

# The use of certain elements of the marketing communications system by Ukrainian pharmacies in emergencies

**Valerii Demchenko, Viktoriia Demchenko, Natalia Tkachenko, Tamara Mahanova**

Department of Management and Economics of Pharmacy, Zaporizhzhia State Medical and Pharmaceutical University, Ukraine

The purpose of the study was to determine the degree of influence of the marketing communications system elements on consumer preferences for pharmaceutical products and the loyalty of drug consumers to pharmacies in the conditions of martial law, with further recommendations for the management of pharmacies in wartime.

The results of the study showed that the patient's choice of a pharmacy to receive pharmaceutical care is largely influenced by the following factors: convenient location of the pharmacy to the place of residence; affordable prices for the necessary medicines and the level of physical availability of medicines that meets all the patient's needs.

Among the sources of information that influence the choice of drugs, 75% of respondents indicated recommendations or prescriptions of a doctor, recommendations of a pharmacist – 46.7%, 9.8% – advertising products.

Queues, unprofessional care and the pharmacist's intrusive manner of communication are the factors that cause the greatest negative emotions.

In the conditions of martial law, people pay attention to advertising, which helps to orientate on the necessary pharmaceutical products, as well as assess their economic availability at a specific moment in time. Therefore, pharmacy management needs to focus attention and resources on building clear communication links with patients using informational and reference digital technologies.

**Key words:** pharmaceutical care, pharmaceutical services, emergencies.

## Využití určitých prvků systému marketingové komunikace ukrajinskými lékárnami v nouzových situacích

Účelem studie bylo zjistit míru vlivu prvků systému marketingové komunikace na spotřebitelské preference farmaceutických produktů a loajalitu spotřebitelů léčiv k lékárnám v podmínkách stanného práva s dalšími doporučeními pro řízení lékáren v době války.

Z výsledků studie vyplynulo, že výběr lékárny pacienta pro čerpání lékařské péče je do značné míry ovlivněn následujícími faktory: výhodná poloha lékárny k místu bydliště; dostupné ceny potřebných léků a úroveň fyzické dostupnosti léků, která odpovídá všem potřebám pacienta.

Mezi zdroji informací, které ovlivňují výběr léků, 75 % respondentů uvedlo doporučení či recepty lékaře, doporučení lékárníka – 46,7 %, 9,8 % – reklamní produkty. Největší negativní emoce vyvolávají fronty, neodborná péče a vtíravý způsob komunikace lékárníka.

V podmínkách stanného práva lidé věnují pozornost reklamě, která pomáhá zorientovat se v potřebných farmaceutických produktech a také posoudit jejich ekonomickou dostupnost v konkrétním okamžiku.

Vedení lékáren proto musí zaměřit pozornost a zdroje na budování jasných komunikačních vazeb s pacienty pomocí informačních a referenčních digitálních technologií.

**Klíčová slova:** farmaceutická pomoc, farmaceutické služby, nouzová situace.

The maintenance of the appropriate level of pharmaceutical provision of medical care and the quality of pharmaceutical care in emergency situations are important social aspects, the solution of which is entrusted to pharmacy (1). The latter include problems such as pandemics (2), disasters (3), military actions (4, 5), reliable security systems (6), public mental health, etc. (7).

Ukrainian pharmacy got into an emergency, like the entire health care system, with the spread of COVID-19 (8). Subsequently, the situation was complicated by new challenges, which related to the full-scale military invasion of the Russian army in Ukraine (9).

The ongoing war in Ukraine revealed the weaknesses of the national health care system, emphasized the importance of the economy of the system in general, and pharmacy in particular. The „extraordinary“ problems of Ukrainian pharmacy in the first year of the war include: loss and destruction of infrastructure (destruction or blocking of warehouses, pharmacies, medicines); complex and expensive logistics (increasing fuel costs, destruction of supply chains); rising prices of raw materials; accounts receivable (overdue payments to distributors and pharmacies, mandatory advance payment to the supplier of pharmaceutical products); decrease in the number of consumers (according to UN data, 6 million Ukrainians are abroad, migration and population loss – killed civilians) (10); a drop in patients' incomes (inflation at the beginning of the war was 22%, and the forecast for 2023 was 30%, the loss of Ukrainians' incomes was 35%) (11); lack of personnel in pharmacies (migration, men – at the front, deaths of pharmacists at work); the need for minimum accounting and quality control of foreign humanitarian aid. The hryvnia exchange rate as of December 31, 2023 was: EUR – 43.05; USD – 38.92; CZK – 1.7175 (12)

Responding to these problems, the Ministry of Health of Ukraine implemented several stabilizing actions, including in the pharmaceutical sector. Recovering from a severe unexpected situation, Ukrainian pharmacy in 2023 restored the operation of the supply system, increased the production of domestic drugs, partially switched to electronic prescriptions, and reconfigured the system of professional education, including continuous professional development of practicing pharmacists. However, there are still problems of the legal basis for the provision of pharmaceutical services (there is still no national standard on proper pharmacy practice, dispensing without a prescription Rx drugs), lack of personnel and practical implementation of effective actions to work with consumers to support the economy of the pharmacy sector.

