UDC 159.923.2
DOI https://doi.org/10.17721/BPSY.2024.2(20).7

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THE ROLES OF HEALTH LOCUS OF CONTROL, EPISTEMIC BELIEFS, VACCINATION BELIEFS, CYNICISM – HOSTILITY, AND CHEMOPHOBIA IN DECISION-MAKING REGARDING SELF-VACCINATION AND VACCINATION OF CHILDREN

Background. *Vaccine hesitancy represents a significant challenge to public health, particularly in countries like Ukraine. This issue has been exacerbated by the ongoing military conflict, which has disrupted healthcare systems and increased societal stressors. Psychological factors such as chemophobia, health locus of control, epistemic beliefs, and vaccine conspiracy beliefs play pivotal roles in shaping attitudes toward vaccination. This study aims to identify the psychological and sociodemographic determinants influencing vaccination decisions in Ukraine, with a focus on self-vaccination and the vaccination of children.*

Methods. *A cross-sectional survey design was utilized, involving 392 participants. Data were collected through online platforms, employing validated scales to measure chemophobia, health locus of control, epistemic beliefs, vaccine conspiracy beliefs, and cynicism-hostility. Vaccination attitudes and sociodemographic variables were also assessed. Statistical analyses included descriptive statistics, correlation analysis, generalized linear modelling (polynomial logistic regression), and mediation analysis.*

Results. *Psychological antecedents of vaccination emerged as significant predictors of vaccination rates. Collective responsibility and confidence in vaccine safety positively correlated with the number of vaccinations received, while excessive calculation—characterized by critical information seeking—negatively impacted vaccination uptake. Chemophobia, although not a mediator between psychological antecedents and vaccination behavior, independently influenced lower vaccination rates. Epistemic beliefs were not associated with adult vaccination decisions but positively influenced decisions to vaccinate children. Sociodemographic factors, including gender, age, education, and religiosity, did not significantly predict vaccination behaviours.*

Conclusions. *This study highlights the complex interplay of psychological factors in vaccination decision-making. Emphasizing collective responsibility and trust in vaccines could enhance public health campaigns, while addressing chemophobia through targeted education may help mitigate its negative effects.*

Keywords: *vaccine hesitancy, chemophobia, health locus of control, epistemic beliefs, vaccine conspiracy beliefs, cynicism-hostility.*

Background

Problem statement. Vaccination is widely recognized as one of the most effective public health interventions, preventing the spread of infectious diseases and protecting individuals and communities from potential outbreaks of these infections. Despite the proven benefits of vaccines, vaccination rates can vary widely between regions and populations. In recent years, Ukraine has struggled to maintain high vaccination coverage, leading to outbreaks of vaccine-preventable diseases and related public health problems. The situation has worsened significantly since Russia's large-scale military invasion of Ukraine on February 24, 2014, which also disrupted the national health system (Kalaitzaki et al., 2022). In addition to the consequences of COVID-19, the Ukrainian community has experienced the severe traumatic effects of war, expressed in post-traumatic growth (Kurapov, Balashevych, et al., 2022; Kurapov, Pivorienė, et al., 2023), increased frequency of symptoms of anxiety, depression, and stress (Kurapov, Danyliuk, et al., 2023; Kurapov, Kalaitzaki, et al., 2023; Pavlenko et al., 2022), and deterioration of general psycho-emotional status (Kurapov, Pavlenko, et al., 2022). Against the background of the traumatic experience and due to the limited access of Ukrainians to health services, the vaccination situation in Ukraine has deteriorated significantly. In this context, understanding the factors that influence people's attitudes toward vaccination is critical to developing targeted interventions that could improve vaccine uptake and use in Ukraine.

In this regard, this study aims to fill the gap in the literature regarding the psychological factors that shape the attitudes of the Ukrainian population toward vaccination, with an emphasis on the concept of chemophobia. By focusing on locus of control, epistemological beliefs, vaccination beliefs, cynicism-hostility, and chemophobia, this study aims to contribute to the development of evidence-based vaccination promotion strategies tailored to the specific context of Ukraine. Ultimately, the results of this study can be used for targeted public health interventions to increase vaccine acceptance and coverage, thereby strengthening the country's immunization efforts and protecting the health of its citizens.

