



Research Paper

Searching for patient information in Internet resources by nursing and midwifery students

Patrycja Zurzycka¹, Katarzyna Wojtas¹, Zofia Musiał¹, Grażyna Puto², Katarzyna Czyżowicz¹

¹ Department of Specialized Nursing, Institute of Nursing and Midwifery, Faculty of Health Sciences,
Jagiellonian University Medical College, Poland

² Department of Internal and Geriatric Nursing, Faculty of Health Sciences,
Jagiellonian University Medical College, Poland

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ABSTRACT

Introduction: The phenomenon of patient targeted googling (PTG) is present not only among health care professionals, but also among medical students. Given the complexity of the issue, there is a need to undertake research that captures its multifaceted nature. The paper presents an excerpt of results from the project 'Internet as a source of patient information.'

Aim: The aim of this study was to evaluate the prevalence of PTG phenomenon among nursing and midwifery students.

Material and methods: The survey was conducted among 153 students using a diagnostic survey method based on the author's questionnaire. Statistical analysis was carried out based on PQStat v. 1.8.4.142.

Results and discussion: More than half of the students confirmed searching for information about patients several times a year, mainly through Facebook, mostly out of curiosity, a desire to get to know the patient better, to help them, to understand their behavior as well as their outward appearance and presented behavior. Information rated as relevant was shared with all members of the treatment team. The students pointed out the positive aspects of PTG, but searching for information about the patient without informing, in their opinion, mainly violates the principles of informed consent, privacy, professionalism and trust. The respondents advocated the need for training in this area and reported knowledge deficits in legal and ethical issues relating to PTG.

Conclusions: The PTG phenomenon is present among nursing and midwifery students.

1. INTRODUCTION

The phenomenon of health care professionals searching Internet resources for patient information is patient-targeted googling (PTG)¹⁻³ and is an informal aspect of care delivery in modern medicine.^{1,4-8} Possible risks associated with PTG to issues associated with breaches of privacy, confidentiality, informed consent, professionalism, the therapeutic relationship, communication standards,^{1,2,5-7,9-12} or in the evaluation of information veracity and use,¹³ verification of patient identity^{2,4} or data interpretation.^{2,10,14} Potential benefits relate to a deeper understanding of the patients and expanded information about them.^{2,6,13} The ethical aspect of undertaking PTG should primarily determine the motivation and goals for conducting it.⁵ The available results confirm the presence of PTG phenomenon conducted by health care professionals as well as students.^{1,2,5,6,12,15-18}

2. AIM

The aim of this study was to evaluate the prevalence of obtaining private patient information from publicly available online resources among nursing and midwifery students.

3. MATERIAL AND METHODS

The study was conducted between October 21, 2021, and July 26, 2022, using the diagnostic survey method with the Internet survey technique. The research tool – the author's survey questionnaire consisted of 47 questions divided into sections: demographic variables, searching for information and considering searching for information about patients on the Internet, and the circumstances accompanying it, knowledge of the legal and ethical regulations in force in Poland allowing searching for information about patients on the Internet, addressing the issue of maintaining relationships with patients in the Internet space during education. The last three questions were related to clinical situations and making decisions to search for information about patients on the Internet. The studies were preceded by pilot studies. The statistical package PQStat v. 1.8.4.142 was used to analyze the data for the analysis.

The study was conducted in a group of 153 undergraduate students of nursing and midwifery from universities in southern Poland. The average age of the respondents was 21.75 years.

4. RESULTS

4.1. Searching for patient information on the Internet by students

More than half of the respondents (58.17%) searched for information about patients. The most commonly used tools were Facebook (84.27%). The reasons for seeking information were varied (Table 1).

Table 1. Reasons given by students for PTG.

Motivation for undertaking a search for patient information on Internet resources*	Respondents	
	N	%
Curiosity	81	91.01
Willingness to get to know the patient better	53	59.55
Willingness to help the patient	49	55.06
The need to obtain patient data impossible to obtain from other sources	18	20.22
Understanding the patient's behavior	40	44.94
Verifying the patient's truthfulness	29	32.58
Confirming the assumption that the patient is suffering from a mental disorder	19	21.35
Verifying the patient's compliance with medical/nursing recommendations	8	8.99
Verifying the patient's functioning at the end of treatment/hospitalization	22	24.72
Other	1	1.12

Comments: * multiple answer choices possible.

