

SOCIAL MEDIA AS A SOURCE OF KNOWLEDGE ABOUT HEALTH NURSING STUDENTS

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ABSTRACT

Introduction: Nowadays, the Internet allows unlimited access to information from various areas, including health. Health-related content posted on the Internet and social media can shape users' health behaviour and knowledge, but unfortunately not always in a professional manner. Given the unreliability of health information present on the Internet, there is a need to sensitize students planning to pursue medical professions in the future to this phenomenon. The results presented here constitute a continuation and expansion of the study on selected health behaviours of nursing students from the Faculty of Health Sciences at the Jagiellonian University and the sources of health knowledge they use in social media.

The aim of this paper was to explore the sources of health knowledge among nursing students from available social media on the Web.

Material and methods: The study covered 110 first- and second-year students at the undergraduate and graduate levels of the Faculty of Health Sciences at the Jagiellonian University. The 2021 study was conducted using a diagnostic survey method, and data were collected based on the author's survey questionnaire with 6 question categories. The results were developed using IBM SPSS 26.0 package, and the significance level was adopted as $p \leq 0.05$.

Results: Among the issues related to health, the most searched content was related to physical activity. The most popular social network was Instagram, and the most reliable source of information were profiles of specialists.

Conclusions: Internet social media are a frequent source of information in the surveyed group of nursing students. There is a need to sensitize the recipients to seek and use professional sources in social media.

Key words: social media, nursing students, health.

INTRODUCTION

The Internet is treated as one of the information sources for health in the broadest sense, and data show that an increasing number of people are seeking information on this topic through this means. Trends indicate that the role of the Internet in providing knowledge and health information will increase [1].

Dissemination of the health sphere in social media has led to the emergence of the e-health phenomenon, which refers to the secure use of information technology to support health and related medical surveillance, health services, health publications, and health education. Given the diversity of user groups in the online space, it is worth addressing the subject of promoting positive behaviour and solving health problems [2].

Online social media are considered as modern tools for education due to their quick and unrestricted ac-

cess to a wide population, use of images, video, sound, animation [2], and treating the user as an active participant in both creating and sharing content [3]. In addition, the online platform provides a sense of autonomy, privacy, and lucidity and is characterized by personalization [2]. In Poland, the demand for health education on social media varies due to intergenerational differences and inequalities. This is due to sociodemographic characteristics; thus, the health education method of a particular social group is important [2, 4].

The aim of this paper was to explore the sources of health knowledge among nursing students from available social media.

MATERIAL AND METHODS

The survey was conducted in 2021 among 110 nursing students studying in their first and sec-

ond year at the undergraduate and graduate levels of the Faculty of Health Sciences at the Jagiellonian University. These surveys were carried out using online means (due to the COVID-19 outbreak) after obtaining written consent of the Dean of the Faculty of Health Sciences and with the approval of the supervisors of each year group. The students, acquainted with the purpose and form of the study and the method of filling out the author's questionnaire, and having been assured of anonymity, gave their voluntary consent to participate in the study.

The research method used in the study was a diagnostic survey. The author's survey questionnaire addressed issues related to the subjects' diets, physical activity undertaken, preventive behaviours, health promotion, as well as mental health and the importance of social media in these areas. Results were compiled using the IBM SPSS 26.0 package and χ^2 , Phi, and Cramer's *V*. A significance level of $p \leq 0.05$ was adopted.

The results presented here constitute a continuation and expansion of the study on selected health behaviours of nursing students from the Faculty of Health Sciences at the Jagiellonian University and the sources of health knowledge they use on social media.

RESULTS

Sixty-seven undergraduate (bachelor's) students and 43 graduate (Master's) students participated in the study. Most of the respondents were women – 95.5%, and 4.5% were men. More than half of the respondents lived in rural areas (58.2%). The average age of the respondents was 21.8 years. Students were divided by age into 3 groups: over 22 years (38.2%), 21-22 years (29.1%), and 19-20 years (32.7%).

Respondents' interest in health issues on social media

The following results show indications of social media as sources of knowledge, and motivation and shaping behaviour in various areas of health. The social media most frequently followed by respondents were Instagram (45.5%), YouTube (16.4%), and Facebook (10.0%), as well as blogs and TikTok (1.8% each).

