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SOCIAL WORKERS' INFORMATION AND TELECOMMUNICATIONS TECHNOLOGY COMPETENCES

Streszczenie

Celem przeprowadzonych badań było zdiagnozowanie jak pracownicy socjalni oceniają własne kompetencje informacyjne. Zgromadzony materiał empiryczny wykazał, że badani charakteryzują się zróżnicowanym poziomem kompetencji w zakresie wiedzy, umiejętności i kompetencji społecznych, co wskazuje na istniejącą lukę w wykorzystywaniu nowoczesnych technologii informacyjno-komunikacyjnych w pracy socjalnej, szczególnie w zakresie ochrony danych i bezpieczeństwa w sieci. Przyczyny tkwić mogą zarówno w osobie pracownika (niechęć do podnoszenia kwalifikacji ze względu na zbyt duże aktualne obciążenie pracą, niska motywacja, wiek, postawa wobec pracy), jak i w miejscu pracy, gdzie często występują ograniczenia sprzętowe, niskie zaplecze materialne, brak wsparcia pracodawcy.

Słowa kluczowe: kompetencje informacyjno-komunikacyjne, pracownik socjalny, czynniki demograficzne.

KOMPETENCJE PRACOWNIKÓW SOCJALNYCH W ZAKRESIE TECHNOLOGII INFORMACYJNO-KOMUNIKACYJNYCH

Abstract

The aim of the research was to diagnose how social workers assess their own ICT competences. The collected empirical material has shown that the respondents present different levels of competence in the field of knowledge, skills, and social competences, which indicates the existing gap in the use of modern information and communication technologies in social work, especially in the field of data protection and network security. The reasons may lie both in the employee' attitude (reluctance to raise qualifications due to too high current workload, low motivation, age, attitude towards work) and in the workplace, where the limitations often occur such as hardware restrictions, low material resources, and lack of employer support.

Key words: ICT skills, social workers, demographic factors.

Introduction

With the advances in new technologies, human resources are becoming increasingly important as they are considered to be a factor of economic, technological, and, first and fore-

most, social growth. "An information society is a new social entity characterised by a fast development of information and communications technologies, which facilitate communication and access to information which is as more prevalent than ever before"[1]. At the same time modern information technologies are becoming an indispensable work tool in an increasing number of professions. The integration of information and communications technologies has shaped a new entity, which means that "information technologies have changed the face and scope of the aspects of communications technologies and, in turn, those technologies have accelerated the growth of information technologies. The notion of information and telecommunications technology (ICT) encompasses any activities related to manufacturing and utilising telecommunications, IT devices, and related services as well as storing, processing, and making available information in digital form using digital means and various e-communications devices"[2]. Nowadays it is hardly possible to perform work-related activities without basic ICT knowledge and skills. This, in turn, brings up the subject of employee's current competences. „Employees' competences are related to personal traits, skills and knowledge and are treated as a set of behaviours. An employee's cognitive skills and behavioural competences are also taken into account. The aspects of experience, capabilities, and aptitude to take actions are also taken notice of"[3]. Furthermore in the "*Memorandum of life long learning* IT skills are classified as new basic skills, i.e. those required for active participation in the knowledge society and economy"[4].

The development of new technologies, which is also seen in welfare institutions, forces the employees of those institutions to improve their skills and knowledge. "Especially noteworthy are the so-called supporting professions, among which the profession of social worker plays a significant role in the modern society. Social work is a profession in which competences and skills are key factors contributing to professional success, satisfaction, and alleviation of occupational stress and burn-out"[5]. The complexity of the socio-economic condition and various changes in the field of ICT are nowadays quite a challenge for social workers. One can also notice that social work undergoes the process of professionalisation[6]. "Social workers must have adequate knowledge, specific competences, and they must adopt an attitude that will make them able to be both a guide and a companion in solving human problems. They must be able to differentiate and identify social issues as well as containing the adverse

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[1] J. Bednarek, *Rola i miejsce nowych zagrożeń cyberprzestrzeni i świata wirtualnego w kontekście polityki społecznej*, [in]: J. Lizut (ed.), *Zagrożenia cyberprzestrzeni. Kompleksowy program dla pracowników służb społecznych*, Wydawnictwo WSP im. Janusza Korczaka, Warszawa 2014, p. 22.

