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eHealth Skills of Female Entrepreneurs in Serbia



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ABSTRACT

This paper's main objective is to assess the current level of eHealth skills of female entrepreneurs in Serbia and their respective associations with selected socio-demographic characteristics. To this end, we use a dataset from the 2018 survey on ICT usage in Serbia. In particular, the analysis covers three eHealth skills: seeking health-related information online, scheduling medical appointments online or via applications, and online purchase of pharmaceutical products. The analysis shows that female entrepreneurs in Serbia, on average utilized eHealth opportunities more frequently than other women or male entrepreneurs. Level of education and average monthly income appears as the socio-demographic characteristics associated with eHealth skills related to familiarity with online services.

KEY WORDS: digital skills, eHealth literacy, female entrepreneurs, Covid-19, Serbia

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Introduction

The Covid-19 pandemic has a global impact on the planet. Lifestyle, work and communication transform significantly. Physical contact is minimized, and people have turned to online communication. Business meetings, school and university classes, conferences, theatre performances, concerts and private communication have all derive into virtual form. The pandemic crisis also put on challenges health systems globally. Many countries have not been able to handle the pressure of requests for treatment of Covid-19 and individuals with other pathological conditions. People are in a constant state of uncertainty and fear and search for support. These circumstances caused the Internet has become a valuable source of information about Covid-19 and other diseases, and the concept of eHealth spread much faster and broader than before.

However, information about Covid-19 has also been labeled as “infodemic”, which means “an excessive amount of information about the problem that is typically unreliable, spreads rapidly, and makes a solution more difficult to achieve” (Oxford dictionary). Unreliable information can endanger the health and lives of those who rely on it. Furthermore, they may lead them to actions such as public demonstrations, misuse of drugs, remedies, or induce fear from conspiracy theories, inducing both panic and xenophobia, in some cases (Huand and Liu, 2020; Mamun and Griffiths, 2020). As a result of the circumstances mentioned above, locating trustworthy online health resources and using available information effectively is extremely important. In this process, Health and eHealth literature have one of the critical roles.

In line with the trend, the European Economic and Social Committee (EESC) supports the European Commission's attempts to put Digital Health Literacy as a high-priority in the eHealth Agenda (EESC, 2019). The EESC also emphasizes that various generations need different approaches to improve E-health literacy, depending on their utilization of digital tools in everyday life. It also points out the advantages that e-services provide in correlation with fully understanding the provided information. The WHO European Region office also published a comprehensive overview of ongoing projects and their outcome in its WHO-HEN-Report-57 (Rowlands et al., 2018). The document's conclusion states that health literacy's main factor is the growth of skills through formal educational systems and life-long learning.

The Republic of Serbia also started introducing eHealth in the Serbian medical system in line with Strategy for Development of Information Society in Serbia until 2020 (Official Gazette, no. 51/2010) with the concept of Integrated Health Information System (IHIS). The IHIS is a central electronic system which contains all medical and health data of patients, data of health workers and associates, data of health institutions, health interventions and services performed in health institutions, data of electronic instructions and electronic prescriptions, appointment information for specialist examinations, diagnostic procedures, and surgical interventions (Ministry for Health RS, 2020). With the top-down approach, Serbia has opted for a modern approach to health and healing.

On the other hand, Serbia citizens developed the need and habits of Internet support in practically every aspect of their lives, including healthcare. Their ability to find useful information, schedule doctor appointments and similar activities were beneficial during the Covid-19 lockdown. The entire population was exposed to health risks on various grounds. In addition to the direct infection with the Coronavirus, there was an increased risk of difficult access to the healthcare system due to the focus on Covid-19 patients, clinics' closure, and free circulation restrictions.

Lockdown and social distancing affect all sectors of the Serbian economy, but not equally - the sector of small and micro enterprises is the most vulnerable. At the same time, women entrepreneurs' position is particularly complexed. In Serbia, in a society that respects traditional values, women continue to be a pillar of the household and still have the principal responsibility for doing everyday household chores. SeConS (2020) published a survey that shows that one or more women cook in 73% of households; wash dishes in 67% of households; wash clothes in 79% of households, and control children's school homework in 55.6% of households. As a result, female entrepreneurs are recognized as an extremely vulnerable group. Therefore, we believe that appropriate behavior and the level of eHealth literacy can greatly facilitate health and family care. It is particularly important and in line with the fact that women should have equal opportunities to gain skills and abilities like men through lifelong learning. The development of technology has only emphasized this need, bearing in mind that "many female entrepreneurs are still keeping their head in the sand" (Achakpa and Radović-Marković, 2018) for knowledge about information-communication technology.