Therefore, research on determining the impact on consumers of various elements of marketing communications, which can use pharmacies during hostilities. At the same time, the peculiarities of the Ukrainian retail segment of the pharmaceutical market should be taken into account:

- retail is divided between a small number of large pharmacy chains (600 or more pharmacies are combined into horizontal marketing sales systems);
- very often in cities there are 4-8 pharmacies within 10 meters;
- lack of pharmacies in rural areas;
- active digitization of communications with patients;
- self-treatment of patients;

- the motivational system for pharmacists is based on an additional payment of % of pharmacy sales and the imposition of an internal product brand on the patient.

Among the classic elements of the marketing communications system, which are actively used by pharmacies, are sales promotion, advertising, personal selling (quality of pharmaceutical services), merchandising.

It should be noted that over the past five years, the legal basis for the use of these marketing tools by pharmacies has been formed. Thus, Ukrainian legislation introduced the concepts of „pharmaceutical care“ and „pharmaceutical service“ (13), there are clear rules regarding the advertising of medicines (14), license conditions of online trading of medicines (15), which take into account the recommendations of the international pharmaceutical community (16).

The purpose of the study was to determine the specifics of the marketing communications system's elements influence on consumer pharmaceutical products preferences and the loyalty of drug users to pharmacies in the conditions of martial law, with further recommendations for the management of pharmacies on the rational use of funds and planning a survival strategy during the war.

## Research materials and methods

The work used methods of information search, synthesis, critical analysis, survey, generalization, and interpretation of results.

A specially developed questionnaire for pharmacy visitors from all regions of Ukraine was used to conduct the survey (including persons temporarily displaced during the hostilities in Ukraine).

The survey was conducted in a mixed format: online (the electronic version was created using Google Forms) and in direct contact with visitors to pharmacies in large cities of Ukraine (Kyiv, Lviv, Vinnytsia), which are located in relation to hostilities, in February-August 2023. A total of 508 valid questionnaires were received. The share of respondents who filled out the questionnaire themselves is 10%. The inclusion criteria were: participants know the terms and conditions and are willing to be research respondents, more than 20 years old, pharmacy customers who had visited at least two times and willing to participate in the study.

The questionnaire was conventionally divided into two parts. The introductory part made it possible to form the social status of the respondents, as it contained questions about gender, age, etc. The main part – included 15 questions that revealed the influence of the main elements of drug promotion (advertising events for pharmaceutical products and merchandising elements, sales promotion events, personal selling (quality of pharmaceutical services)) on consumer preferences during a pharmacy visit.

Gender, age, social status, and region of residence were chosen as indicators of respondents' segmentation (Table 1). Most of the respondents were women under the age of 35, who were socially active during the state of emergency in Ukraine – they worked, studied, volunteered, and were concerned about their own health and the health of their relatives. Basic calculations were performed using Excel.

**Tab. 1.** Socio-demographic characteristics of respondents

No	Criterion	characteristic	%
1	sex	women	84.3
		men	15.7
2	age	25–35 years old	71
		35–45 years old	15
		45–55 years old	11
		55 and older	3
3	social status	Student – studies and works at the same time	57
		working	38
		unemployed / housewife	4
		pensioner	1
4	region of stay	front-line territory (near hostilities)	43
		rear territory of Ukraine (periodic shelling)	42
		recently returned to Ukraine (from abroad or moved from the temporarily occupied territory)	15

## The results

The results of the study showed that the patient's choice of a pharmacy to receive pharmaceutical care is largely influenced by the following factors: convenient location of the pharmacy to the place of residence (69% of respondents indicated); affordable prices for the necessary medicines (62%) and the level of physical availability of medicines that meets all the patient's needs (55%).

Factors such as the attractiveness of the pharmacy's mandatory sign/showcase, interior decoration (interior) of the pharmacy, and the presence of a promotional area in the pharmacy's sales hall do not have a significant impact on the choice of a pharmacy for seeking pharmaceutical help.