ISSN 2518-1378 (Print), ISSN 2708-6038 (Online)

Literature review. By a general definition, chemophobia is an irrational fear or aversion to chemicals, especially synthetic or artificial ones, which is often based on misconceptions or exaggerated fears about the potential risk from using them (Nieto-Villegas et al., 2023; Saleh, 2020). This fear can cause the rejection of products, technologies, or substances perceived as "chemicals", regardless of their actual safety (Saleh et al., 2020).

The public tends to perceive synthetic chemicals as more dangerous than natural ones, even when scientific evidence suggests otherwise (Rollini et al., 2022). In a survey, 82 % of respondents considered chemicals used in food products to be harmful, even if their packaging did not bear a hazard symbol (Buchmüller et al., 2020). People are more concerned about synthetic chemicals than naturally occurring, although both types may have similar chemical structures, and at least 40% of European consumers do not want to live in a world where such chemicals exist (Siegrist, & Bearth, 2019). Chemophobia mostly arises from a lack of understanding of the diverse nature of chemicals and their important role in various aspects of daily life (Nieto-Villegas et al., 2023; Saleh et al., 2020). Fear of chemicals can prevent the acceptance and use of beneficial products such as pharmaceuticals, fertilizers, and nutritional supplements and cause the rejection of proven technologies based on chemical processes. In addition, chemophobia is often fueled by misconceptions and a lack of scientific literacy (Bearth et al., 2021; Bearth et al., 2019; Saleh et al., 2021). People may associate "chemicals" with toxicity or harmful effects without realizing that everything, including natural substances, is made up of chemicals (Saleh, 2020). This misconception can lead to the rejection of safe and well-tested chemical products and technologies. Chemophobia can also create problems for policymakers and regulators (Homburg, & Vaupel, 2019). Unrealistic concerns can lead to establishing unnecessary and overly restrictive regulations that hinder scientific progress and innovation but do not necessarily increase actual safety.

Chemophobia and ideas about vaccination may be linked through a combination of psychological and social factors. In particular, earlier studies suggest that chemophobia may extend to concerns about synthetic substances found in vaccines. This fear can contribute to hesitancy or refusal to be vaccinated based on misconceptions or unreasonable safety concerns. People with chemophobia may have misconceptions about vaccine ingredients, believing that the presence of certain chemicals makes vaccines inherently harmful (Entine, 2011). Chemophobia can also heighten concerns about possible adverse reactions to vaccine ingredients. Despite the low incidence of severe reactions, people with chemophobia may be alert to the presence of certain chemicals, even if scientific evidence supports the safety of vaccines. The influence of the media and the impact of misinformation may also play an important role in shaping public opinion about vaccines and chemicals. Misinformation and sensationalism can exacerbate chemophobia and fuel distrust of vaccines, also contributing to distrust of the vaccination procedure. According to Cameron, people's beliefs also depend on the influence of the social environment; in particular, Internet communities and echo chambers can reinforce chemophobic sentiment and anti-vaccine sentiment, creating a self-reinforcing cycle of fear and misinformation (Cameron, 2020). In turn, Goldenberg notes that chemophobia and fear of vaccine ingredients are associated with reduced parental acceptability of vaccines (Goldenberg, 2021). These findings generally comply with the study by Cameron, according to whom concerns about vaccine ingredients, including chemicals, are one of the reasons given by parents who have chosen not to vaccinate their children (Cameron, 2020). The World Health Organization (WHO) has named vaccine hesitancy as one of the top ten global health threats. According to the WHO, vaccine ingredients concerns caused by chemophobia are one of the factors that contribute to vaccine hesitancy.

There are many psychological and social factors that shape a person's attitude toward vaccination. The most important and common among them include the health locus of control, epistemic beliefs, vaccination beliefs, cynicism-hostility, chemophobia, and social determinants (Cadeddu et al., 2020; Hotez et al., 2020; Pisl et al., 2021; Rollini et al., 2022; Rountree, & Prentice, 2021). According to Pisl et al.(2021) , the concept of the health locus of control refers to people's perceptions and beliefs about how much they control their own health outcomes. In turn, epistemic beliefs cover people's views on the nature of knowledge and the sources from which they obtain information (Rosman et al., 2021). Vaccination beliefs are examined in terms of people's perceptions, attitudes, and knowledge about vaccines and immunization methods (Cameron, 2020). Aspects such as cynicism and hostility relate to negative attitudes and distrust of other people and social institutions (Rountree, & Prentice, 2021). These traits can affect people's willingness to accept vaccination advice from healthcare professionals or government agencies.