Following the rationale that eHealth refers to a broad range of health care services and health information delivered through or enhanced by information and communication technologies (Eng, 2002; Eysenbach, 2001), in this paper, we analyze the level and determinants of the eHealth skills of female entrepreneurs in Serbia, in particular:

- Current utilization of the eHealth opportunities by the female entrepreneurs in Serbia and comparison with other women and male entrepreneurs and;
- Association of the socio-demographic factors with eHealth skills of the female entrepreneurs in Serbia.

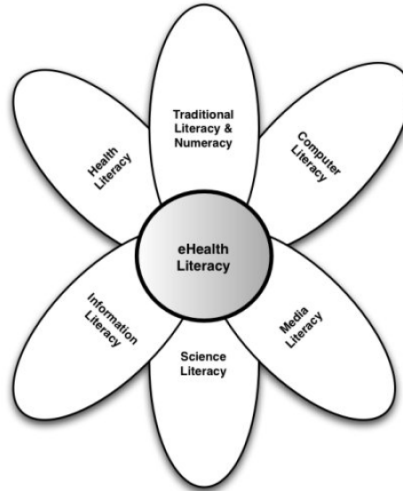
Literature Review

In the last few decades, the increasing popularity of using the Internet to find health-related content has spurred the development of the eHealth concept. One of the fundamental assumptions of this concept is skills that enable users to find on the Internet and accurately interpret available health information – eHealth literacy (Duplaga, 2020). In that sense, eHealth literacy is defined as “*the ability to seek, find, understand, and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem*” (Norman & Skinner, 2006). Eysenbach (2001) argues that the accumulation of eHealth literacy is essential for eHealth behavior. It determines whether and to what extent individuals can benefit from eHealth participation, which refers to a person’s engagement with various health services and information delivered or enhanced through digital technologies.

The first dilemmas about the reliability of medical information available on the Internet emerged at the end of the last century when these services became increasingly in demand. Eysenbach (1998) even uses the expression “anarchic nature” in the sense of available information quality. Impicciatore et al. (1997) point out that unrestricted retrieval of data on diseases, treatments, and medicines requires taking responsibility for healthcare decisions. The users need to have in mind that this information lacks validity and consistency in many cases. Even at that time, it was a very sensitive issue since “more than 60 million individuals in the US searched for health, and medical information on the Internet in 1998” (Louis Harris & Associates, 1999) and the need for appropriate knowledge and literacy become to emerge.

The level of eHealth literacy directly impacts eHealth behavior, including the use of information technology to search the Internet for health information, make appointments with physicians, purchase medicines online, or participate in support groups (Chen and Lee, 2013).

Figure 1: The Lily Model of eHealth Literacy



Source: Norman & Skinner (2006b)

The first eHealth literacy conceptual model is proposed by Norman & Skinner (2006b). It comprises six core skills or literacies: traditional, health, information, scientific, media, and computer literacy and it is represented by “The Lily Model” (Figure 1). Each literacy type can be measured separately or combined into two dimensions: analytical skills and context-specific skills. The analytical skills combine traditional literacy and numeracy, media and information literacy, while context-specific literacy includes health, computer and science literacy. Table 1 presents a brief explanation of literacies.

Based on the model, Norman & Skinner (2006a) develop a measurement scale – eHEALS (the eHealth Literacy Scale). As a methodological instrument, they use a self-assessment questionnaire with a five-point Likert scale of agreement (from “strongly agree” to “strongly disagree”) and factor analysis. The research covers 664 participants aged between 13 and 21 and found that the tool can identify the level of internet health information usefulness among different categories of respondents.