[2] W. Furmanek, *Edukacja a przemiany cywilizacyjne*, Wydawnictwo Oświatowe FOSZE, Rzeszów 2010, p. 26.

[3] J. Bakonyi, *Kompetencje informatyczne – z perspektywy pracowników*, „Zeszyty Naukowe Wyższej Szkoły Humanistycznej Zarządzanie" 2016, issue 2, p. 30.

[4] T. Nowakowski, *Nauczyciele akademiccy i studenci wobec nowych technologii informacyjnych*, Wyd. Centrum Badań Europy Wschodniej, Olsztyn 2010, p. 10.

[5] A. Solak, *Nowe kompetencje pedagogiczne pracowników służb społecznych wyzwaniem zmian współczesnego świata*, „Szkoła – Zawód – Praca" 2013, issue 5-6,41-52.

[6] B. Kromolicka, *Pedagogiczne aspekty pracy socjalnej*, [in] A. Kotlarska-Michalska, K. Piątek (ed.) *Praca socjalna - jej dyskurs, usytuowania i profile*, Kujawsko-Pomorska Szkoła Wyższa w Bydgoszczy, Toruń-Bydgoszcz 2013, p. 75-90.

effects that those issues may exert on the lives of individuals and social groups"[7]. In the profession of the social worker the quality and scope of competence are significant as welfare work is burdened with responsibility for other people – their lives and functioning, which involves the contact with a wide range of information technologies that have nowadays made their way into a variety of walks of life.

The subject-matter literature points out to the existence of digital and information literacy. According to W. Czerski, the meanings of those two terms are strongly related to each other, but have differing scopes. Digital literacy "should be understood as the skills related to using hardware and software. They should be also treated as part of information literacy. The information literacy, on the other hand, refers to handling information using the computer, peripheral devices and the software installed on the computer"[8]. Sometimes, for the sake of simplicity, authors use the term "digital literacy" instead of " information and communications literacy". One of the reasons is that the term "information and communications technology" is used interchangeably with "digital technology"[9]. Regardless of the terminology, ability to use digital technologies is nowadays the core element of the competences of any member of the public. Those competences include not only the use of various devices, software and the Internet, but also the awareness of possibilities, limitations, and risks that come with new technologies, critical attitude to the reliability of information gathered through the use of digital technologies as well as the awareness of legal and ethical rules related to ICT[10].

Social workers should be able to work using new technologies, which would allow them to improve the quality and efficiency of their work, e.g. gathering information needed for preparing a community interview, efficient cooperation with a local community, with other specialists, and social groups. Digital literacy is particularly important. It is defined as the "ability to use new information technologies, to search, gather, and process new information and to operate efficiently in the conditions of the spreading digitization (computerization) of all aspects of human life"[11]. However, digital literacy of social workers does not only mean specific knowledge or skills related to the use of a computer or a printer. This is also a certain kind of pedagogical competence, as pointed out by W. Osmańska-Furmanek[12], which involves the awareness of risks and possibilities that come with the use of information technology in work

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[7] A. Weissbrot-Koziarska, *Współczesne problem społeczne jako wyzwanie dla etyki zawodowej pracowników socjalnych*, [in:] M. Czechowska-Bieluga, A. Kanios, *Współczesne oblicza pomocy społecznej i pracy socjalnej*, Wydawnictwo UMCS, Lublin 2014, p. 15.

[8] W. Czerski, *Ewolucja katalogu kompetencji informacyjnych nauczycieli*, „Dydaktyka Informatyki" 2017, issue 12, p. 181.

[9] J. Jasiewicz, D. Batorski, M. Kisilowska, A. Mierzecka-Szczepańska, *Wyniki badań przeprowadzonych w ramach projektu „kompetencje cyfrowe nauczycieli i wykorzystanie nowych mediów w szkolnictwie podstawowym, gimnazjalnym i ponadgimnazjalnym*, uniwersytet Warszawski, Warszawa 2013; M. Sysło, *Standardy przygotowania nauczycieli w zakresie technologii informacyjnej i komunikacyjnej*, PTI, Warszawa 2010, p. 2, http://mmsyslo.pl/[29.01.2019], p. 8.