It should be noted that 46% of respondents respond positively to the use of various advertisements in the design of the facade, sales

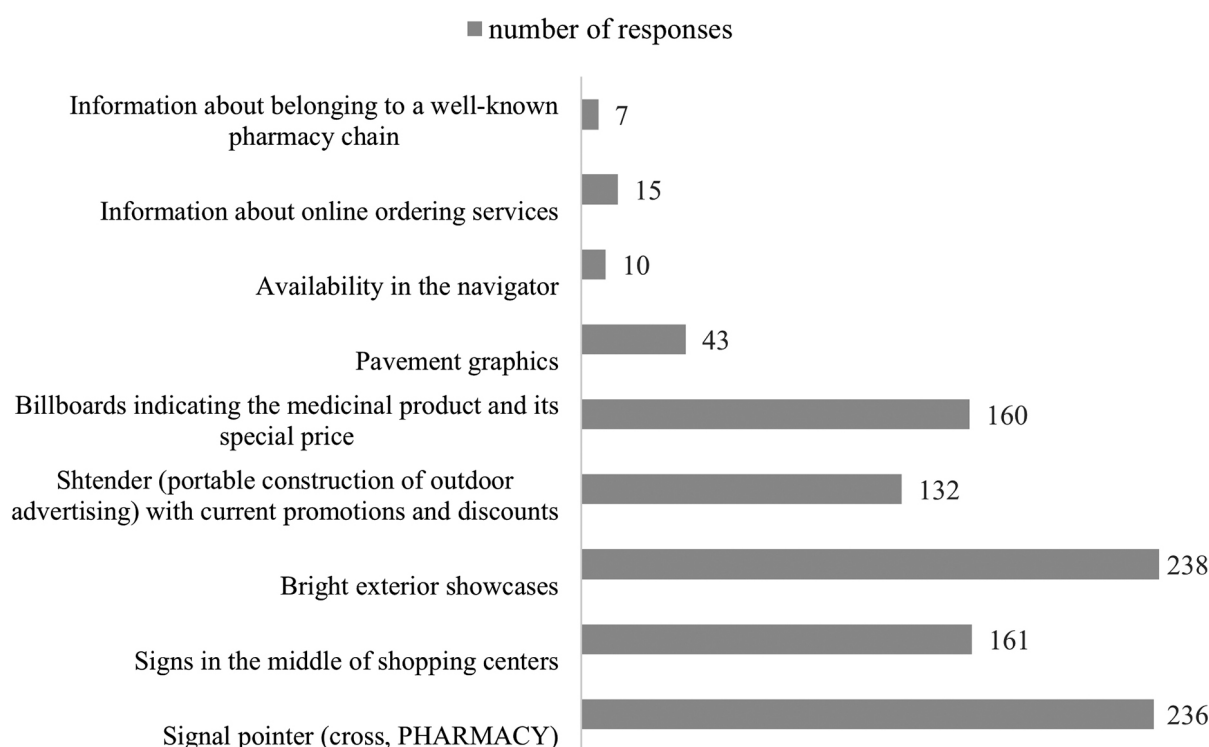
hall or pharmacy windows, the same number of respondents (46%) responded negatively to the actions, and 8% remained neutral about them.

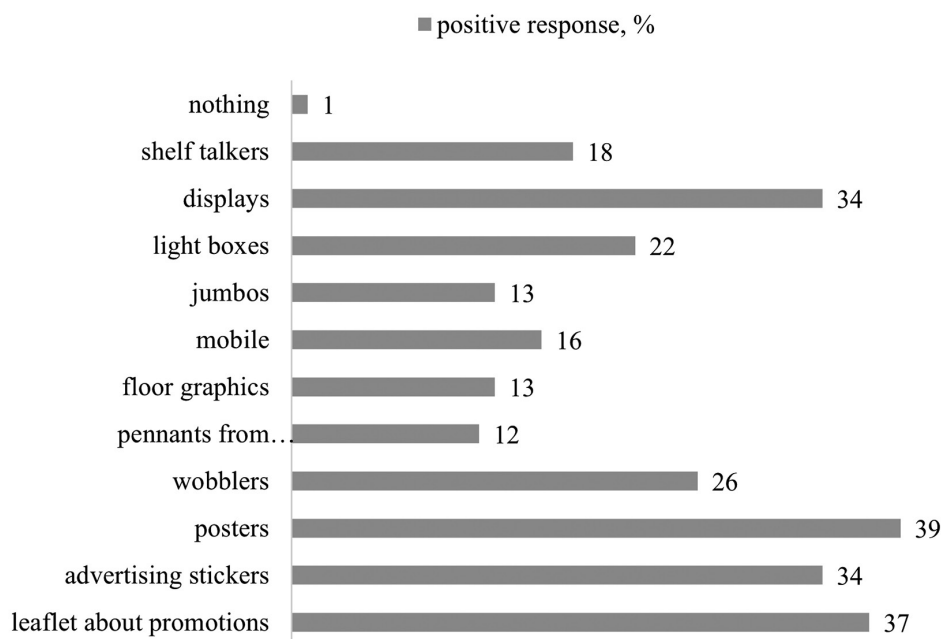
Considering the peculiarities of Ukrainian retail, we tried to find out which events and means of attracting attention to the pharmacy (Fig. 1) have an impact on consumers when buying drugs and other pharmaceutical products (OTC drugs, medical cosmetics, medical products, patient care, baby food, mineral water, etc.).

