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## Використання соціальних мереж науковцями зі Східної Європи в часи пандемії COVID-19: крос-секційне опитування

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У часи пандемії COVID-19, соціальні мережі стали важливим онлайн-інструментом для проведення наукових досліджень. Особливо важливим є впровадження таких нових підходів до наукової діяльності у країнах, що не належать до списку країн-лідерів у розвитку світової науки.

Це дослідження мало на меті оцінити значення соціальних мереж у діяльності науковців Східної Європи. Ми провели опитування 127 науковців з України, Польщі, Литви й інших східноєвропейських країн, які повідомили, що витрачають в середньому 1–2 години щоденно на активність у соціальних мережах.

Найпопулярнішими платформами для післяпублікаційної промоції статей були ResearchGate, Facebook і LinkedIn. Лише 17,3% респондентів були знайомі з метриками, що генеруються Altmetric.com і Plum Analytics. Відповідно необхідно збільшити обізнаність науковців Східної Європи про важливу роль соціальних мереж та їх метрик у науковій сфері.

**Ключові слова:** соціальні мережі, COVID-19, освіта, наукові дослідження, альтметрики.

## Social media use among researchers from Eastern Europe during the COVID-19 pandemic: a cross-sectional survey study

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Social media platforms are essential for online scholarly activities in the time of the COVID-19 pandemic. Their use is critical in countries of non-mainstream science. This study aimed to evaluate the role of social media in scholarly activities in Eastern Europe. We collected responses from 127 scholars from Ukraine, Poland, Lithuania, and other Eastern European countries. They mainly reported spending 1–2 hours on social media activities. ResearchGate, Facebook, and LinkedIn were the most popular channels for post-publication article promotion. Only 17.3 % of respondents were familiar with metrics generated by Altmetric.com and Plum Analytics. Increasing awareness of the role of social media platforms and metrics for scholarly purposes requires more attention in Eastern Europe.

**Keywords:** social media, COVID-19, education, research, Altmetrics.

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## Introduction

The COVID-19 pandemic has substantively influenced the established education models, research activities, and scholarly networking worldwide [1]. The unprecedented restrictions of face-to-face communication, limited access to patients in clinical settings, and difficulties with scientific information generation and processing have all switched the global attention to online research and communication.

In the global crisis, social media platforms are becoming essential tools for various professional activities, including research and post-publication promotion [2]. Social media facilitate international research in specific scientific fields and emergency networking of scholars [3].

Online visibility of scholars and ease of navigation across social media offer numerous advantages for research, clinical work, and education. On the other hand, the unawareness of the benefits and insufficient population of social media platforms by scholars, particularly in non-mainstream science countries, are becoming a big issue.

The current survey aimed to focus on social media use by the scientific community in East-

ern Europe during the coronavirus disease (COVID-19) pandemic.

## Material and methods

This survey included 127 respondents who filled an anonymized Google Forms questionnaire. The questionnaire had the following sections: 1) general demographic information (age, gender, education, employment, and social status); 2) the use of social media; 3) the impact of social media on professional life; 4) social media advantages and disadvantages.

The survey was conducted and reported according to the Checklist for Reporting Results of Internet E-Surveys (CHERRIES) statement [4] and recently published guidelines by Gupta et al. [5].

The survey targeted researchers, clinicians and educators in Eastern Europe. No particular sampling method was used; all individuals who agreed to fill the questionnaire were included.

The dissemination of the Google Forms questionnaire was arranged via Facebook and Twitter channels of the *Proceedings of the Shevchenko Scientific Society Medical Sci-*

Tab. 1.

### Basic social and demographic information on survey responders

Characteristics	Respondents (n=127)	%
Sex		
Female	99	78.0
Male	28	22.0
Country		
Ukraine	50	39.4
Poland	20	15.7
Croatia	8	6.3
Lithuania	34	26.8
Slovakia	3	2.4
Other	12	9.4
Job role		
Educator/lecturer	22	17.3
Researcher	24	18.9
Clinician	21	16.5
Researcher,educator/lecturer	28	22.0
Clinician, Researcher, Educator/lecturer	12	9.4
Clinician, Educator/lecturer	5	3.9
Student	4	3.1
Other	11	8.7

ences and personal Viber accounts of the authors. The survey circulation was limited to February 2021.

### Results

Among 127 respondents, 70 (55.1%) were aged below 40, and 99 (78%) were females. The majority of respondents were researchers and educators (n=28, 22%), researchers (24, 18.9%), educators (22, 17.3%), and clinicians (21, 16.5%). Over half of the respondents (72, 56.7%) were affiliated with universities. Sixteen (12.6%) worked at public hospitals. Most participants represented Ukraine (39.4%), Lithuania (26.8%), Poland (15.7%), and Croatia (6.3%) (Table 1).

