey for the participants to fill out. After the workshop, the Director sent out the post survey link.

The pre-surveys included items related to their previous experience with telehealth services, and the post-survey included items related to the attitude toward the use of telehealth services.

Table 2

Survey for Participants Pre-Presentation

Question	Response
Are you familiar with the term “telehealth”?	<input type="radio"/> Yes <input type="radio"/> No
Do you use telehealth services?	<input type="radio"/> Yes <input type="radio"/> No
Do you have access to telehealth services via a computer or smartphone?	<input type="radio"/> Yes <input type="radio"/> No
Do you feel knowledgeable and able to use telehealth services independently?	<input type="radio"/> Always <input type="radio"/> Often <input type="radio"/> Sometimes <input type="radio"/> Rarely <input type="radio"/> Never
Do you use telehealth services with the help of friends or family?	<input type="radio"/> Always <input type="radio"/> Often <input type="radio"/> Sometimes <input type="radio"/> Rarely <input type="radio"/> Never
If you had the choice between receiving telehealth services and in-person healthcare services, which would you prefer?	<input type="radio"/> Telehealth services <input type="radio"/> In-person services

Table 3

Survey for Participants Post-Presentation

Question	Response
I understand the meaning of the term “telehealth”.	<input type="radio"/> Strongly Agree <input type="radio"/> Agree <input type="radio"/> Undecided <input type="radio"/> Disagree <input type="radio"/> Strongly Disagree
I have a better understanding of how to use telehealth services after participating in this workshop.	<input type="radio"/> Strongly Agree <input type="radio"/> Agree <input type="radio"/> Undecided <input type="radio"/> Disagree

	<input type="radio"/> Strongly Disagree <input type="radio"/> Strongly Agree <input type="radio"/> Agree <input type="radio"/> Undecided <input type="radio"/> Disagree <input type="radio"/> Strongly Disagree
I know how where to find help if I need assistance using telehealth services.	<input type="radio"/> Strongly Agree <input type="radio"/> Agree <input type="radio"/> Undecided <input type="radio"/> Disagree <input type="radio"/> Strongly Disagree
I am more likely to use telehealth because of participating in this workshop.	<input type="radio"/> Strongly Agree <input type="radio"/> Agree <input type="radio"/> Undecided <input type="radio"/> Disagree <input type="radio"/> Strongly Disagree
I think telehealth could be beneficial for improving my overall health.	<input type="radio"/> Strongly Agree <input type="radio"/> Agree <input type="radio"/> Undecided <input type="radio"/> Disagree <input type="radio"/> Strongly Disagree
I am interested in learning more about telehealth after this presentation.	<input type="radio"/> Strongly Agree <input type="radio"/> Agree <input type="radio"/> Undecided <input type="radio"/> Disagree <input type="radio"/> Strongly Disagree

The Likert scale was used on the survey assessments which allowed the participant's responses to be measurable. Attitudes are assumed to be linear, so the Likert scale assesses for the strength/intensity of an attitude by using a continuum (McLeod, 2019). One potential limitation of a Likert scale is that respondents may lie to place themselves in a more positive light, but responses that may be compromised due to social desirability is a risk in all surveys (McLeod, 2019).

One strength of the Likert scale is that it allows for degrees of an opinion, or no opinion at all, which is more informative than a simple yes/no survey. The quantitative data from a Likert scale can often be obtained with relative ease, since it offers anonymity on self-administered questionnaires, which likely reduces social pressure and desirability bias (McLeod, 2019). Descriptive statistics were used to discuss the survey results and the pre and post-surveys helped to show how impactful the workshop was.

Ethical Considerations/Protection of Human Subjects

The University of Massachusetts, Amherst (UMass) Internal Review Board (IRB) approval was obtained prior to initiating the DNP Project. All participants were protected by the Health Insurance Portability and Accountability Act of 1996 (HIPAA) which, among other guarantees, protects the privacy of patients' health information (Modifications to the HIPAA Privacy, Security, Enforcement, and Breach Notification Rules, 2013). Additionally, the DNP student followed the Standards of Care for practice in a primary care office.