Due to the technological development and change in human behavior, van Deursen & van Dijk (2011) expand the model with Internet literacy. The new type of literacy includes operational, formal, informational and strategic literacy, including medium-related Internet skills and content-related Internet skills. Medium related skills contain operational skills for using browsers, search engines, operating with Internet forms, navigation and sense for location on the World Wide Web. Content-related Internet skills cover information skills for the location of information and strategic skills to benefit available content. Internet skills are closely related to digital skills, which is a broader concept than computer skills (van Deursen et al., 2014). Certain elements overlap in van Deursen and the Lily model - information literacy and computer literacy.

Table 1: Traditional, health, information, scientific, media, and computer literacy – basic concepts

Type of literacy	Concept
Traditional	<ul style="list-style-type: none"> • The ability to read text, understand written passages, and speak and write a language coherently. • Basic reading and writing skills are essential in order to make meaning from text-laden resources.
Health	<ul style="list-style-type: none"> • Health literacy skills required to interact with the health system and engage in appropriate selfcare. • It is “a constellation of skills, including the ability to perform basic reading and numerical tasks required to function in the health care environment. Patients with adequate health literacy can read, understand, and act on healthcare information” (American Medical Association, 1999).
Information	<ul style="list-style-type: none"> • Information literate person knows “how knowledge is organized, how to find information, and how to use information in such a way that others can learn from them” (American Library, 1989). • Web users need to know how to develop and execute search strategies as well as comprehend how this knowledge is organized.
Scientific	<ul style="list-style-type: none"> • Scientific literacy is broadly conceived as an understanding of the nature, aims, methods, application, limitations, and politics of creating knowledge in a systematic manner (Laugksch, 2000). • Science literacy places health research findings in appropriate context.
Media	<ul style="list-style-type: none"> • Media literacy is a process of development metacognitive reflective strategies by means of study about media content and context. • It is generally viewed as a combination of cognitive processes and critical thinking skills applied to media and the messages that media deliver.
Computer	<ul style="list-style-type: none"> • Computer literacy is the ability to use computers to solve problems. • Computer literacy includes the ability to adapt to new technologies and software and includes both absolute and relative access to eHealth resources.

Source: Adapted from Norman & Skinner (2006b)

Hsu, Chiang & Yang (2014) propose the integrative eHealth model (IMeHU) to study Taiwan students' eHealth literacy. The model tests hypothesis on the correlation between individual factors (health status, degree of health concern, major and frequency of discussions about health-related issues), eHealth literacy (functional, interactive and critical) and health behavior (eating, exercise and sleep). They introduce a twelve-item questionnaire with a five-point Likert scale of agreement, conduct research and collect 525 answers. The results show that eHealth proficiency has an intermediate role in the relationship between demographic and individual factors and health behavior. Also, the literacy level was higher among respondents with better health status, who studied clinical fields or had a particular concern for their well-being. In the same year, Koopman et al. (2014) develop the PRE-HIT instrument to assess eHealth literacy. First, they use focus groups to test the questionnaire, then conduct a survey and collect 195 responses from the patients with chronic conditions, ages between 20 and 86. Finally, based on factor analysis, authors extract eight strong factors - the need for health information, experience in using computer and Internet, fear of computers, relationship with a physician, experience in using cell-phone, concerns about privacy on the Internet and a need to avoid undesirable information.

We also need to mention dual instruments for the assessment of eHealth literacy. Based on the meta-analysis by Karnoe & Kaysen (2015), Lin et al. (2014) study of computer and health literacy and skills with Chinese patients. The authors use Chew, Bradley, and Boyko (2004) questions regarding health literacy and generated computer literacy questions. The results show that 43.6% of respondents have a low level of health literacy, and even 96.7% have a low level of computer literacy. Taha, Sharit & Czaja (2014) explore correlation between numeracy ability / technology skills and health literacy. They generate questions regarding habits in using cell phones, computers and ATMs and Test of Functional Health Literacy in Adults (TOHFLA) (Parker, et al., 1995) together with questionnaire for analysis of specific portals use. Also, the authors use self-assessment for web-use skills. They found an inconsistency between numeracy skills and health literacy, while numeracy and Internet skills impact task performance. Without going into details Reininger et al. (2013), and van der Vaart, Drossaert, Taal, & van de Laar (2011) also gave their contribution on the topic (see details in Karnoe & Kaysen, 2015).