Overall, 109 (85.8%) of respondents claimed to use social media regularly. On average, 1-2 hours per day was spent on social media activities by nearly one-third (31.5%) of respondents (Fig. 1).

Facebook (n=119, 93.7%), YouTube (97, 76.4%), and WhatsApp (73, 57.5%) were reportedly the most popular social media channels, followed by Instagram (51, 40.1%) and LinkedIn (49, 38.6%).

Most respondents (n=108, 85%) employed social media for professional work-related activities: obtaining clinical and research updates (74, 58.3%), sharing scholarly information (60, 47.2%), and professional networking

and collaboration (81, 63.8%). Notably, 80 respondents (63%) relied on ResearchGate, Facebook, LinkedIn, and other social media platforms for post-publication promotion of scholarly works and 52 respondents (41%) for interactive teaching of students.

Distribution of unverified information and cyberbullying were considered the main disadvantages of social media by 103 (81.1%) and 47 (37%) respondents, respectively. Breach of confidentiality (40, 31.5%) and blurring boundaries of patient-physician relationships (25, 19.7%) were additional drawbacks of social media. In addition, nearly one-third (43, 33.8%) believed that social media networking could negatively affect face-to-face communication.

Only 22 (17.3%) respondents were familiar with social media metrics generated by Altmetric.com and Plum Analytics. As a result, about one in five used Altmetric analyses for research studies.

Social distancing in the COVID-19 pandemic has led to an unprecedented switch to online education and research, becoming an integral part of academic life. Recent studies have demonstrated that online tools and platforms, including social media, are increasingly employed for various scholarly activities such as surveys for generating new hypotheses and testing old ones [6].

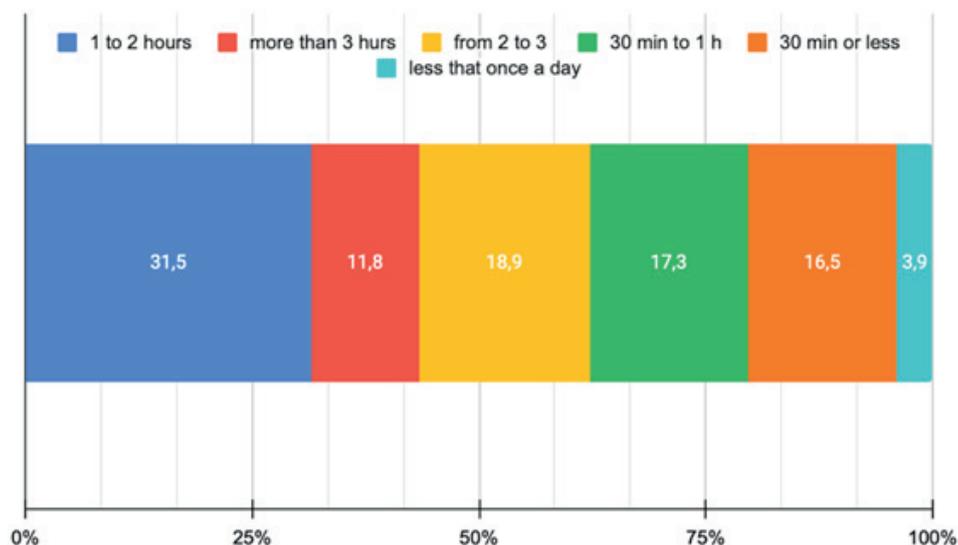


Fig. 1. Average time spent on social media per day

Innovative online research approaches include analysis of Altmetric data provided by Altmetric.com. Altmetric.com offers some free tools for noncommercial research projects (<https://www.altmetric.com/research-access/>). These tools allow analyzing the societal influence of published research works by monitoring shares and comments on social media (Twitter, Facebook, YouTube), news outlets, academic blogs, Wikipedia citations, and reader bookmarking on Mendeley. As a result, social network analysis is now viewed as an alternative dimension complementing Scopus and Web of Science citation indexes for research evaluation [7].

Along with numerous benefits, our survey has revealed some barriers to innovative online research, primarily due to the low use

of Twitter by respondents (19 out of 127). In addition, the lack of awareness of Altmetric analytical tools was also recorded as an additional barrier for respondents in Eastern Europe.

In conclusion, increasing awareness of the role of social media platforms and metrics for scholarly purposes requires more attention in Eastern Europe.

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