The conducted literature review allows understanding that a person's beliefs about vaccination depend on many factors. It is also necessary to pay attention to such a component as the social determinants of vaccine acceptance, which are expressed in such aspects as gender, age, education, and religiosity. However, there are not enough studies that have examined them in combination. The existing literature also does not contain sources that would relate to the Ukrainian audience and factors that explain the willingness or unwillingness of Ukrainians to accept vaccines. In this regard, this study addresses the following research questions:

- Do the health locus of control, epistemic beliefs, vaccination beliefs, cynicism-hostility, and socio-demographic characteristics (such as age, gender, religiosity, and education) explain the antecedents of vaccination and the number of COVID-19 inoculations Ukrainians have made before the war?
- Is chemophobia a mediator of antecedents of vaccination and the number of COVID-19 inoculations made?
- Do the health locus of control, epistemic beliefs, vaccination beliefs, cynicism-hostility, socio-demographic characteristics (such as age, gender, religiosity, education), and chemophobia explain the difference in adults' attitudes to vaccinating themselves and their children?

The aim of the research was to investigate the determinants shaping Ukrainians' perceptions towards vaccination, with a specific focus on the role of chemophobia, health locus of control, epistemic beliefs, vaccine conspiracy beliefs, cynicism-hostility, and sociodemographic factors as potential predictors.

Methods

This study is a cross-sectional correlational study. We collected data that included the sociodemographic characteristics of participants, the overall number of vaccinations received, and the number of COVID-19 vaccinations. We also used the following scales: Chemophobia Scale (α = 0.84). Antecedents of Vaccination 5C Scale (with subscales Confidence (α = 0.93), Compliancy

(α = 0.72), Constraints (α = 0.69), Calculation (α = 0.76), Collective Responsibility (α = 0.83) (Danyliuk, Kurapov, Malysheva, and Lytvyn, 2023), Health Locus of Control Scale (with subscales Internal (α = 0.78), Chance (α = 0.78), and Powerful (Influential) Others (α = 0.73) (Danyliuk, Kurapov, Malysheva, Yahiiaiev, et al., 2023) Epistemic Beliefs Scale (with subscales Faith (α = 0.84), Need (α = 0.77), Truth (α = 0.87) (Danyliuk, Kurapov, Yahiiaiev, et al.. 2023). Conspiracy Mentality Beliefs Scale (α = 0.87) (Danyliuk, Yahiiaiev, et al., 2023), and Cynicism-Hostility Scale (α = 0.80) (Danyliuk, Kurapov, Yahiiaiev, et al., 2023).

Statistical analysis. In this study, statistical analysis was performed using R (version 4.2.2). Significance levels were set at 95% confidence intervals. In order to process the obtained data, we used such types of analysis as descriptive statistics, correlation analysis, and generalized linear modeling (polynomial logistic regression) with mediation analysis.

Data Collection and Participants. A total of 685 people with Ukrainian citizenship who lived on the territory of Ukraine or were displaced due to hostilities (N = 685) took part in the study. Fully completed questionnaires were returned by 392 participants (N = 392), with 320 people being female and 72 participants being male. The study included respondents who were in the age range of 18 to 65. All respondents who were included and completed the surveys previously signed an informed consent. The participants were recruited through the social platforms Telegram and Facebook. In turn, the survey and subsequent data collection were carried out on the 1ka.si platform.

Results

Descriptive Statistics of Vaccination Attitudes. The table 1 presents a comprehensive overview of various demographic and health-related aspects of the surveyed participants.

Considering the proximity of the distributions, the absence of hypothesis and research questions, we did not conduct one-way ANOVA with number of COVID-19 vaccinations as a fixed effect. Figure represents only the mean differences and descriptive statistics of dependent variables according to the number of COVID-19 vaccines made by the participants.

Relationships Among Attitudes to Vaccination and the Number of Individual COVID-19 Shots. To identify the relationship among our dependent variables and the number of COVID-19 vaccinations made, we have used generalized linear modelling utilizing the forward method. Detailed results are presented in table 2.