[10] ZALECENIE RADY z dnia 22 maja 2018 r. w sprawie kompetencji kluczowych w procesie uczenia się przez całe życie, https://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:32018H0604(01)&from=en [29.01.2019].

[11] T. Nowakowski, *op. cit.*, p. 78.

[12] W. Osmańska-Furmanek, *Nowe technologie informacyjne w edukacji*, Lubuskie Towarzystwo Naukowe, Zielona Góra 1999, p.123.

with other people. The knowledge of the risks, coming from the use of the Internet, may contribute to more effective work with the client. The cross-sector cooperation with institutions and organisations may be more efficient with the use of the Internet. With the use of information technology at work, social workers can reduce the time needed for dealing with administrative matters, preparing documents or community interviews as well as making the broadly understood communication at various levels more efficient.

Methodology

The main objective of the study was to examine social workers information and communications technology competences as well as finding the correlations between those competences and the socio-demographic factors. Therefore, the following research questions have been asked: *How do social workers assess their information and communications technology competence in terms of knowledge, skills, and social competences?* and *What is the correlation between information and communication technology competences and socio-demographic factors?* The research is diagnostic, therefore working hypotheses have not been put forward[13]. The solutions to research problems will be made by diagnosing the information and communications technology competences of social workers. The diagnostic survey method and questionnaires were used in the research procedure. Empirical data were gathered using the questionnaire comprising *Kwestionariusz kompetencji informacyjno-komunikacyjnych* [Information and communication technology competences questionnaire] which is a modified version of the scale designed by J. Bakobnyi[14] and the respondent's particulars (socio-demographic variables). The respondents' task was to self-assess their knowledge, skills, and social competences using the five-point scale ranging from 5 (positive assessment) to 1 (negative assessment). The statistical analysis was performed using the IBM SPSS software (version 24).

The study included 140 social workers from three provinces: Lublin, Podkarpackie, and Masovian province. All questionnaire forms were filled in correctly and constituted the basis for the empirical analysis.

Analysis

While analysing the demographic particulars of the study group, the following independent variables were taken into consideration: sex, age, place of residence, level of education, acquired profession, and worked years. The analysis of the above variables is presented in Table 1-5. The study group of social workers comprised more women (83.6% of respondents) than men. Men constituted less than 17% of the respondents.

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[13]A.W. Maszke, *Metodologiczne podstawy badań pedagogicznych*, Wydawnictwo UR, Rzeszów 2004, p. 57.; M. Łobocki, *Wprowadzenie do metodologii badań pedagogicznych*, Oficyna Wydawnicza Impuls, Kraków 1999, p. 127.

[14] J. Bakonyi, *Kompetencje informatyczne – z perspektywy pracowników*, „Zeszyty Naukowe Wyższej Szkoły Humanistycznej Zarządzanie" 2016, issue 2, p. 29-43.

Table 1. Participating social workers according to sex

Sex	N	%
woman	117	83.6
man	23	16.4
total	140	100.00

The most numerous group of social workers was constituted by the respondents aged 30 to 39 (40.7%) who worked for up to 10 years (60%) (Table 2-3).

Table 2 Participating social workers according to age

Age	N	%
20 – 29	16	11.4
30 – 39	57	40.7
40 – 49	41	29.3
50 – 59	19	13.6
60 – 69	7	5
Total	140	100.0

Most social workers are young, which means there is a significant potential for the development of the profession.

Table 3. The participating social workers according to the years worked

Years worked	N	%
<5	43	30.7
6 – 10	41	29.3
11 – 15	27	19.3
16 – 20	11	7.8
21 >	19	12.9
Total	140	100.0

A vast majority of social workers (c. 58%) live in rural areas while c. 42% of the respondents live in urban areas (Table 4).

Table 4. Participating social workers according to the place of residence

Place of residence	N	%
Large city	4	2.9
Small town	54	38.6
Rural area	82	58.6
Total	140	100.00

The vast majority of the respondents have higher education. This group comprises 90% of the respondents. As for acquired professions, most respondents were social workers (61.4%), educationalists (18.6%), economists (5.7%), and sociologists (5%) by education. There were also other professions represented in the studied group of social workers, which shows the considerable diversity within a single group of people working in welfare (Table 5).