All information collected as part of evaluating the impact of this project was aggregated data from the project participants and did not include any potential patient identifiers. The risk to patients participating in this project is no different from the risks of patients receiving standard care. All electronic files containing identifiable information were password protected to prevent access by unauthorized users and only the project coordinators had access to the passwords.

Results

Despite vigorous recruitment of community members, only four participants completed the pre and post-surveys out of six workshop participants. The purpose of the pre-workshop survey was to obtain a baseline understanding of the study participants' experience, knowledge, and beliefs about telehealth. The pre presentation survey responses were helpful for the DNP student to examine before presenting the workshop because it provided some insight as to the members' experience with telehealth. Since the presentation and surveys had to be presented on zoom and through an online survey, some degree of digital literacy was assumed, since participants needed to have the digital skills to access the surveys and join the zoom call independently. The results of the pre-workshop survey are show below in Table 4.

Table 4.*Pre-Workshop Telehealth Assessment Survey Responses*

Assessment Question	# of Participant Responses	Pre-Workshop Response
Familiar with telehealth.	4	Y=50% N=50%
Currently use telehealth.	4	Y=0 N=100%
Have access to telehealth via computer or smartphone.	4	Y=75% N=25%
Feel able to use telehealth independently.	3	Y=0 N=100%
Use telehealth with the help of friends or family.	3	Y=0 N=100%
Would prefer telehealth or in-person care.	3	In person=33.33% Telehealth=0 Depends=66.66%

. Half of the participants (n=2, 50%) responded that they were familiar with telehealth, although none of the participants did use telehealth services currently. While three of the participants (75%) have access to telehealth via computer or smartphone, none of them feel able to use telehealth independently.

All of the participants said they did not feel knowledgeable or able to use telehealth and that they do not use telehealth services with the help of friends or family. None of the participants responded that they would prefer telehealth to in-person care. It is important to note that one participant skipped these two questions.

Just like in the case of the ptr assessment survey, only four out of six people completed the post presentation survey, which is an 86% completion rate. The post-survey results are shown below in Table 5.

Table 5.

Responses following the Telehealth Educational Workshop Intervention (Post-Survey)

Survey Question	# of Participant Responses	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Understand the meaning of the term “telehealth”.	4	50%	50%			
Better understanding of telehealth after workshop.	4		100%			
Know where to find help using telehealth services.	4		25%	50%	25%	
More likely to use telehealth after workshop.	4		50%	50%		
Think that telehealth could benefit overall health.	4		75%	25%		
Increased interest in learning more about telehealth.	3		33.33%	33.33%	33.33%	

The survey results showed that after the presentation, 100% of participants reported that they understood the meaning of the term “telehealth”, which was a 50% improvement compared to their pre assessment survey. Based on these results, it can be concluded that the workshop was successful in increasing telehealth knowledge in the older adult population. Participants also reported that they had a better understanding of how to use telehealth services as a direct result of their participation in the educational workshop.

A second goal of the project was to promote feelings of support surrounding telehealth as well as increase likeliness of usage. When asked if they would know where to find help using telehealth, 25% of participants agree, 25% disagreed, and 50% did not agree or disagree. This indicates that the workshop should have offered more resources that assist older adults in using telehealth; however, one challenge of creating the workshop was finding telehealth resources for older adults. When the participants were asked if they were more likely to use telehealth after the workshop, 50% agreed and the other 50% did not agree or disagree. So overall the project was successful in promoting likeliness of telehealth use by 50%. Although only 50% reported an increase likeliness of telehealth use, 75% of participants agree that they believe telehealth could be beneficial for their overall health.

The final post workshop question asked if the participants were interested in learning more about telehealth to which 33.33% agreed, 33.33% disagreed, and 33.33% did not agree or disagree. It is hard to conclude anything specific from these responses, but in the future it could be helpful to do an assessment as to why participants feel interested or uninterested in learning about telehealth.

