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Experiences of Decision Making and Attitudes Toward Digital Health Services Among Older Adults in Finland

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Abstract. Shared decision making (SDM) is based on the clinical expertise of healthcare professionals and patients' preferences and values. Digital health services may offer new possibilities for patient-generated data e.g. in SDM. This study aimed to assess older adults' experiences of decision making in healthcare and attitudes toward digital health and social services. Data were collected via an online survey of 629 respondents. Results showed that digital services are considered beneficial, yet half of respondents needed guidance in their use. Many factors affect SDM and the perceived benefits of digital services. Based on our findings digital services are expected to provide guidance and individualised user experience. More research is needed to provide services with equitable access for people with special needs.

Keywords. patient participation, decision making, older adults, digital services

1. Introduction

Shared decision making (SDM) is a decision-making (DM) process where a decision is based on the best available evidence shared by a healthcare professional (HCP) and preferences and values shared by a patient [1,2]. SDM is valuable for preference-sensitive conditions with multiple valid treatment options, and the decision is made based on the patient's views regarding the risks and benefits of the choices given [3].

In previous studies, SDM has been shown to have many positive implications. SDM is known to underline patients' rights and enhance patients' autonomy and self-efficacy [2,4]. Furthermore, SDM impacts affective-cognitive outcomes by increasing patient satisfaction and decreasing DM conflicts [4]. The implications of SDM for health

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outcomes are variable. SDM is known to promote adherence to treatment, as a poor perceived SDM is related to worse patient-reported health outcomes and higher healthcare utilisation [5]. In the long term, SDM may benefit disadvantaged patient groups in reducing societal health disparities [4].

Digital health and social services offer new affordances for patients, e.g., possibilities for health management irrespective of time and place, patient involvement, and DM in healthcare [e.g., 6,7]. This questionnaire study aimed to assess older adults' experiences of DM in healthcare in Finland. The study also researched the use of digital health and social services and attitudes toward using digital services.

2. Methods

The data for the study were collected between December 2021 and January 2022 via an online questionnaire. The study was shared with the members of the Finnish Pensioners' Federation (ca. 120,000 members) via emails from their member database (N=30329) and their social media accounts (Facebook and Twitter). The study complies with the Finnish Advisory Board of Research Integrity regulations and the World Medical Association Declaration of Helsinki. Respondents were informed about the study and the data management practices and were asked for consent to participate. Respondents' anonymity, confidentiality, and informed consent were maintained.

In the survey, respondents were asked about their sociodemographic background, subjective health status, and if they had had a doctor's appointment within the past six weeks [8]. The place of the appointment was also asked. Respondents who reported visiting the doctor answered the validated Finnish version of the SDM-Q-9. SDM-Q-9 is a nine-item scale developed to evaluate the extent to which patients are involved in DM in healthcare [9]. Validation of the Finnish version of SDM-Q-9 will be reported elsewhere. Items were rated on a four-point scale from Completely disagree (=1) to Completely agree (=4). The total score ranged between 9 and 36. Additionally, respondents were asked about the prevalence of using digital services for appointments, the perceived benefits of digital services, and whether they need guidance for using digital services [10].

The data were analysed utilising descriptive statistics (frequencies, percentages, means, and standard deviations (SD)). Correlation coefficient (Spearman's rank correlation (rs) or Pearson correlation coefficient (r)) and linear regression analysis were used to assess the relationship among the factors. The SDM-Q-9 items and items on perceived benefits of digital services were each treated as a single sum variable in the linear regression analysis. For the regression analysis, adjusted R square (R2), standardised regression coefficients (β), and P values were reported.

3. Results

A total of 629 respondents answered the survey. Most respondents were women (60 %) with a mean age of 71 years. 44% had a bachelor's degree as highest education level. Health status was reported mostly as fairly good (41%) or average (35%). No one considered their health status poor.

The mean of means of the Finnish version of SDM-Q-9 was 25.96 (SD=7.59). For single items of SDM-Q-9 the mean of means was 2.93 ranging from 2.47 (item 7) to 3.40 (item 1). SDM correlated slightly with health status (rs =-0.155, P<0.01). No other sociodemographic variable showed a significant correlation. The perceived benefits of digital services showed a reasonable correlation with SDM (rs =0.250, P<0.01).

Only two respondents had their latest doctor's appointment digitally despite the ongoing COVID-19 pandemic at the time of the survey. Most respondents (93%) had an in-person and 6% a phone appointment. The majority had never used digital services for the appointment. The prevalence of using digital services is shown in Table 1.