Table 5. Participating social workers according to the acquired profession

Occupation	N	%
Social worker	86	61.4
Educationalist	26	18.6
Economist	8	5.7
Sociologist	7	5.0
IT specialist	3	2.1
Nurse	2	1.4
Organiser of cultural activities	1	0.7
Dietitian	1	0.7
Electronic engineer	1	0.7
Hair dresser/barber	1	0.7
Cook	1	0.7
Occupational therapist	1	0.7
Psychologist	1	0.7
Total	140	100.0

Information and communications technology competences include three elements: knowledge (declarative and procedural), skills (ability to put the above into practice), and attitudes. "Competences in the regard of the use of information technology should indicate that social workers has the knowledge and skills allowing them to use the hardware and software for communicating , searching, gathering, and processing information in an efficient and conscious manner"[15]. The group of social workers participating in the study consisted mainly of those who assessed their ICT competences as good (56.4%), while others assessed their competences in this regard as very good (20.7%) and average (22.1%) (Table 6). Only one person assessed their competences as poor.

Table 6. Self-assessment of information and communications competences in the group of social workers

Assessment of information and communications competences	N	%
Poor	1	0.7
Average	31	22.1
Good	79	56.4
Very Good	29	20.7
Total	140	100.0

Social workers have rated their own knowledge rather highly, especially their knowledge of what parts the computer is made up of (M=4.62), and their skills of searching for particular information using search engines (M=4.60). According to social workers' self-assessment, the areas in which they felt least knowledgeable were networks and related terms, names of basic office software, and, which is rather worrying, the principles of protecting against malware (chart 1).

It is beyond any doubt that social workers should be knowledgeable about the use of hardware, peripherals, principles of cyber-security, copyright, and basic office software as well as they should be able to search for information on the Internet (w1-w14). Among the

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[15] J. Bakonyi, *Kompetencje informatyczne pracowników instytucji pomocy i integracji społecznej*, „Zeszyty Naukowe WSH Zarządzanie 2015, issue 2, p. 115.

skills perceived as the most important are those related to performing basic operations on files and folders, protection of hardware and data against malware, using peripherals, and being able to use social media (u1-u28). On the other hand, social competences related to digital competences include the awareness of the principles of security at work with hardware, software, and ICT networks as well as the need for life-long learning (k1-k4).
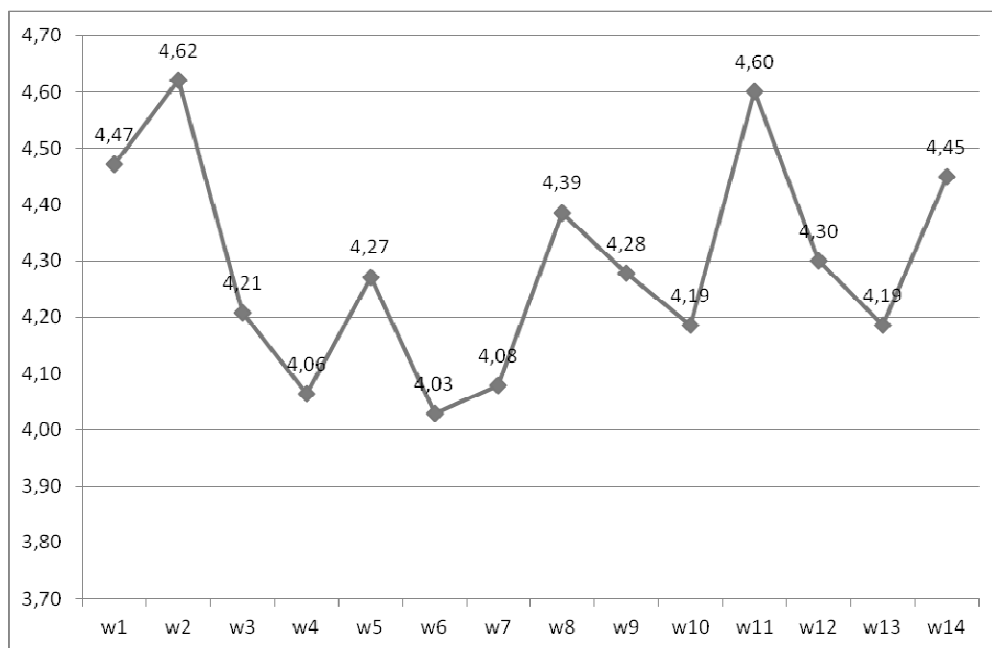