On social media, 50.0% of respondents analysed health content. The reliability of these media as an information source was acknowledged by 25.0%, while 54.0% verified this data most often based on scientific literature (27.3%), medical websites (18.2%), and contact with a specialist (14.5%). The most reliable, in the opinion of respondents, were profiles of physicians and nurses (14.5%).

Most people searched for content related to physical activity (68.2%), healthy eating (49.1%), mental health (32.7%), and preventive examinations (30.0%).

The health content shared on social media, as subjectively perceived by 53.0% of respondents, positively influenced their health and the health behaviours they undertook.

Recognition of social media as a source of medical knowledge on healthy eating was confirmed by 44.0% of students. The use of diets from Ewa Chodakowska, Klaudia Lakoma, FitLovers, FitPatki, Anna Lewandowska was reported by 6.3% of respondents, while diets from "Fabryka siły" and other online sources were used by the same percentage, i.e. 3.6% each. Sources of knowledge regarding healthy eating on social media given by respondents included: Instagram (24.5%), Facebook (10.9%), YouTube (9.1%), websites (1.8%), and TikTok (0.9%). Social media profiles that respondents believed promoted healthy eating were as follows: Klaudia Łakoma (4.5%), FitPatka (3.6%), Irena Owsiak, Dr. Lifestyle, Codziennie fit, Anna Sudół, and Jadłonomia (1.8% each), and Fitneskami, Owsiana, Czytamy etykiety, Fit przepisy edu, Zdrowostki, Fitlovers, Ewa Chodakowska, and Anna Lewandowska (0.9% each). Workouts available on the Internet contributed to exercise at home for 54.0% of respondents. The most frequently indicated exercises available on platforms were YouTube (44.5%), Instagram (4.5%), and Facebook (1.8%).

Social media reminded students of check-ups (26.0%). Respondents could give several profiles, but the most frequently indicated in the area of prevention was the account of mamaginekolog (14.5%). Other profiles were those of celebrities (5.5%), Mama.i.stetoskop and Physician Profiles (3.6% each), Nurse and Nursegram Profiles (1.8% each), and Instal lekarz, drnalewczyńska, Na kocią łapę, and dr_Strus (0.9% each).

Relationships between variables

Female students were more likely than male students to follow social media accounts on health topics (Table 1).

Age did not differentiate following health-related social media ($p = 0.896$), as in the case of place of residence ($p = 1.000$) and year of study ($p = 0.453$). Female students were more likely than male students to search social media for content on proper nutrition ($p = 0.025$) (Table 2).

Respondents over the age of 22 years were more likely than younger respondents to say they searched social media for content on proper nutrition (Table 3).

The year of study did not differentiate searching social media for content on proper nutrition ($p = 0.128$), nor did place of residence ($p = 0.369$).

Female students were more likely than male students to search for content on physical activity ($p = 0.018$). However, searching for this content was unrelated to the year of study ($p = 0.709$) or place

Table 1. Sex of respondents vs. following social media accounts on health topics

		Sex		Total	
		Female	Male		
Following social media accounts on health topics	<i>N</i>	55	0	55	
	%	52.4	0.0	50.0	
Not following social media accounts on health topics	<i>N</i>	50	5	55	
	%	47.6	100.0	50.0	
	<i>N</i>	105	5	110	
Phi	0.218	5.238	1	0.022	0.057
Rate	Value	Chi-square	df	<i>p</i>	<i>p</i> accurate

Table 3. Age of respondents vs. searching social media for content on proper nutrition

		Age			
		19-20 years old	21-22 years old	Over 22 years old	
Searching social media for content on proper nutrition	<i>N</i>	14	12	28	
	%	38.9	37.5	66.7	
Not searching social media for content on proper nutrition	<i>N</i>	22	20	42	
	%	61.1	62.5	33.3	
	<i>N</i>	36	32	68	
Cramer's <i>V</i>	0.277	8.411	2	0.015	
Rate	Value	Chi-square	df	<i>p</i>	

of residence ($p = 0.350$). Searching for content on mental health was not related to gender ($p = 0.110$), age ($p = 0.870$), year of study ($p = 0.337$), or place of residence ($p = 0.142$). Similarly, searching social media for content on preventive testing was not related to gender ($p = 0.134$), age ($p = 0.738$), year of study ($p = 0.419$), or place of residence ($p = 0.164$).