Table 1

Descriptive statistics for socio-demographic variables

Category		Number of Participants	Percentage
Gender	Male	72	18.4 %
	Female	320	81.6%
Permanent Place of Residence	Settlements < 100,000	85	21.7 %
	Cities 100,000 – 250,000	24	6.1 %
	Cities 250,000 – 500,000	41	10.5 %
	Cities 500,000 – 1 million	25	6.4 %
	Cities > 1 million (excluding Kyiv)	22	5.6%
	Kyiv	195	49.7 %
COVID-19 Vaccinations	Not vaccinated	137	34.9%
	Single dose	11	2.8 %
	Two doses	168	42.9 %
	Three doses	71	18.1 %
	Four doses	3	0.8 %
	Other vaccination options	2	0.5 %
Religiosity	Not religious at all	46	11.7 %
	Not religious, some spiritual inclination	69	17.6 %
	Somewhat moderate in religiosity	167	42.6 %
	Religious and active	103	26.3 %
	Very religious	7	1.8 %

Table 2

Relationship Among Attitudes Toward Vaccination and the Number of COVID-19 Vaccines

Dependent Variable	Step	Deviance Residuals		Independent Variable	Estimate	SE	p
		Min	Max				
Number of COVID-19 Vaccines	1 Psychological Antecedents of Vaccination (5C)	-3.17	2.67	Collective Responsibility	0.219	0.05	< 0.01 **
				Calculation	-0.215	0.06	< 0.01 ***
				Constraints	0.001	0.04	0.96
				Complacency	-0.008	0.04	0.85
				Confidence	0.109	0.04	< 0.01 **
	2 Health Locus of Control	-3.35	2.64	Influential Others	-0.033	0.063	0.59
				Doctors	0.088	0.055	0.11
				Chance	0.016	0.030	0.58
				Internal	-0.037	0.036	0.30
	3 Hostility	-3.36	2.65	Hostility	-0.008	0.032	0.78
	4 Epistemic Beliefs	-3.59	2.81	Epistemic Faith	0.042	0.03	0.21
				Epistemic Need	0.044	0.04	0.29
				Epistemic Truth	0.062	0.03	0.05