Gazibara et al. (2018) conduct a research study among adolescents (aged 14-19) using eHEALS literacy scale for the first time in Serbia. Based on the sample of 702 respondents, the authors conclude that adolescents have an above-average self-confidence level in searching and using information from the Internet. They can assess the quality of available health information but struggle to find the source of information, although female students show more confidence in this area. Multiply regression found that the female gender also has a higher level of eHealth literacy.

Methodology and Data

In the previous section we discussed the full-scope methodological approach to appraise eHealth literacy. However, such approach requires collection of primary data through specially designed survey, which goes beyond the scope of our research resources. Therefore, we rely on the existing sets of secondary data on digital skills and subsequently reduced scope of eHealth literacy examination to several eHealth skills covered in available datasets.

This paper's methodology is based on the Eurostat comprehensive survey on digital skills "Usage of information and communication technologies in households and by individuals" (Eurostat, 2020), which is annually conducted by the national statistical institutes of EU member and candidate countries. The Eurostat survey covers a broad list of ICT subjects, including ICT competence and skills, and the use of the Internet and other electronic networks for different purposes by individuals and/or households. Following the acceleration, diffusion, and expansion of the ICT usage, the questionnaire's list of questions has varied over time, so that questions related to the eHealth skills only recently were added. Therefore, our methodology consists of two building blocks:

1. Identification of eHealth skills and women entrepreneurs. We use the 2018 survey conducted by the Serbian Statistical Office, wherein we identified three questions related to the eHealth skills (Statistical Office of the Republic of Serbia, 2018):

- Which of the following activities have you performed over the Internet in the last 3 months? (Optional answer: Seeking health-related information);

- Which of the following goods or services have you ordered on the Internet in the last 12 months? (Optional answer: Pharmaceutical products);
- Which of the following activities have you performed over the Internet for private purposes in the last 3 months? (Optional answer: Making an appointment with a practitioner via a website or application, like scheduling an appointment in a hospital or medical center).

In the second step, we use socio-demographic characteristics of the survey participants to render the subsample of female entrepreneurs. In particular, we combine the criterion of self-employment with the female gender to select proper cases.

2. Statistical analysis of the data. It covers the following set of analytical issues:

- Comparison of eHealth skills vis-à-vis comparable digital skills of the female entrepreneurs;
- Inference on differences in the level of eHealth skills between male and female entrepreneurs, as well as between female entrepreneurs and other women;
- Inference on associations between eHealth skills and socio-demographic characteristics of the women entrepreneurs.

The full 2018 sample from the survey on ICT usage in households and Serbia individuals includes 2,652 participants. Among them, we identified 48 participants that jointly match both gender and self-employment criteria to render a subsample of the women entrepreneurs. We consider the following socio-demographic characteristics: age, education, number of kids (aged under 18), size of the average monthly income and settlement type (urban or suburban/rural). Choice of socio-demographic characteristics, illustrated in Table 1, is aligned with motives to examine their associations with eHealth skills. The socio-demographic characteristics distribution reveals that the “average” woman entrepreneur in Serbia is aged between 46-55 years, secondary educated, have no infant or adolescent children, earns less than 600 EUR and lives in an urban area.

Table 1: Distribution of subjects by socio-demographic variables (age, education, number of kids aged 18 or less, average monthly income per household and type of settlement)

Characteristic	n (%)
Age	
25-35	4 (8.3%)
36-45	14 (29.2%)
46-55	20 (41.7%)
56-65	10 (20.8%)
Education	
Primary education	3 (6.2%)
Secondary education	29 (60.4%)
Vocational studies	1 (2.1%)
Academic studies	15 (31.3%)
Number of kids aged 18 or less	
0	30 (62.5%)
1	11 (22.9%)
2	5 (10.4%)
4	2 (4.2%)
Average net monthly income per household	
Less than 300 EUR	17 (35.4%)
300 – 600 EUR	12 (25.0%)
Over 600 EUR	13 (27.1%)
Missing	6 (12.5%)
Settlement type	
Urban	31 (47.9%)
Suburban/Rural	17 (22.9%)

Source: Author's calculations

Results and Discussion

In 2015, the DG CONNECT and the Eurostat Information Society Working Group developed a comprehensive digital skills indicator to measure the extent of digital competence in Europe, based on the set of individual indicators derived from the survey on ICT usage (EC, 2016). Those

indicators basically cover the following area of digital skills: information, communication, problem solving and familiarity with online services. Regarding the nature of three identified questions related to eHealth, seeking health information can be considered an information skill, whereas buying pharmaceutical products and scheduling appointments online or using applications belongs to a group of familiarity with online services skills. For the purpose of research, we picked several peer skills from the respective groups to provide a comparative analysis. Subsequently, we rendered the variables that indicate the participant's ability to perform some of those skills. The cross-tabulated distribution of digital skills (including eHealth-related skills) across female and male entrepreneurs and other women is presented in Table 2.