It is important to note that part of the telehealth workshop was a 15-minute open discussion. Additionally, participants’ questions were addressed before, during, and after the

presentation. Before the telehealth workshop was presented, one person claimed that she felt the survey questions assumed participants knew what telehealth was and had experienced it in some light. This was helpful feedback since the survey questions do pose some assumption that people at least understand the term “telehealth” aside from the first survey question. At the end of the presentation, one participant noted that she could see why telehealth can be useful, but she didn’t feel the need to go out of her way to adopt it into her healthcare. Several of the participants echoed this response saying that they were content with their current in-person healthcare.

Discussion

The first goal of the project was to increase the likeliness of telehealth use among older adults. This was successful since 50% of participants agreed that they would be more likely to use telehealth after the workshop. The second goal was to increase the likeliness of telehealth use in the older adult population. The project results showed that 50% of older adults agreed that they would be more likely to use telehealth after the workshop.

The final goal of the project was to make older adults feel more supported and encouraged to use telehealth. This question was not asked directly, however, the participants were asked if they knew where to find telehealth support resources. This response showed a positive result with 25% agreeing that they knew where to find help using telehealth services. It is important to note that the three factors, telehealth knowledge, likeliness of use, and feels of support and encouragement all relate to one another. For example, older adults are more likely to use telehealth services if they are knowledgeable and capable of doing so. They will only feel knowledgeable and capable if have educational resources or assistance from friends or family.

The project results showed variability in older adults’ desire to learn more about telehealth, but maybe this would positively improve if there were more resources for them. The

improvement in factors like telehealth knowledge and likeliness of use, show that older adults can learn how to use telehealth when effectively educated. There is a need for educational programs to support older adults in the adoption of telehealth to improve their overall health (Kampmeijer et al., 2016)

Another goal of the telehealth workshop was to provide educational telehealth resources for the members. As mentioned earlier, there are very limited telehealth education resources, particularly for older adults. Since it was challenging to provide resources for participants, it is not surprising that 50% responded that they neither agreed nor disagreed with their ability to find help using telehealth resources. This is reflective of what was found in the literature review, which is that telehealth promotion programs for older adults is a very isolated initiative, particularly in the United States (Kampmeijer et al., 2015).

Given the fact that only four people participated in the survey responses, it is hard to make conclusions from the resulted data. Recruiting participants was very challenging, which may indicate that this older adult population lacks interest in telehealth in general, but this is just a hypothesis.

Telehealth can be used to improve the health of older adults as well as reduce healthcare costs, but there has been limited research on whether older adults perceive that telehealth services offer such benefits (Ahmad et al., 2020). This project proved that older adults do perceive telehealth services as beneficial after learning more about them; however agreeing that telehealth services can be beneficial does not equate to being motivated or able to use telehealth. For older adults to participate in telehealth, they must be willing and able to use it. The literature review showed earlier that the successful use of telehealth tools greatly depends on the older adults' motivation as well as the support that they receive when using it (Kampmeijer et al.,

2015). Although this study showed a small portion of older adults felt capable of where to find telehealth support resources, this was one of the poorest outcomes of the project. This shows that more telehealth resources need to be available to older adults.

Conclusion

Telehealth is increasingly being used in healthcare, but there has not been adequate effort to provide education to those who are not comfortable using it. Vulnerable populations, such as older adults, are particularly at risk for being subject to adverse effects of this boom in telehealth. Educational workshops and programs should be offered to include them in the telehealth movement. However, some older adults may not be interested in joining the push to increasingly use telehealth in the healthcare system, especially if they don't see their peers using it.

Should older adults be pushed to use telehealth services? This could be determined based on an individual's own attitudes and beliefs about telehealth and the resources that are available to them. Additionally, the COVID-19 pandemic has shown us that telehealth can be a valuable, safe and necessary tool for when in-person visits are not feasible. There should be educational opportunities for older adults to improve their digital literacy and include them in the telehealth movement.

One opportunity to provide telehealth education to older adults is to target communities and services that already cater to this population. It would be helpful if facilities such as older adult communities and group home provided a telehealth support service, in the same way that they might already provide other health services. It is also important that health care facilities offer instructional opportunities for their telehealth services, particularly if telehealth has become their main way of providing healthcare. This problem can't be solved overnight, but it does not

seem right to continue to leave this vulnerable population behind, when they are already at risk. Friends, family, and community members as well as nurses can all make an effort to engage the older adults in our lives to learn about healthcare resources like telehealth that are available to them.