The leading positions were occupied by: bright exterior show-cases of pharmacy establishments; signal indicators (a cross and the inscription „Pharmacy“), which allow you to find a pharmacy among other information signs; signs located inside shopping centers (again, they allow you to orient yourself to the location of the pharmacy); billboards indicating the medicinal product and its special price; pillars (portable construction of outdoor advertising) with current promotions and discounts. Most consumers are interested in external advertising elements that allow them to find a pharmacy faster, which is especially important in emergency situations.

With the next question of the questionnaire, we tried to find out which elements of merchandising attract the attention of visitors in the pharmacy sales hall to one or another pharmaceutical product and encourage them to make an impulsive (unplanned) purchase (Fig. 2).

According to the survey, information presented on a poster (artistically designed poster used for advertising purposes about a pharmaceutical product or its manufacturer), an informational leaflet about promotions (permitted to be placed in the area of work of a pharmacist for dispensing OTC) has the greatest influence on pharmacy visitors - medicines), advertising stickers (a small sticker that is placed directly

**Fig. 1.** Distribution diagram of consumers' opinions regarding actions and means that drew attention to the pharmacy

**Fig. 2.** Diagram of consumer preferences regarding elements of pharmacy merchandising

on the product and has an advertising nature) and displays (electronic means for reproducing graphic and alphanumeric information about medicines or promotional events in a pharmacy).

Less eye-catching are wobblers (a type of printed advertisement on a flexible plastic leg that is attached to the product) and illuminated light boxes (intended for information and advertising). Banners (a long and narrow flag that carries information about the manufacturer of a pharmaceutical product), floor graphics (advertising stickers that are stuck on the floor under the feet of visitors), mobiles (suspended structures that are usually fixed under the ceiling) have almost half the impact on the consumer and contain advertising information), jumbos (3-dimensional boxes imitating the product on an enlarged scale) and shelf talkers (a structure made of paper or cardboard with the image of a trademark, price and other information).

Respondents also answered questions about the sources of information that are taken into account and that influence the choice of drugs. For example, 75% of respondents indicated that a doctor's recommendation or prescription is the main influencing factor when buying drugs, pharmacist's recommendations - 46.7%, and 9.8% of respondents indicated advertising products, including in social networks. We draw attention to the fact that 1% of respondents refer to the instructions for the medical use of the drug and to the protocols for the provision of medical assistance for information about the drug.

However, almost 88.8% of all respondents noted that an important factor in choosing medicines for them is their own previous experience of using certain medicines and Internet information about medicines. This confirms the acute problem of responsible self-medication among Ukrainian patients and the low level of educational work regarding health (including mental health), as well as preventive acts on the part of pharmaceutical workers. These problems are exacerbated in

emergencies, when the availability of medical and pharmaceutical care is sharply reduced.

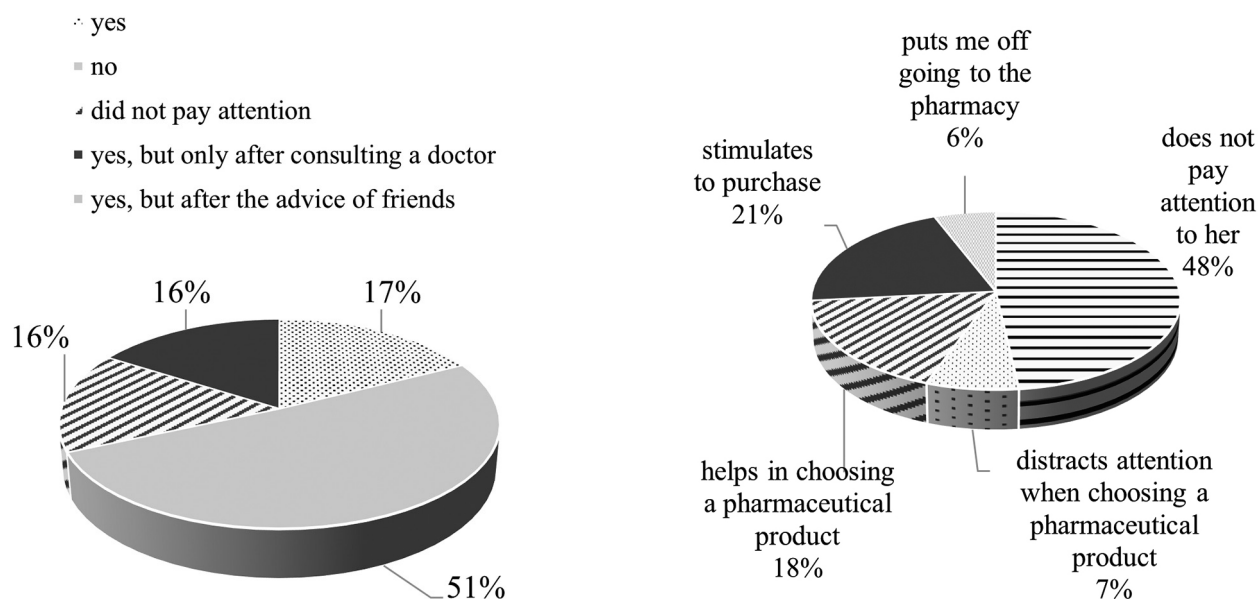
To the question „Do you pay attention to the attractive or convenient display of the product in the pharmacy?” 69% of the respondents answered positively, while for 14% of the respondents the presentation is not important and 17% do not pay attention to it. When buying drugs, 53% of consumers have a significant influence on the design of shop windows and the convenient display of over-the-counter drugs, while 37% of respondents noted no influence on consumer preferences. Only 10% of respondents found it difficult to answer this question.