The opinion that knowledge shared on social media has a positive impact on health and health behaviour was gender dependent. It was expressed more often by the female students surveyed ($p = 0.016$) (Table 4). In contrast, this view did not depend on age ($p = 0.921$), year of study ($p = 0.441$), or place of residence ($p = 0.421$).

DISCUSSION

The Internet's importance in many facets of life for recipients of all ages is very high. Considering the age of the surveyed group (19 years – over 22 years), a CBOS study from 2020 will be cited, which shows that almost all respondents between the ages of 18 and 24 years declared using the Internet and registering on social networks [5]. According to other authors, the Internet is a space that has become a pop-

Table 2. Sex of respondents vs. searching social media for content on proper nutrition

		Sex		Total	
		Female	Male		
Searching social media for content on proper nutrition	<i>N</i>	54	0	55	
	%	51.4	0.0	50.0	
Not searching social media for content on proper nutrition	<i>N</i>	51	5	55	
	%	48.6	100.0	50.0	
	<i>N</i>	105	5	110	
Phi	0.214	5.051	1	0.025	0.057
Rate	Value	Chi-square	df	<i>p</i>	<i>p</i> accurate

Table 4. Sex of respondents vs. opinion on positive influence of media on health behaviour

		Sex		Total	
		Female	Male		
Positive influence of media on health behaviour	<i>N</i>	58	0	58	
	%	55.2	0.0	52.7	
No positive influence of media on health behaviour	<i>N</i>	47	5	52	
	%	44.8	100.0	47.3	
	<i>N</i>	105	5	110	
Phi	0.230	5.842	1	0.016	0.021
Rate	Value	Chi-square	df	<i>p</i>	<i>p</i> accurate

ular source of health knowledge, especially for people in their twenties [6].

In a study conducted by Shiferaw *et al.*, more than half of nursing students used the Internet on a daily basis [7], and Ryan's research highlights that the vast majority used it in relation to their personal lives [8]. O'Connor *et al.* showed that students used social media for both personal and professional reasons, with Facebook, Instagram, and Snapchat proving to be the most popular. It is worth emphasizing the students' knowledge of guidelines for responsible use of social media [9]. A study conducted by Harerimana and Mtshali showed that students most often used Facebook and Twitter [10]. This study mainly used Instagram, YouTube, and Facebook, as well as Blogs and TikTok.

The range of content on the Internet also includes those with broad health topics. Interesting results were presented from the Polish Internet Survey. Content on "lifestyle" was searched for by 81.0% of Internet users within a month, while that on "health and medicine" was searched for by 49.0%. It is worth noting that the topic of health and medicine was of interest to 16.0% of respondents aged 15-24 years [11]. The results of the authors' own study showed that half of the respondents followed online social

media accounts on health issues. Comparable results were presented by Szymczyk *et al.* [12] and Szymczuk *et al.* [13]. Similarities between the results of the authors' study and those of Hulewska [14] are related to the students' most frequent search for information on physical activity. Kawiak-Jawor *et al.* indicated that physical activity was searched for and promoted right after proper nutrition [15]. According to Ludwisiak, information on medications, diet, and disease diagnosis was searched most frequently [16]. The results of a study by Kalankesh *et al.* confirm the experience of the students of the Medical University of Tabriz in searching for information on nutrition, physical activity, and physical health. According to them, the Internet made access to this information easier and consequently triggered students' decisions to visit a physician, change their diet or treatment without consulting a physician, or reduce anxiety [17]. In a study conducted by Aranha *et al.*, conducted at Yenepoya Medical College among undergraduate students in medicine, dentistry, and nursing, physiotherapy students were most likely to seek information on disease, treatment, and medications [18]. A study conducted by Dastani *et al.* among students in medicine, nursing, and paramedics of Gonabad University of Medical Sciences found that students searched for health information especially on specialists' websites [19]. The majority of undergraduate nursing students in Turkey the study by Senyuva *et al.* also considered the Internet as a source of information but believed that it should be used consciously [20]. Participants of the Schäfer *et al.* study, i.e. students of undergraduate and graduate university studies in medical (nursing) and non-medical (law, pedagogy) faculties and doctoral students from Germany, showed an interest in health topics and mostly confirmed seeking this information from online sources. This intensity increased during the pandemic [21].