References

- Agency for Healthcare Research and Quality. (July, 2018). Clinicians and Providers.
<https://www.ahrq.gov/prevention/clinician/index.html>
- Ahmad, N. A., Mat Ludin, A. F., Shahar, S., Mohd Noah, S. A., & Mohd Tohit, N. (2020). Willingness, perceived barriers and motivators in adopting mobile applications for health-related interventions among older adults: a scoping review protocol. *BMJ open*, *10*(3), e033870. <https://doi.org/10.1136/bmjopen-2019-033870>
- Bethausser, L. M., Stearns-Yoder, K. A., McGarity, S., Smith, V., Place, S., & Brenner, L. A. (2020). Mobile App for Mental Health Monitoring and Clinical Outreach in Veterans: Mixed Methods Feasibility and Acceptability Study. *Journal of medical Internet research*, *22*(8), e15506. <https://doi.org/10.2196/15506>
- Giacobbi, P., Jr, Cushing, P., Popa, A., Haggerty, T., Hansell, A., & Sedney, C. (2018). Mobile Health (mHealth) Use or Non-Use by Residents of West Virginia. *Southern medical journal*, *111*(10), 625–627. <https://doi.org/10.14423/SMJ.0000000000000879>
- Jonker, L. T., Haveman, M. E., de Bock, G. H., van Leeuwen, B. L., & Lahr, M. (2020). Feasibility of Perioperative eHealth Interventions for Older Surgical Patients: A Systematic Review. *Journal of the American Medical Directors Association*, *21*(12), 1844–1851.e2. <https://doi.org/10.1016/j.jamda.2020.05.035>.
- Kampmeijer, R., Pavlova, M., Tambor, M., Golinowska, S., & Groot, W. (2016). The use of e-health and m-health tools in health promotion and primary prevention among older adults: a systematic literature review. *BMC health services research*, *16 Suppl 5*(Suppl 5), 290. <https://doi.org/10.1186/s12913-016-1522-3>

- Knapova, L., Klocek, A., & Elavsky, S. (2020). The Role of Psychological Factors in Older Adults' Readiness to Use eHealth Technology: Cross-Sectional Questionnaire Study. *Journal of medical Internet research*, 22(5), e14670.
<https://doi.org/10.2196/14670>
- Lee, M., Kang, D., Yoon, J., Shim, S., Kim, I. R., Oh, D., Shin, S. Y., Hesse, B. W., & Cho, J. (2020). The difference in knowledge and attitudes of using mobile health applications between actual user and non-user among adults aged 50 and older. *PloS one*, 15(10), e0241350.
- Martinez, K. A., Rood, M., Jhangiani, N., Kou, L., Rose, S., Boissy, A., & Rothberg, M. B. (2018). Patterns of Use and Correlates of Patient Satisfaction with a Large Nationwide Direct to Consumer Telemedicine Service. *Journal of general internal medicine*, 33(10), 1768–1773. <https://doi.org/10.1007/s11606-018-4621-5>
- McLeod, S. (2019). Likert scale definition, examples, and analysis. *Simply Psychology*.
<https://www.simplypsychology.org/likert-scale.html>
- Nagel, D. A., & Penner, J. L. (2016). Conceptualizing Telehealth in Nursing Practice: Advancing a Conceptual Model to Fill a Virtual Gap. *Journal of holistic nursing : official journal of the American Holistic Nurses' Association*, 34(1), 91–104.
<https://doi.org/10.1177/0898010115580236>
- Oh, S. S., Kim, K. A., Kim, M., Oh, J., Chu, S. H., & Choi, J. (2021). Measurement of Digital Literacy Among Older Adults: Systematic Review. *Journal of medical Internet research*, 23(2), e26145. <https://doi.org/10.2196/26145>

Pittman, J., Afari, N., Floto, E., Almklov, E., Conner, S., Rabin, B., & Lindamer, L. (2019).

Implementing eScreening technology in four VA clinics: a mixed-method study. *BMC*

health services research, 19(1), 604. <https://doi.org/10.1186/s12913-019-4436-z>