As we can see, such components of merchandising as display window design and attractive and convenient display of pharmaceutical products have an impact on consumer choice and encourage impulsive buying. However, this is not the case Rx-prescription drugs (paper or electronic prescription).

The following questions made it possible to assess the level of influence of advertising in the pharmacy on consumer decisions regarding the purchase of pharmaceutical products in emergency situations (Fig. 3), because 23% of respondents answered affirmatively to the question „does advertising influence your choice of drugs?” and 40% of respondents believe that drug advertising should be on television, social networks, and other mass media.

Only one-fifth of respondents (20.5%) indicated that advertising products encourage them to visit a pharmacy, and 17.7% of respondents - help with the choice of pharmaceutical products. 47.8% of respondents do not pay attention to pharmacy advertising, and 13.1% of consumers expressed a negative attitude towards pharmacy advertising.

However, the analysis of respondents' answers showed that in emergency situations, people pay attention to advertising (information), which helps to orientate on the necessary pharmaceutical products, the place where they can be purchased (physical availability), as well as to

**Fig. 3.** Distribution diagram of responses of pharmacy visitors regarding the influence of advertising on purchase decisions

assess their economic availability at a specific moment in time. That is, such a classic element of promotion in marketing as the advertisement of a pharmaceutical product is not of decisive importance for most consumers, and its influence on the patient regarding the purchase decision is practically absent, or rather weak.

Next, questions were asked about such a classic element of promotion as sales promotion in the direction of actions aimed at the consumer.

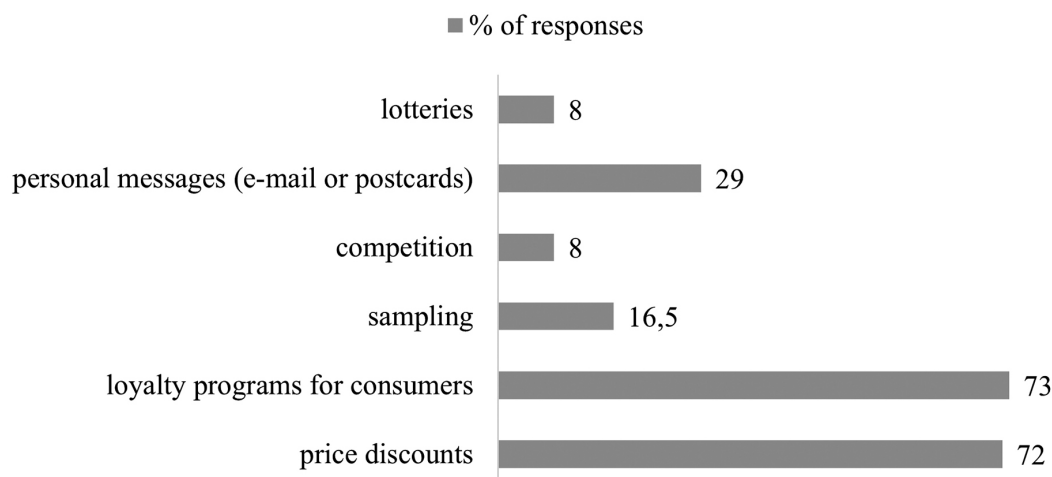
Respondents were asked to indicate actions to stimulate impulse buying, which pharmacies use in relation to visitors (Fig. 4) and which „promotional events/price discounts” are attractive to consumers (Fig. 5).