Chart 1. State of social workers' knowledge in terms of information and communications competences

The levels of knowledge regarding the installation the peripherals (e.g. printers or scanners), the use of word processors, and regarding the security of data looks promising. The participants assessed all aspects above 4.0 on average. However, it has to be noted that this is the self-assessment of the respondents' self-declared knowledge. Therefore, there may be differences between their knowledge and actual use of that knowledge in daily use of a computer. The next step was to analyse the correlations between the level of knowledge and socio-demographic factors such as sex (x^2=7.71; df=16; p=0.738, rc=-0.100), age (x^2=1.9; df=4; p=0.957, rc=-0.103), level of education (x^2=4.68; df=4; p=0.321, rc= 0.179), and years worked (x^2=33.98; df=24; p=0.85, rc=-0.130). The results show that there is no correlation between the level of knowledge and socio-demographic factors.
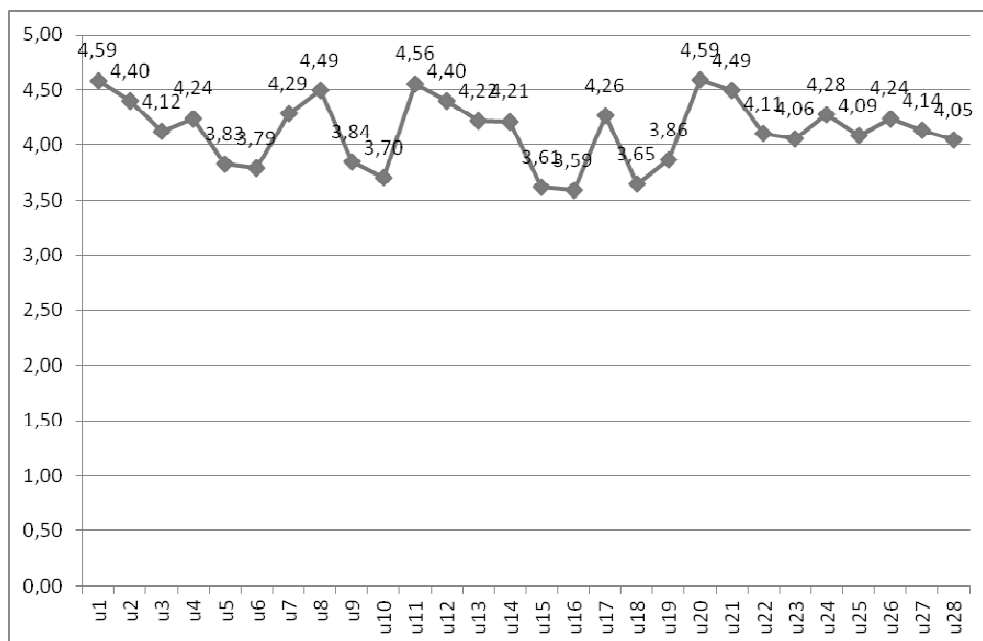
Chart 2. The assessment of social workers' knowledge of information and communications competences