The present research also addressed the reliability of health content on social media. It shows that some respondents recognized the reliability of these media. Positively, the profiles of physicians and nurses were considered the most reliable. Hulewska reported that students also cited specialized portals as the first source of information [14]. Fryc *et al.* in their study obtained a result ranking the Internet 7th in terms of reliability [22]. The research results of Hancher-Rauch *et al.* showed that, in the opinion of students, social media were the least reliable sources of health information [23], while Liu *et al.* indicated that websites do not always meet students' expectations [24]. Another danger of the virtual world is the risk of addiction, as shown in studies by Khalil *et al.* [25] and Rafiee *et al.* [26], and Internet addiction may be related to depression, as outlined in a study conducted by Shirazi *et al.* [27]. Content posted on social media should be verified for accuracy [28]. According to a study by

Bak *et al.*, not all students have the ability to evaluate the quality of health information [29], and this can vary widely [30] and can influence students' decision-making and behaviour [19].

Hence, in our study, the students were divided into 3 age groups dictated by the need to differentiate their knowledge and work experience resulting from the educational program in the curriculum, which could translate into an objective assessment of the content on health-promoting content obtained on social media.

This research showed that female students were more likely to follow health-related accounts than male students and more likely to search for information on proper nutrition.

The authors of this study were aware of the small percentage of men in the study group but decided to present the data obtained with a proviso that the results obtained should be treated with caution. The insignificant percentage of men among the respondents was largely related to the field of study – nursing is still a feminized major. Another factor that may have conditioned the size of the group studied and the results obtained was the pandemic and thus difficult access to students.

Place of residence and stage of study were not related to searching for health information, while the oldest students were more likely to report searching for it. More frequent following of social media by students was presented by Sahu *et al.* [31]. A 2016 Polish Internet survey showed that female students were slightly more likely to use health sites and that interest in health sites increased with the size of the respondents' locality of residence [11].

The authors' own study found that just over half of the respondents confirmed that social media positively influenced the health behaviours they undertook – this was claimed to a greater extent by female students. However, the author's own research did not study the actual impact of social media on students' health behaviour, only their subjective feelings in this regard. In Ludwisiak's study, two-thirds of the women surveyed confirmed that information provided in the media influenced their lifestyles. Differing from the results of this study, the author found that subjects aged 18-25 years confirmed the influence of media on health behaviour [16]. Mantaj *et al.*, investigating the influence of media on health-promoting behaviours, showed that younger people rated higher the importance of media in promoting health, shaping nutrition, and self-monitoring health status and performing preventive examinations. The author confirmed what our own research showed with regard to the subjective evaluation of the subjects. Women were more likely than men to attribute the function of health promotion to the media, mainly in terms of nutrition. In addition, residents of rural areas and

small towns were more likely than residents of larger cities to emphasize the importance of the media's educational function in creating their health behaviour, particularly emphasizing advice from the Internet. Residents of the largest cities were most likely to confirm the influence of media on physical activity and awareness of choosing healthy foods [32]. The results of a study conducted by Szymczuk *et al.* found that reviewing social media to search for health information is related to age but not to place of residence. The vast majority of respondents aged 20-25 years confirmed the use of media information to improve their health [13].

CONCLUSIONS

Instagram was the most frequently chosen social media by nursing students, with content related to physical activity. Half of the respondents had a subjective sense of the positive impact of social media on their health behaviour.

Social media is an easily accessible tool used in the process of shaping health behaviour, and therefore it is necessary to sensitize the Internet recipients to the reliability of sources addressing health issues.

Disclosure

The authors declare no conflict of interest.

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