Table 2: Comparisons of eHealth and peer digital skills between women entrepreneurs and other population groups in Serbia

Skills	Female entrep. %	Other females %	Diff	z test	Male entrep. %	Diff	z test
Information skills (performance)							
Seek health-related information	58.3	47.1	11.6	1.59*	45.8	12.5	1.41*
Save files on Internet storage space	29.2	15.6	14.1	-2.64***	22.9	6.3	-0.82
Obtain information from public auth/services' websites	52.1	29.0	23.8	-3.58***	43.8	8.3	-0.95
Find information about goods or services	70.8	58.8	12.4	1.73**	75.0	-4.2	0.53
Watch Internet video content (YouTube, Vimeo...)	66.7	50.1	17.1	-2.33*	67.7	-1.0	0.13
Familiarity with online services (performance)							
Schedule medical appointment	12.5	8.1	4.4	-1.15	12.5	0.0	0.00
Sell online	25.0	12.8	12.6	-2.57***	18.8	6.2	-0.87
Book accommodation online	16.7	13.3	3.4	-0.68	16.7	0.0	0.00
Use Internet banking	25.0	17.1	8.2	-1.48*	27.1	-2.1	0.27
Purchase pharmaceutical products	20.8	11.2	10.2	-2.16**	12.5	8.3	-1.31*

Source: Author's calculations

Comparative analysis of digital skills reveals that abilities to perform information skills exceed familiarity with online services, regardless of the population group. When only eHealth skills of female entrepreneurs are considered, seeking health-related information is the most frequently exhibited skill, whereas scheduling medical appointments appears as the least commonly practiced skill, not only among eHealth but also among all digital skills considered. It is a quite expected result, since the scheduling of the medical appointments online or using web applications is the relatively new e-service in Serbia relative to internet banking or online purchasing, and therefore still underdeveloped.

A comparison of digital skills between female entrepreneurs and other women reveals several important insights. Female entrepreneurs are more digitally skilled than other women, regardless of the type of skill considered. This is especially the case in a group of informational skills, where all differences in proportions are two-digit numbers, and the z-test of proportions confirms the significance of those differences. However, the difference between the share of women entrepreneurs *vis-à-vis* other women seeking health information online is the smallest one among information skills. The opposite case is on the side of familiarity with online services, whereby the difference in purchasing of pharmaceutical products online between female entrepreneurs and other women is the second-highest; the only difference that is higher is recorded for the online selling, in line with expectations that such activity is not typically performed by the women who are not self-employed. When differences in digital skills between female and male entrepreneurs are compared, eHealth skills, particularly seeking health-related information and purchasing the pharmaceutical products online, appear to be the only which are statistically significant. The equality of digital skills between female and male entrepreneurs is an interesting finding that opposed evidence from previous research, which shows that Serbia's digital skills (based on an ICT usage survey in 2017) are gender-sensitive (Bradić-Martinović and Banović, 2018).

The second part of the empirical analysis covers association between socio-demographic variables and eHealth skills. To this end, we computed the cross-tabulations of socio-demographic variables (Table 1) and eHealth indicators and ran the Pearson Chi-squared test of association. The selection of the socio-demographic characteristics is based on the prior expectation about possible associations with eHealth variables, which are grounded on the following rationales:

- Age and education: the previous research on digital skills and the digital divide figured robust empirical evidence that age and education are associated with digital skills. In particular, mastering digital skills is inversely related to age and proportional to education level (van Deursen and van Dijk, 2010; van Deursen, van Dijk and Peters, 2011).
- The number of kids: while this characteristic is not typically encompassed in the research on digital skills, it is reasonable to assume that care about infants or adolescents is time-consuming and therefore, may motivate self-employed women to increase involvement in online activities.
- Average monthly income: The existing literature profoundly documents evidence that stronger skills provide workers with better opportunities for jobs and higher income (EC, 2020). Therefore, income level and level of digital (or any other) skills should co-vary in the same direction;
- Settlement Type: despite coverage of broadband connections in the last couple of years has considerably improved in suburban and rural areas in Serbia, the population living in the urban areas still has better access to ICT means, and therefore it is arguably to assume that the urban population is more digitally skilled.