Computer literacy skills and those skills related to the use of the Internet constitute further components of information and communication competences. The chart shows that social workers rate their skill lower compared to their knowledge. Social workers rated their skills highly especially when it comes to the use of the peripherals, e-mail, and search engines for gathering the information that they need. Configuring the software, updating the system, and solving the issues related to the efficiency of computer operation and security of data turned out to be most difficult for social workers. Also, social workers do not use the e-signature or cloud storage servers. The analysis of the correlation between the level of the skills and socio-demographic characteristics has shown that the level of the skills does not correlate with the sex (x^2=0.546; df=4; p=0.969, rc=-0.002) nor with the place of residence (x^2=10.08; df=8; p=0.259, rc=-0.204). On the other hand, the study has confirmed a significant correlation between the level of education and the self-assessment of the skills (x^2=19.101; df=4; p=0.001, rc=0.341). The higher the level of education, the higher the level of the participants' skills. On the other hand, both age (x^2=29.816; df=16; p=0.019, rc= -0.288) and years worked (x^2=67.847; df=24; p=0.000, rc= -0.325) correlated negatively with the level of the skills, which may indicate poorer levels of computer ICT skills among older persons.
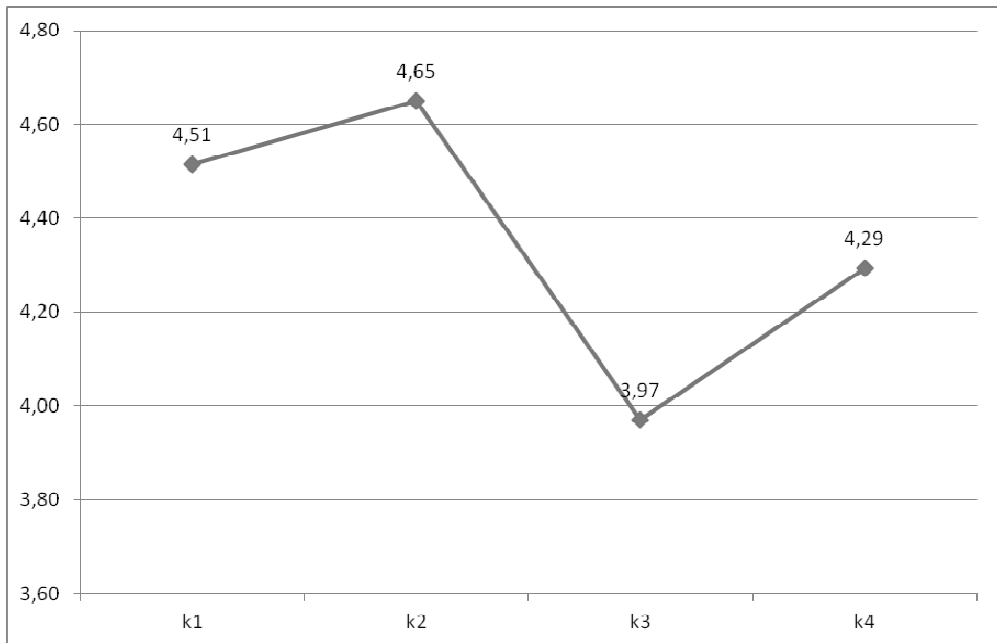
Chart 3. The assessment of social workers' knowledge in terms of information and communications technology competences

Social skills have also been assessed positively. Social workers rated most favourably their awareness of life-long learning and improving their qualifications. On the other hand, their awareness of cyber-threats was again self-assessed least favourably. The assessment of social skills is strongly correlated to the sex of the participants. Women significantly more frequently showed higher levels of social skills (x^2=15.2; df=3; p=0.002, rc=-0.127). There is also a significant correlation between the marital status and social skills (x^2=22.4; df93; p=0.008, rc=-0.265). The results of the research also show that the number of years worked plays the role in the performance of social skills consisting in the awareness of who uses hardware and software for work(x^2=51.4; df=18; p=0.000, rc=-0.227). The level of competences changed with the growth of the number of years worked. The correlation is negative, which may indicate the deterioration of the level of competences. It can be explained both by professional burn-out experienced by social workers and by the influence of age.
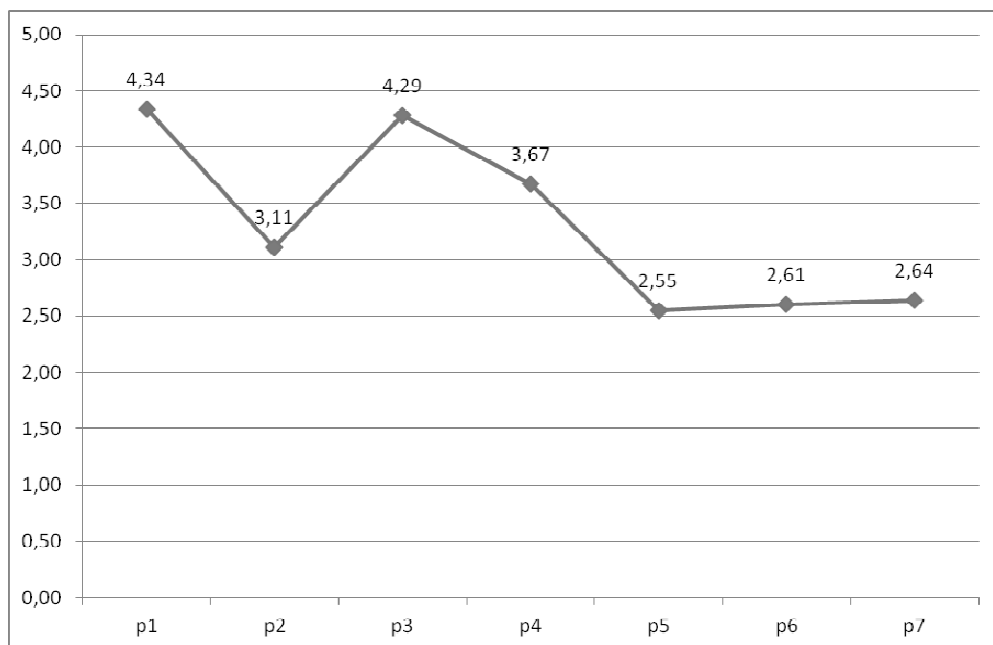
Chart 4. Social workers' self-assessment of the skills of using applications at work