Note: SE = Standard Error

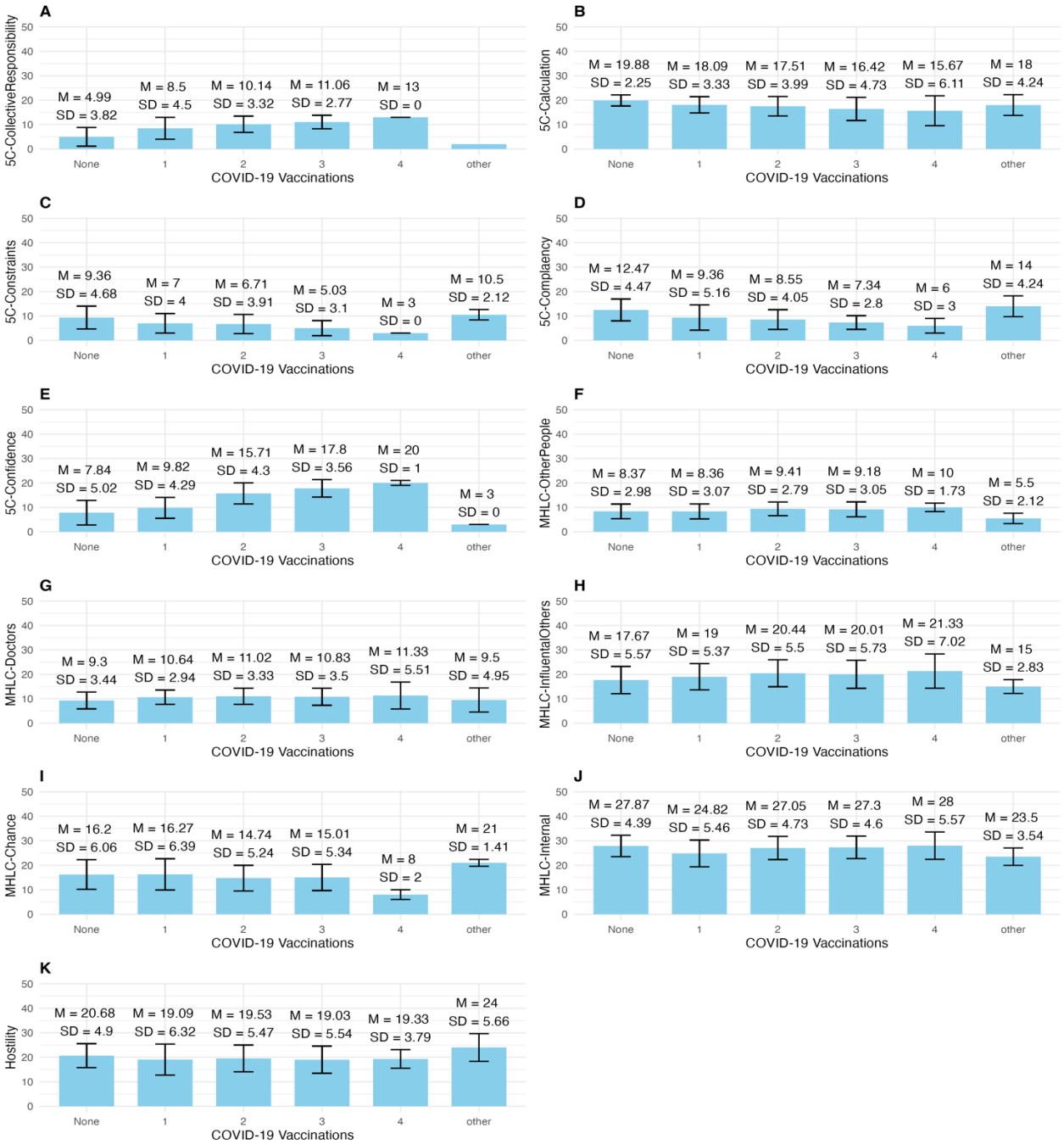

Fig. Descriptive statistics and data distribution of dependent variables according to the number of COVID-19 vaccines

Results show that only psychological antecedents of vaccination are significantly related to the number of COVID-19 vaccines. In particular, collective responsibility and confidence in the quality of vaccine increase the number of vaccinations while calculation (extensive information searching and weighing the pros and cons before making a decision about vaccination) reduces the number of vaccines.

The Role of Chemophobia in Explaining the Number of COVID-19 Shots. Since only psychological antecedents of vaccination are significantly related to the number of COVID-19 vaccines, the role of chemophobia was evaluated in correspondence to them. We hypothesized that chemophobia can mediate the relationship between psychological antecedents of vaccination and the number of COVID-19 vaccines made.

In line with psychological antecedents of vaccination, chemophobia is not significantly related to the number of COVID-19 vaccines ($\beta = -0.008$, $SE = 0.02$, $p = 0.695$), however, it is as a single predictor ($\beta = -0.058$, $SE = 0.013$, $p < 0.01$). Thus, mediation analysis was conducted using *mediation* package with a quasi-Bayesian approach to estimate confidence intervals. Results show low effect of chemophobia as mediator in line with psychological antecedents of vaccination (ACME = 0.9) while its strong effect as independent fixed effect (ADE < 0.01; c < 0.01). As such, chemophobia cannot be viewed as a mediator but rather as a single fixed effect suggesting that higher scores refer to lower number of vaccines made.

The Role of Psychological Attitudes towards Vaccination in Decision to Vaccinate Children. We hypothesized that vaccination of children is a more sensitive

issue than vaccination of self. As such, we have applied generalized linear modeling (polynomial logistic regression) in order to define differences in decision regarding vaccination of self and children. Using the same approach as for self-vaccination, we also distinguished the total number of required vaccines made to children of participants and COVID-19 vaccine (tabl. 3). For the analysis, we have removed participants that reported having no children thus reducing our sample size to 182 (N = 182).

Table 3

Relationship Among Attitudes Toward Vaccination and the Presence of Required Vaccinations for Children

Dependent Variable	Step	Deviance Residuals		Independent Variable	Estimate	SE	p
		Min	Max				
Majority of Required Vaccinations Vaccines	1 Psychological antecedents of vaccination (5C)	-1.71	2.58	Confidence	-0.191	0.063	0.002
	2 Health Locus of Control	-1.74	2.79	Internal	-0.108	0.054	.0459

Note: this table reports only significant fixed effects per each category of variables

Regarding the relationship among attitudes toward vaccination and the number of COVID-19 vaccines made for children only epistemic belief of need was significant ($\beta = 0.1359$, $SE = 0.0608$, $p = 0.025$). Thus, we observe significant differences between the attitudes towards vaccination of self and children.