Regarding the frequency distribution of the socio-demographic characteristics of participants in the sample (Table 1), we did several modifications to make this distribution more even by merging modalities with an insufficient number of observations: i) age categories 25-35 and 35-45, ii) 2 or more children, iii) primary and secondary education (into non-tertiary, and iv) vocational and academic education (into tertiary).

Analysis of the association between socio-demographic characteristics and eHealth skill *seeking health-related information* of female entrepreneurs is shown in Table 3a. The results of the Chi-squared tests do not confirm expectations about the existence of those associations. Indeed, proportions between female entrepreneurs who search health-related information online and those who are not quite evenly distributed across modalities of socio-demographic characteristics, without sizable deviations, may indicate associations' existence.

Table 3a: Association between socio-demographic characteristics and eHealth skill seeking health-related information online

Socio-demographic characteristic	No	Yes	Ratio Yes/No	Chi-squared test
Age				
25-45	14.58	22.92	1.57	0.16
46-55	18.75	22.92	1.22	
56-65	8.33	12.50	1.50	
Education				
No tertiary	29.17	37.50	1.29	0.1714
Tertiary	12.50	20.83	1.67	
Number of kids aged 18 or less				
0	27.08	35.42	1.31	0.1656
1	8.33	14.58	1.75	
2 +	6.25	8.33	1.33	
Average net monthly income per household				
Less than 300 EUR	14.58	20.83	1.43	0.2274
300 – 600 EUR	12.50	12.50	1.00	
Over 600 EUR	12.50	14.58	1.17	
Missing	2.08	10.42	5.01	
Settlement type				
Urban	27.08	37.50	1.38	0.0026
Suburban/rural	14.58	20.83	1.43	

Source: Author's calculations

Note: Null hypothesis of Chi-squared test: cross-tabulated variables are independent; * for 10% statistical significance, ** for 5 % statistical significance, *** for 1 % statistical significance; Chi-squared test excludes missing values.

On the other side, analysis of the association between socio-demographic characteristics and eHealth skill *scheduling medical appointments online or via applications* reveals the existence of such associations for two variables: education and average monthly income (Table 3b). Values of the ratios that read in Table 3b confirm expected positive associations: the proportion of tertiary educated female entrepreneurs who made online scheduling of

appointments considerably exceeds the proportion of non-tertiary educated, and the same holds for earnings over 600 EUR.

Table 3b: Association between socio-demographic characteristics and eHealth skill scheduling medical appointments online or via applications

Socio-demographic characteristic	No	Yes	Ratio Yes/No	Chi-squared test
Age				
25-45	31.25	6.25	0.20	
46-55	39.58	2.08	0.05	1.8286
56-65	16.67	4.17	0.25	
Education				
No tertiary	64.58	2.08	0.03	7.7143***
Tertiary	22.92	10.42	0.45	
Number of kids aged 18 or less				
0	52.08	10.42	0.20	
1	22.92	0.00	0.00	2.068
2 +	12.50	2.08	0.17	
Average net monthly income per household				
Less than 300 EUR	33.33	2.08	0.06	
300 – 600 EUR	25.00	0.00	0.00	6.6208**
Over 600 EUR	18.75	8.33	0.44	
Missing	10.42	2.08	0.20	
Settlement type				
Urban	54.17	10.42	0.19	1.0539
Suburban/rural	33.33	2.08	0.06	

Source: Author's calculations

*Note: Null hypothesis of Chi-squared test: cross-tabulated variables are independent; * for 10% statistical significance, ** for 5 % statistical significance, *** for 1 % statistical significance; Chi-squared test excludes missing values.*

The previous finding is also confirmed in the case of eHealth skill *online purchase of pharmaceutical products*. As reads in Table 3c, this skill is associated both with education and the average monthly income of female entrepreneurs. Association is also found in case of settlement type; the

proportion of female entrepreneurs that purchase pharmaceutical products in urban areas exceed those in suburban or rural areas. This is not a surprising result, bearing in mind that online purchasing also requires delivery services which are better developed and infrastructurally supported in urban areas.