The obtained results show that as regards applications messaging applications, word editors, and spreadsheets are the ones most frequently used (chart 4). Other three software types (ERP, CRM, and analytical software) are not commonly used in welfare professions.

There is a significant correlation of the level of education (x^2=16.311; df=4; p=0.003, rc=0.277) and years worked (x^2=49.754; df=24; p=0.002, rc=-0.269) with information and communications competences.

The self-assessment of information and communications competences presented in the study is satisfactory. The only worrying thing is social workers' low awareness of cyberthreats and network security. Undoubtedly the noticeable shortages of ICT knowledge and skills cab make social workers' functioning in the digital environment more difficult, especially in terms of the protection of data that they work with. This is why, it is becoming necessary to raise their ICT competences and keep those competences at a relatively high level. This creates organisational issues and requires a more precise definition of the ways in which social workers could improve the competences in question. The reasons for that lie not only in social workers but, first and foremost, in the difficulties in using ICT technologies caused by economic and organizational issues. Poor computer literacy may result from limited access to hardware[16] as not all social workers have a computer at their disposal at work. The research shows that only 78% of social workers have access to the computer[17]. Poor level of compe-

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[16] A. Kanios, *Postawy wobec pracy pracowników socjalnych a ich sytuacja zawodowa*, Wyd. UMCS, Lublin 2017, p. 194.

[17] *Ibidem*, s. 207.

tences in some of the aspects in questions, e.g. those regarding data security and network threats may result from the lack of knowledge, lack of support in the form of trainings, lack of financial resources or the reason may be that social workers are reluctant to raise their qualifications as they are burdened with work anyway. J. Bakonyi came to similar conclusions in the study of the employees of welfare institutions. The results also showed a basic computer literacy, relatively low level of the use of e-mail or software for creating reports[18].

Conclusion

The research focussed on determining the level of competences in information and communications technologies among social workers. The analysis of the empirical data makes it possible to draw the following conclusions: most participants have acquired basic competences at a satisfactory or good level. The level of competences is correlated with both age and number of years worked. The analysis of the relation of the age and number of years worked to the information and communications competences has shown the negative correlation, which means that the younger a social worker and the fewer years he or she has worked, the higher his or her ICT competences. It may be the result regarding the number of years worked is related to the age. The research has confirmed the correlations between sex and the place of residence of social workers and their self-assessment of ICT competences. Many social workers do not have sufficient knowledge and skills needed for efficient functioning in the digital environment.

Summing up, it should be stressed that these studies are of in initial nature as they offer the preliminary exploration of the subject-matter. The value of the research stems from a relatively narrow body of empirical data. Nevertheless, synthesising the obtained results, some practical conclusions can be drawn.

The research conducted on the group of social workers provide the data for wide-ranging actions related to the improvement of their ICT competences, especially in terms of data security and protection. Raising the ICT competences of social workers will not only contribute to their work being more efficient but it will also be a significant incentive for their work.

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[18] J. Bakonyi, *Kompetencje informatyczne pracowników instytucji pomocy…* p. 123.

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https://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:32018H0604(01)&from=en [29.01.2019].