4.2. Relationships with the patient in the Internet space in the course of respondents' education

The issue of maintaining proper relationships with patients in the Internet space in the course of education was not addressed in the opinion of 81.05% students. Most of them (77.12%) were in favor of the need for training in this area.

4.3. Knowledge of legal and ethical issues by respondents affiliated with PTG

The vast majority of respondents (71.9%) did not know whether the current legal regulations in Poland allow searching for patient information on the Internet. More than half of the students (65.36%) also did not know whether current ethical standards in Poland allow searching for patient information on the Internet. According to 41.18%, PTG-related activity was considered unethical. Respondents indicated situations in which it was appropriate to obtain information about a patient from the Internet: verify that the patient is not taking actions that could endanger himself or others (50.98%), to supplement the interview (43.79%), to verify information provided by the patient (41.18%), and to verify the patient's functioning after treatment (21.57%).

4.4. Importance of patient information obtained from the Internet according to respondents

Students believe that the information obtained from the Internet about the patient allows them mainly to get to know the patient's social environment (57.52%), to understand the patient better (54.25%), to verify the information obtained from the patient (47.71%), to obtain information quickly (45.1%), and to find out the created image (37.25%). Almost half of the respondents (47.71%) considered the information obtained from Internet resources reliable. More than half

of the respondents (51.63%) had no opinion as to whether patient information obtained from the Internet could be relevant to the subsequent nurse-patient relationship. A negative impact was indicated by 16.99% of the respondents, and a positive impact by 12.42%. If the patient found out about the search of information about him on the Internet, it would have a negative impact on the further relationship in the therapeutic process (47.17%). More than half of the students considered the use of PTG without informing the patient as a violation of informed consent (61.44%), privacy (53.59%), violation of professionalism (47.06%), confidentiality (39.22%), trust (42.52%), therapeutic relationship (37.91%) and patient rights (28.1%).

4.5. Clinical situation showing the adoption of patient information seeking

The case presented the situation of a patient with a history of criminal convictions. A member of the treatment team decided to search the Internet for information about him. It turned out that he had been convicted of a violent crime (e.g., dangerous physical attack). The students' responses best reflected their opinion to the above situation: 'having knowledge about this is important, but it must not reduce the quality of care' (52.94%); 'we have the right to know this information for our own safety' (30.07%); 'the basis for seeking this information was the curiosity of treatment team members' (7.19%); 'the search for this information was inappropriate' (3.92%); 'I have no opinion' (2.61%) and other (3.27%).

5. DISCUSSION

5.1. Students' online activity

An analysis of the available results confirms that students' online activities have been the subject of many studies. Examples include those conducted by de Reinert et al.,¹³ Clinton et al.,¹ Chester et al.,² Fisher et al.,⁵ Eichenberg et al.,⁶ DiLillo et al.,¹⁵ Ben-Yakov et al.,¹⁶ Bosslet et al.,¹⁷ Lehavot et al.,¹⁸ Dudziak,¹⁹ Marcinkowski et al.,²⁰ Gurmińska et al.,²¹ Cai et al.,²² Basara et al.,²³ Nalliah et al.,²⁴ Garwol,²⁵ Gądek-Hawlena et al.,²⁶ Milar,²⁷ Warzech²⁸ – understandably, of course, in relation to various issues. The above-cited studies^{19–28} do not address the phenomenon of PTG among Polish students, but some of their areas can be used to compare the results of our own research.

5.2. Searching for information about patients on the Internet

More than half of the respondents searched for information about patients, hospitalized mainly in the medical treatment unit. In comparison, 14.0% of the respondents admitted to searching for information about patients in the hospital emergency department.¹⁶ A study conducted by Chester et al. involved final-year medical students and 16.7% of them conducted PTG.² Having ever visited a patient or family profile was confirmed by 2.3% of students in the study by Bosslet et al.¹⁷ Moreover, 55.4% of them strongly disagreed

with the statement that physicians can analyze patient profiles on personal social networks.¹⁷ Interestingly, in this context – the search for information about others – the results of Warzecha's study are interesting. It showed that more than half of the students on the networks observed the activity of others.²⁸ Another study found that among students there are also those who cannot imagine the lack of information about other people on the Internet.²⁵