Discussion and conclusions

This study aimed to examine the factors that influence Ukrainians' attitudes toward vaccination, with a particular focus on predictors such as chemophobia, health locus of control, epistemological beliefs, vaccination conspiracy beliefs, cynicism-hostility, and sociodemographic characteristics. The findings provide insight into the determinants that shape the Ukrainian population's perception of vaccination, allowing for a re-examination of public health actions aimed at minimizing the issue of vaccination refusal.

The study used several measurement tools that, according to preliminary expectations, would be able to explain Ukrainians' willingness to get vaccinated. At the same time, the results show that, on average, the components of these scales do not explain the number of COVID-19 vaccinations received by participants. However, despite the general lack of significant relationships, we have identified exceptions for specific components. In particular, components such as Collective Responsibility and Confidence are exceptions. The results have shown that only psychological antecedents of vaccination are significantly associated with the number of COVID-19 vaccines received. This finding implies that psychological aspects play a critical role in influencing vaccination behaviors among the factors considered in the study. We have found that the variable Collective Responsibility is positively associated with the number of COVID-19 vaccinations. This fact suggests that people with a stronger sense of collective responsibility to the community or public welfare are more likely to be vaccinated. Confidence in vaccine quality is also positively associated with vaccination rates, indicating that people who trust and have confidence in the effectiveness and safety of a COVID-19 vaccine are more likely to receive it. Another result, important from the point of view of research purposes, is the identification of the negative impact of such a component as Calculation on vaccination. In this case, the Calculation variable, which involves extensive information searching and weighing the pros and cons before deciding to vaccinate oneself, negatively correlates with the number of vaccines received. This finding suggests that people who engage in more thoughtful and analytical decision-making and rely more on external information and sources will be less likely to get vaccinated.

In this regard, the findings highlight the importance of psychological factors in shaping COVID-19 vaccination behaviors. We hypothesize that people who feel a sense of collective responsibility and confidence in the vaccine are more likely to get vaccinated, consistent with the idea that social and trust factors play a critical role in vaccine acceptance. Accordingly, in contrast, the negative relationship with the Calculation variable suggests that people who carefully consider and critically evaluate information before deciding to vaccinate themselves are less likely to be vaccinated. This situation may indicate the presence of potential barriers associated with over-analysis or skepticism. In this case, we can suggest that public health interventions and communication strategies could benefit from emphasizing collective responsibility and building trust in vaccine quality to encourage higher vaccination rates among the population. In turn, in order to address problems or hesitations associated with information seeking and decision-making processes, it may be important to create relevant, credible, and authoritative information content to reach more analytically oriented people.

Another important research question was to examine the role of chemophobia in vaccination decision-making processes. The results have shown that, in terms of psychological antecedents of vaccination, chemophobia is not significantly associated with the number of COVID-19 vaccines. However, we have found that it can be considered the only predictor of vaccination rates. In particular, the mediation analysis results have indicated a low effect of chemophobia as a mediator in the relationship between psychological antecedents of vaccination and the number of COVID-19 vaccines. However, chemophobia has a strong independent effect, indicating that higher rates of chemophobia are likely to be associated with fewer COVID-19 vaccines received because people who experience fear of chemicals are more likely to perceive vaccine components as dangerous or carrying health risks (Buchmüller et al., 2020; Nieto-Villegas et al., 2023; Rosman et al., 2021). Therefore, these findings may have implications for understanding the psychological factors influencing COVID-19 vaccination behaviors. The fact that chemophobia has a significant negative association with vaccination rates, even when not considered as a mediator, highlights its importance as an individual factor influencing vaccination decisions and, therefore, should be considered in information campaigns. At the same time, we should note that the results of the current study do not provide information about the specific components of chemophobia that might influence vaccination decisions. For this reason, further study of the

components of chemophobia and their influence on the decision to vaccinate, considering additional variables or factors not included in the current analysis, is required. In addition, we can note that filling information campaigns on vaccination with content related to a comprehensive and detailed description of the substances included in vaccines and their pharmacological effects on the human body could potentially help people overcome fear and focus on a positive decision about vaccination (Bearth et al., 2019). In this case, the emphasis should be on reducing the spread of misinformation in society.