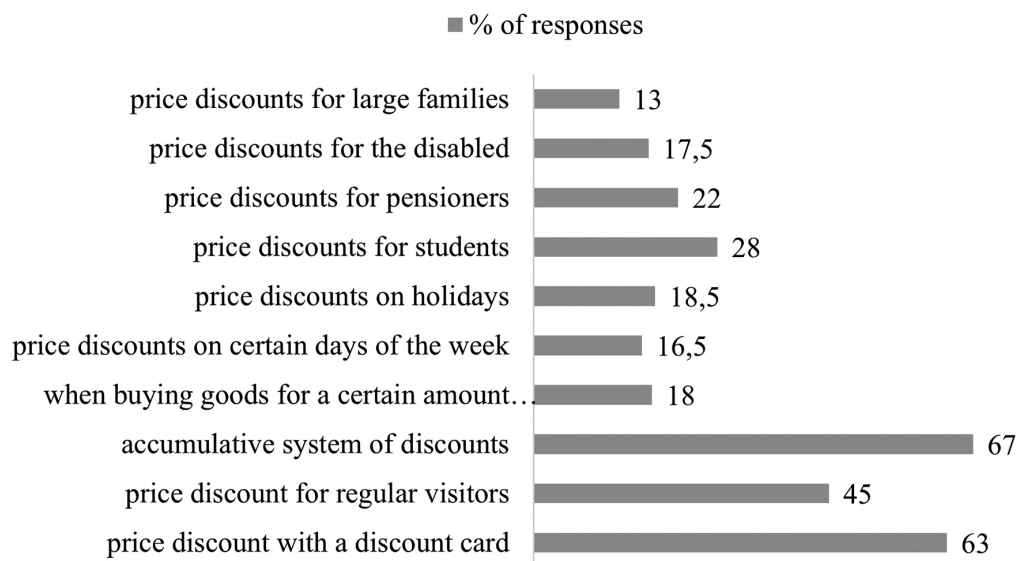
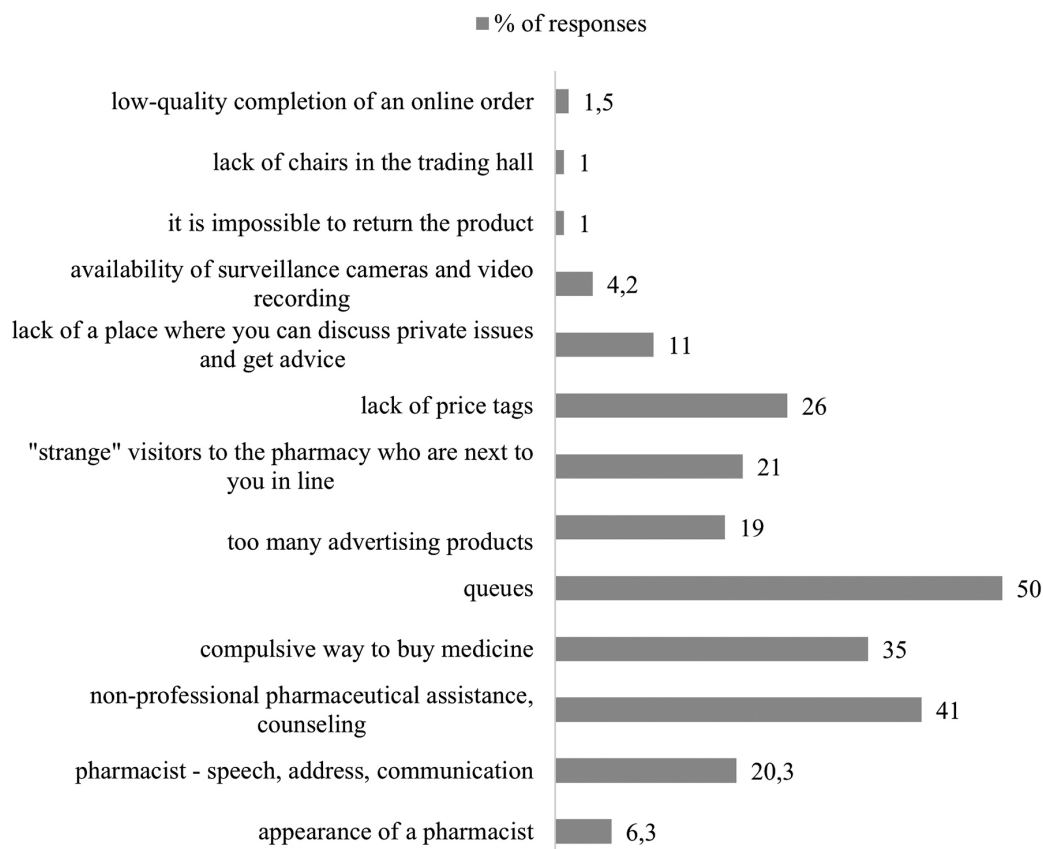
According to the results of the survey, it was established that pharmacy chains actively use various corporate loyalty programs for consumers (accumulation of monetary bonuses for the next purchase,