Table 1. Prevalence of using digital services with health and social care professionals (%/n)

	Have not used	Once	More often
Doctor	83.6% (n=526)	8.3% (n=52)	8.1% n=51)
Nurse	78.4% (n=493)	7.5% (n=47)	14.1.% (47)
Social worker or social instructor	98.4% (n=619)	1.3% (n=8)	0.3% (n=2)
Other health or social care professional	93.3% (n=587)	3.7% (n=23)	3.0% (n=19)

Despite low actual use, most respondents agreed on the benefits of digital services. Some disagreement was expressed regarding digital services' ability to activate health management (26.4%) and adapt to individual needs (32.5%). The prevalence of using digital services correlated with the perceived benefits (rs =0.180, P<0.01). The perceived benefits of digital services are shown in Table 2.

Table 2. Perceived benefits of digital health and social services and need for guidance in using them

Digital health and social services:	Totally disagree	Partly disagree	Partly agree	Totally agree
Help to assess the need for an appointment.	5.4% (n=33)	16.6% (n=102) 14.0% (n=86)	57.7% (n=354)	20.4% (n=125)
Make it easier to search for and choose suitable services.	6.8% (n=42)	13.0% (n=80)	53.1% (n=326)	26.1% (n=160)
Make it easier to use services regardless of time and place.	6.2% (n=38)	16.2% (n=99)	45.7% (n=281)	35.1% (216)
Make co-operation with professionals easier.	6.2% (n=38)	19.2% (n=118)	55.8% (n=341)	21.8% (n=133)
Help to activate health and wellbeing management	7.2% (n=44)	23.5% (n=144)	54.0% (n=332)	19.7% (n=121)
Help to adapt services to suit individual needs.	9.0% (n=55)		51.7% (n=317)	15.8% (n=97)
I need guidance in using digital services	26.4% (n=166)	28.3% (n=178)	31.3% (n=197)	14.0% (n=88)

The perceived benefits of digital services correlated with health status (rs =0.152, P<0.01). Almost half of respondents (45.3%) still needed guidance with digital services, which correlated with age (r=0.134, P<0.01) and health status (rs =0.148, P<0.01).

Regression analysis was conducted for two models employing 1) SDM and 2) perceived benefits of digital services as a dependent. Results are shown in Table 3.

Table 3. Contributions (β) of the variables for models 1-2

	SDM (β)	**Benefits of use β**
Age	-	-
Gender	-	-
Education	-0.055, *P*<0.166	-
Subjective health status	-0.139, *P*<0.001	-0.097, *P*<0.014
SDM		0.213, *P*<0.001
Prevalence of using digital services	0.060, *P*<0.136	0.140, *P*<0.001
Perceived benefits of digital services	0.223, *P*<0.001	
Need for guidance	0.39, *P*<0.336	-0.188, *P*<0.001

The first model variables explained 7.5% of the variance in SDM with adjusted R2=0.075. The model 2 variables explained 12.2% of the variance in perceived benefits of digital services with adjusted R2=0.122.

4. Discussion and Conclusions

The findings indicate that respondents felt involved in DM during their latest doctor's appointment. Older adults' preference for SDM [11] and the various factors influencing SDM [12] have been observed in previous studies. This study showed that SDM was affected by subjective health status, as noted by Pel-Littel et al. [12], and the perceived benefits of digital services. While digital services may foster SDM [13], in our study only a few had an appointment digitally. This study showed that SDM was affected by the perceived benefits of digital services.

We found that while digital services were considered beneficial, actual use of digital services for appointments remained low. Our results support prior studies [14] in showing that the perceived benefits are affected by SDM, actual use, and the need for guidance. Respondents were, however, dubious about digital services activating health management and adapting to their individual needs. Recent studies have shown that negative attitudes and technology anxiety may hinder older people's adaptation to digital services [15]. Along with attitudes, however, regional availability may also have influenced low actual use. Need for guidance in using digital services was widely reported and has been identified as one factor affecting the adoption of digital services [16].

Sustainable implementation of accessible and equitable healthcare services that meet people's needs and digital transformation are to be prioritised in SDM research [17, 18]. Technology may offer possibilities for patients with complex decisional needs and difficulties in reaching traditional healthcare and participation [19]. However, it is still unclear how equitable access to healthcare can be provided [18, 20]. More research is needed to clarify the role of digital services in fostering equitable access to healthcare and good quality SDM for people with specific needs, such as low literacy skills, diverse ethnocultural and sociodemographic backgrounds, as well as for older people [17].

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