Another topic we focused on in the current study was examining the role of adults' psychological attitudes toward vaccination in decisions to vaccinate their children. It is important to note that the only significant variable among all the components studied is participants' epistemic beliefs in the need for vaccines. In particular, the positive coefficient (β = 0.1359) suggests that stronger epistemic confidence in vaccination is associated with a higher number of COVID-19 vaccines administered to children. At the same time, the results show that there are significant differences between attitudes toward vaccinating themselves and attitudes toward vaccinating children. This situation may indicate that the factors that influence a person's decision to get vaccinated may be different from the factors that influence their decision to vaccinate their children. In this regard, the findings suggest that beliefs in the need or importance of vaccination (epistemic beliefs in necessity) are a key factor when it comes to vaccinating children against COVID-19. It may also indicate that parents or caregivers who strongly believe in the importance of childhood vaccinations are more likely to have their children receive a COVID-19 vaccine. Accordingly, we can hypothesize that public health campaigns and educational efforts aimed at parents or caregivers could benefit from emphasizing the importance of childhood vaccination if their content emphasizes the perceived need for the vaccine. In this case, understanding the specific factors determining parents' attitudes toward vaccinating their children could help guide targeted interventions to increase vaccination rates among this population.

The study conducted on the determinants of vaccination in Ukraine has uncovered a complex interplay of psychological factors that influence the attitudes towards both COVID-19 and routine vaccinations. Central to these determinants is the role of people's collective responsibility and confidence in vaccines. The high degree of collective responsibility and high level of confidence in vaccines has been found to significantly affect vaccination uptake, highlighting the need for nuanced public health messaging. Interestingly, despite the initial assumption, epistemic beliefs were not substantial predictors of vaccination rates among adults, suggesting that efforts to address vaccine hesitancy need not focus heavily on correcting knowledge but rather on mitigating skepticism and mistrust. However, regarding childhood vaccination, epistemic beliefs are a primary consideration. In addition, it is possible to conclude that most of the psychological correlates in the studied sample did not have an effect despite expectations. In particular, we have found that sociodemographic characteristics such as gender, age, education, or religiosity are not significant predictors, nor is the level of cynicism-hostility. At the same time, the identified effects of variables such as collective responsibility, trust, calculation, and epistemic beliefs regarding childhood vaccination indicate the possibility of integrating these aspects into information campaigns, and the need for more detailed study.

Moreover, the implications of these findings extend to the realm of parental responsibility, revealing a dichotomy where adults show hesitancy to vaccinate themselves but less so when deciding for their children, a nuance that public health strategies must address. This distinction stresses the importance of acknowledging the unique concerns that parents harbor and designing interventions that resonate with parental instincts to protect their offspring.

The multifaceted nature of vaccine hesitancy in Ukraine demands a multifaceted response. Efforts should prioritize debunking vaccination myths, especially conspiracy theories, while amplifying the trusted voices of medical professionals. Education-based interventions must be at the forefront, aiming to empower the populace with reliable information and emphasizing collective responsibility over individual control. Tailoring approaches to account for the intricate web of personal beliefs and societal influences will be pivotal in increasing vaccination rates and, consequently, safeguarding public health in Ukraine.

Future research directions. Future research should focus on developing and testing intervention models that specifically address vaccination conspiracy beliefs, as these have been identified as a critical barrier to vaccine acceptance. There is also a need to explore the underlying causes of chemophobia and how this fear can be effectively mitigated through public education. Further studies could examine the nuanced effects of different educational approaches on vaccination rates across various educational levels. Additionally, research might explore the psychological mechanisms that lead parents to vaccinate their children despite their own hesitancy, which could inform strategies targeting family health decisions. Finally, longitudinal studies would be beneficial in assessing the long-term effectiveness of tailored public health campaigns on changing vaccination attitudes and behaviors.