Analysis showed that the reasons seeking information were curiosity, willingness to get to know the patient better, understanding the patient's behavior, willingness to help, as well as behavior, unusual hairstyle/makeup, clothing and tattoos. It can be argued that the aforementioned willingness to help and understand the patient are 'good' reasons, indicative of professional sensitivity, with a direct impact on the interventions made. On the other hand, the reference to physical appearance may indicate a certain superficiality in the respondents' evaluation of the patient and may unconsciously aim at categorizing the patient. Perhaps the behavior presented by the patient should lead to more in-depth interview or observation to determine the circumstances that condition this behavior.

The vast majority of students in their own study felt that social media account settings allowing universal access deprived them of privacy when browsing. In a study by Basara et al., students overwhelmingly expressed their belief that access to private data was not universal or gave a 'hard to say' response. Some of the respondents were confident that the data was protected, but 16.0% of the students knew that private data was available to anyone. Most respondents admitted that they share any data on the Web with varying frequency.²³

Data obtained from the Internet does not require permission to obtain it – this belief stems from the assumption that posting content is accompanied by awareness of its availability to others. Treating it as common property may lead to the misconception that searching the Internet for information about patients is possible without their consent.^{1,7,12}

Information obtained from Internet resources was considered reliable by almost half of the students surveyed. The Internet is a source of a lot of information, but the problem arises in the evaluation of its credibility. This issue was also addressed by Nalliah et al. It was concluded that students, due to their knowledge of basic medical science and clinical skills, are better equipped to evaluate the reliability of information in the medical field than other Internet users.²⁴ The Internet, by virtue of its resources and capabilities, provides access to specific information, but it is only up to the person seeking information to interpret and further use it.²³ Knowledge obtained from the Internet can sometimes be chaotic, incomplete, and therefore information selection skills are necessary.²¹ It is worth noting that the Internet provides an opportunity for self-presentation²⁹ and create an image. However, the question arises as to how much of this self-representation is true and how much is an imagined version of oneself. This may be due to the intentions of the self-posting person, who may or may not intentionally mislead Internet users.^{5,14,30}

5.3. Use of patient information obtained from the Internet

Participants in the study felt that the information obtained from the Internet mainly allows them to learn about the patient's social environment, to better understand and verify the information obtained from the patient. They also emphasized the quickness in obtaining data. This indicates the potentially positive aspects of PTG, but on the other hand, the question can be raised whether in-depth data collection from the patient and an interview from the immediate environment would not allow such information to be obtained?

5.4. Risks associated with conducting PTG

More than half of the students felt that PTG without informing the patient violates informed consent, patient rights, the boundaries of privacy, trust, the therapeutic relationship and, interestingly, professionalism. In comparison, the majority of students in the Chester et al. study did not have a positive view of PTG, although some conditioned that it would depend on the situation.² Other studies indicated violations of ethical values such as confidentiality, informed consent and patient dignity also indicated by other students.¹⁶

The authors of this study were curious to know whether students shared the information they obtained about patients with therapeutic team members. Few, more than half of them, denied it. In contrast, the vast majority (83.0%) of the participants in the study conducted by Ben-Yakov et al. confirmed sharing the obtained data with colleagues (83.0%).¹⁶

5.5. Ethical considerations for conducting PTG

Students admitted that they did not know whether ethical norms and the legal guidelines in Poland allowed the PTG procedure. The authors of the survey, being familiar with the study program and educational outcomes, know that the students do not have the preparation in this area.

The transformation of PTG issues is due to the possibilities offered by the Internet in healthcare, creating new dilemmas and controversies. Patients expect health care professionals to respect their rights, maintain confidentiality, trust and professionalism, and these may not be respected by viewing patient information posted online.

5. CONCLUSIONS

1. The Internet is a space that plays many roles and provides many activities for students of different majors.
2. The PTG phenomenon is present among nursing and midwifery students and is associated with many circumstances that raise ethical and legal questions.
3. The availability and ubiquity of the Internet, also in the medical field, leads to the need to educate students in maintaining relationships with other users, using information and searching for patient information.

Conflict of interest

None declared.

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