% discount on the next purchase, etc.) and special price discounts (for electronic ordering, purchase of promotional products, purchase of goods at a certain time, related to important company events, etc.). Personal messages (messenger, chat bots) are also available for regular visitors.

Cumulative discounts were the most attractive for consumers, price discounts for a corporate discount card and for regular visitors.

Finally, respondents were asked to indicate what causes irritation or other negative emotions when visiting a pharmacy. The analysis of the answers made it possible to determine the factors that cause the greatest negative emotions in patients when seeking pharmaceutical help (Fig. 6): queues, unprofessional pharmaceutical care, counseling and the pharmacist's intrusive manner regarding the purchase of certain drugs (corporate mandatory product offers, which affect the % of additional earnings of a pharmacist).

**Fig. 4.** Diagram of the distribution of responses of pharmacy visitors regarding sales promotion activities directed at the consumer, carried out by pharmacies

**Fig. 5.** Distribution chart of respondents' responses regarding pharmacy "promotions/price discounts" that are attractive to consumers**Fig. 6.** Diagram of the distribution of patients' opinions regarding negative points in the work of pharmacies in the provision of pharmaceutical care

## Discussion

The issues of consumer preferences regarding pharmacies and their competitive advantages in the consumer market have always been relevant both for Ukrainian pharmacy and for the pharmacy of other countries (17, 18).

However, given certain emergency situations, consumer preferences change under their pressure. Thus, in peacetime, the consumer preferences of Ukrainians were greatly influenced by drug advertising (on television, on

the Internet, in magazines (newspapers) and in transport), which encouraged manufacturers and pharmacies to spend considerable money on these events. The physical availability and price of the drug also significantly shaped the loyalty of patients to one or another pharmacy (19, 20). In addition, Ukrainian patients preferred imported medicines, considering them to be more effective, safer and of higher quality than domestic products.

In wartime, as evidenced by research data, the influence of drug advertising on consumers became much smaller. Patients' requests were



reoriented to information about the availability of drugs (in which pharmacy the drug is available, where the pharmacy is located, etc.) paying attention to their price offers. In such conditions, pharmacies should not spend money on advertising, but redirect them to building high-quality communication with regular visitors. Various activities of pharmacies to stimulate sales continue to work actively - loyalty programs for regular consumers using discount or corporate cards, promotional price discounts on certain pharmaceutical products, and the work of pharmacies under state social programs for free supply of medicines. It is precisely such actions that are most in demand among patients during the period of economic recession that occurs during the war.

Regarding the improvement of the quality of pharmaceutical service, queues at the pharmacy remain problematic issues at any time (during the martial law, the number of pharmacies and the physical availability of drugs decreased), unprofessional pharmaceutical care (due to the outflow of qualified personnel during the war), the ethics of pharmacist behavior (decrease stress resistance of pharmacists and patients during martial law), an obsessive manner of purchasing this or that drug.