Table 3c: Association between socio-demographic characteristics and eHealth skill online purchase of pharmaceutical products

Socio-demographic characteristic	No	Yes	Ratio Yes/No	Chi-squared test
Age				
25-45	25.00	12.50	0.50	
46-55	37.50	4.17	0.11	3.1326
56-65	16.67	4.17	0.25	
Education				
No tertiary	58.33	8.33	0.14	4.0421**
Tertiary	20.83	12.50	0.60	
Number of kids aged 18 or less				
0	47.92	14.58	0.30	
1	20.83	2.08	0.10	1.2874
2 +	10.42	4.17	0.40	
Average net monthly income per household				
Less than 300 EUR	31.25	4.17	0.13	
300 – 600 EUR	22.92	2.08	0.09	
Over 600 EUR	16.67	10.42	0.63	4.6558*
Missing	8.33	4.17	0.50	
Settlement type				
Urban	45.83	18.75	0.41	3.5675*
Suburban/rural	33.33	2.08	0.06	

Source: Author's calculations

*Note: Null hypothesis of Chi-squared test: cross-tabulated variables are independent; * for 10% statistical significance, ** for 5 % statistical significance, *** for 1 % statistical significance; Chi-squared test excludes missing values.*

Conclusion

The Covid-19 pandemic becomes a great challenge for citizens, but also health systems and health authorities globally. In many countries, the systems cannot meet all patients' needs, or people do not want to visit medical facilities out of fear. Digital health care, in the broadest sense, is one way to alleviate these problems. However, in order for such a system to be effective, it is necessary for users to have a certain level of knowledge about health and treatment, as well as digital skills. Users with a higher level of knowledge and skills have a better opportunity to use information from the world wide web, online and offline communication with medical staff or ordering drugs and similar preparations via the Internet.

In this paper, we analyze to what extent female entrepreneurs in Serbia utilize eHealth opportunities and whether this utilization is associated with selected socio-demographic variables. We focus on the three particular eHealth skills covered by the survey on Serbia's ICT usage for 2018: seeking health-related information online, scheduling medical appointments online or via applications, and online purchase of pharmaceutical products. The first one considered eHealth skills are regarded as an information skill, whereas the second and third are regarded as familiarity with online services (sub-group of problem-solving skills). Besides eHealth skills, we also include peer information skills and familiarity with online services in analysis for the purpose of comparison.

The analysis results confirm the presumption that female entrepreneurs have mastered digital skills better than other women, including eHealth skills. When female and male entrepreneurs are compared, seeking health-related information and purchasing pharmaceutical products appears as the eHealth skills more frequently utilized by female entrepreneurs. Bearing in mind how skills are assessed, such result does not necessary means that women entrepreneurs are more capable of seeking health-related information and purchasing pharmaceutical products; there is also a chance that women, in general, are more concerned about health than men. Apart from those two eHealth skills, other digital skills are evenly utilized by both female and male entrepreneurs, opposite to the previous research findings that digital literacy in Serbia is gender-sensitive.

The association between female entrepreneurs' socio-demographic characteristics and utilization of eHealth skills is not confirmed in most cases. The notable exceptions are statistically confirmed associations of education

level and average monthly income with eHealth skills related to familiarity with online services. We did not consider the direction of causality of those associations. Nevertheless, it is reasonable to assume that the education level increases the level of digital skills, while a higher level of digital skills increases the prospective for higher earnings.

The research has several shortcomings. Besides the already mentioned limitation that eHealth indicators basically reflect actual performances rather than skill capabilities, other important concern is the insufficient representativeness of the female entrepreneurs in the sample. Additionally, an item from the survey on ICT usage related to scheduling appointments with practitioners online is used as a proxy for scheduling medical appointments. Similarly, Eurostat's definition of self-employment predominantly covers entrepreneurs but not exclusively. Therefore, further research on this topic should secure a larger and more representative sample of the female entrepreneurs and increase eHealth skills coverage up to the full-scope measurement of eHealth literacy.

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