Authors' contributions: Ivan Danyliuk – conceptualisation, collection of empirical data collection and their validation, revision and drafting of the manuscript; Karine Malysheva – conceptualisation, methodology, empirical data collection and validation, revision and drafting of the manuscript; Ilya Yagiyayev – conceptualisation, methodology, source analysis, preparation of the literature review and theoretical framework of the study, revision and drafting of the manuscript; Sergiy Lytvyn – conceptualisation, methodology, empirical data collection and validation, source analysis, preparation of the literature review and theoretical framework, writing the manuscript; Anton Kurapov – software, data analysis, revision and drafting the manuscript; Oleksandra Leshenko – empirical data collection and validation, revision and drafting the manuscript.

Acknowledgements, sources of funding. The research was funded by the National Research Foundation of Ukraine, section 'Science for Security and Sustainable Development of Ukraine', grant No. 23DF016-01.

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Отримано редакцією журналу / Received: 22.08.24
Прорецензовано / Revised: 27.10.24
Схвалено до друку / Accepted: 15.12.24

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РОЛЬ ЛОКУСУ КОНТРОЛЮ ЗДОРОВ'Я, ЕПІСТЕМІЧНИХ ПЕРЕКОНАНЬ, ПЕРЕКОНАНЬ ЩОДО ВАКЦИНАЦІЇ, ЦИНІЗМУ – ВОРОЖОСТІ ТА ХЕМОФОБІЇ У ПРИЙНЯТТІ РІШЕНЬ ЩОДО ВАКЦИНАЦІЇ СЕБЕ ТА ДІТЕЙ

В с т у п . ***Наголошено, що вагання щодо вакцинації становить значний виклик для громадського здоров'я, особливо в таких країнах, як Україна. Ця проблема ускладнюється тривалим воєнним конфліктом, який порушив функціонування систем охорони здоров'я та посилив соціальні стресори. Психологічні чинники, такі як хемофобія, локус контролю здоров'я, епістемічні переконання та переконання щодо змови стосовно вакцинації, відіграють важливу роль у формуванні ставлення до вакцинації. Це дослідження має на меті визначити***

психологічні та соціально-демографічні детермінанти, які впливають на рішення щодо вакцинації в Україні, зокрема щодо вакцинації себе та своїх дітей.

Методи. ***Використано крос-секційний дизайн дослідження за участю 392 респондентів. Дані зібрано за допомогою онлайн-платформ із використанням валідованих шкал для вимірювання хемофобії, локусу контролю здоров'я, епістемічних переконань, переконань щодо змови стосовно вакцинації та цинізму-ворожості. Також оцінено соціально-демографічні змінні в їх зв'язку зі ставленням до вакцинації. Для аналізу даних застосовано описову статистику, кореляційний аналіз, узагальнене лінійне моделювання (поліноміальну логістичну регресію) та медіаційний аналіз.***

Результати. ***Виявлено, що психологічні передумови вакцинації є значущими предикторами рівнів вакцинації. Колективна відповідальність та довіра до безпеки вакцин позитивно корелювали з кількістю отриманих респондентами вакцин, тоді як надмірна орієнтація на критичний пошук інформації негативно впливала на рівень вакцинації. Визначено, що хемофобія, хоча й не виступала посередником між психологічними передумовами та поведінкою щодо вакцинації, самостійно впливала на зниження рівнів вакцинації. Установлено, що епістемічні переконання не були пов'язані з рішеннями про вакцинацію дорослих, проте позитивно впливали на рішення вакцинувати дітей. З'ясовано, що соціально-демографічні фактори, такі як стать, вік, освіта та релігійність, не мали значного впливу на поведінку щодо вакцинації.***

Висновки. ***Висвітлено складну взаємодію психологічних чинників у процесі прийняття рішень про вакцинацію. Акцентовано, що колективна відповідальність та довіра до вакцин може покращити ефективність громадських кампаній у сфері охорони здоров'я, а цілеспрямована просвітницька робота може допомогти зменшити негативний вплив хемофобії.***

Ключові слова: ***вагання щодо вакцинації, хемофобія, локус контролю здоров'я, епістемічні переконання, переконання щодо змови стосовно вакцинації, цинізм-ворожість.***

Автори заявляють про відсутність конфлікту інтересів. Спонсори не брали участі в розробленні дослідження; у зборі, аналізі чи інтерпретації даних; у написанні рукопису; в рішенні про публікацію результатів.

The authors declare no conflicts of interest. The funders had no role in the design of the study; in the collection, analyses or interpretation of data; in the writing of the manuscript; in the decision to publish the results.