## REFERENCES

1. Ramos JR, Hernanz BC. Pharmaceutical care in emergency department. *Farmacia hospitalaria* [Internet]. 2023;47(3):T97-9 [cited 2024 Feb 10]. Available from: <https://doi.org/10.1016/j.farma.2023.02.006>.
2. Cen ZF, Tang PK, Hu H, et al. Systematic literature review of adopting eHealth in pharmaceutical care during COVID-19 pandemic: recommendations for strengthening pharmacy services. *BMJ Open* [Internet]. 2022;12(11):e066246 [cited 2024 Feb 10]. Available from: <https://doi.org/10.1136/bmjopen-2022-066246>.
3. McCourt E, Singleton J, Tippet V, et al. Disaster preparedness amongst pharmacists and pharmacy students: a systematic literature review. *Int J Pharm Pract*. [Internet]. 2021;29(1):12-20 [cited 2024 Feb 10]. Available from: <https://doi.org/10.1111/ijpp.12669>.
4. Alkoudsi KT, Al-Qudah R, Basheti IA. Assessing the effectiveness of a pharmaceutical care service on the quality of life of women with polycystic ovarian syndrome living in war and non-war countries. *J Eval Clin Pract*. [Internet]. 2020;26(5):1467-77 [cited 2024 Feb 10]. Available from: <https://doi.org/10.1111/jep.13310>.
5. Pashkov V, Soloviov O, Harkusha A. Legal characteristics of pharmaceutical activity under the emergency conditions: pandemic and war. *Wiad Lek*. [Internet]. 2022;75(9 pt 2):2286-92 [cited 2024 Feb 10]. Available from: <https://doi.org/10.36740/wlek202209219>.
6. Odukoya OK, Chui MA. E-prescribing: a focused review and new approach to addressing safety in pharmacies and primary care. *Res Social Adm Pharm*. [Internet]. 2013;9(6):996-03 [cited 2024 Feb 10]. Available from: <https://doi.org/10.1016/j.sapharm.2012.09.004>.
7. Coventry PA, Meader N, Melton H, et al. Psychological and pharmacological interventions for posttraumatic stress disorder and comorbid mental health problems following complex traumatic events: Systematic review and component network meta-analysis. *PLoS Med*. [Internet]. 2020;17(8):e1003262 [cited 2024 Feb 10]. Available from: <https://doi.org/10.1371/journal.pmed.1003262>.
8. Amariles P, Ledezma-Morales M, Salazar-Ospina A, et al. Pharmacist's Role and Pharmaceutical Care During the COVID-19 Pandemic. *Adv Exp Med Biol*. [Internet]. 2021;1318:605-22 [cited 2024 Feb 10]. Available from: [https://doi.org/10.1007/978-3-030-63761-3\\_33](https://doi.org/10.1007/978-3-030-63761-3_33).
9. Zaliska O, Oleshchuk O, Forman R, et al. Health impacts of the Russian invasion in Ukraine: need for global health action. *The Lancet*. [Internet]. 2022;399(10334):1450-52 [cited 2024 Feb 10]. Available from: [https://doi.org/10.1016/s0140-6736\(22\)00615-8](https://doi.org/10.1016/s0140-6736(22)00615-8).
10. UNHCR. Ukraine situation. UNHCR's 2024 plans and financial requirements. In: *The UNHCR Ukraine*. [Internet]. [cited 2024 Feb 19]. Available from: <https://www.unhcr.org/ua/wp-content/uploads/sites/38/2024/01/UNHCR-Ukraine-Situation-Appeal-2024.pdf>
11. Ministry of Finance. Inflation Index. In: Ministry of Finance. [Internet]. [cited 2024 Feb 10]. Available from: <https://index.minfin.com.ua/economy/index/inflation/2023/>
12. Ministry of Finance. Archive of exchange rates. In: Ministry of Finance. [Internet]. [cited 2024 Feb 10]. Available from: <https://index.minfin.com.ua/exchange/archive/2023-12-31/>
13. Verkhovna Rada of Ukraine. On medicines. Law of Ukraine No. 2469-IX. In: *Legislation of Ukraine*. [Internet]. 2022 Jul 28. [cited 2024 Feb 10]. Available from: <https://zakon.rada.gov.ua/laws/show/en/2469-20?lang=en#Text>
14. Verkhovna Rada of Ukraine. On Advertising. Law of Ukraine No. 270/96-BP. In: *Legislation of Ukraine*. [Internet]. 1996 Jul 3. [cited 2024 Feb 10]. Available from: <https://zakon.rada.gov.ua/laws/show/270/96-%D0%B2%D1%80?lang=en#Text>
15. Cabinet of Ministers of Ukraine. On the approval of the Licensing conditions for the implementation of economic activities for the production of medicinal products, wholesale and retail trade of medicinal products No. 929. Resolution of the Cabinet of Ministers of Ukraine; Terms, Typical Form, Statement, Description, Requirements. In: *Legislation of Ukraine*. [Internet]. 2016 Nov. 30. [cited 2024 Feb 10]. Available from: <https://zakon.rada.gov.ua/laws/show/929-2016-%D0%BF?lang=en#Text>
16. World Health Organization. Joint FIP/WHO guidelines on good pharmacy practice: standards for quality of pharmacy services. In: World Health Organization. [Internet]. [cited 2024 Feb 10]. Available from: <https://www.who.int/docs/default-source/medicines/norms-and-standards/guidelines/distribution/trs961-annex8-fipwhoguidelinesgood-pharmacypractice.pdf>
17. Kang J, Rhew K, Oh JM, et. al. Satisfaction and expressed needs of pharmaceutical care services and challenges recognized by patients in South Korea. *Patient Prefer Adherence* [Internet]. 2017;11:1381-88 [cited 2024 Feb 10]. Available from: doi: 10.2147/PPA.S141562.
18. Popova I. Assessment of the Competitive Advantages of Pharmacy Chains in Ukraine. *Modern Economics* [Internet]. 2022;31(1):104-12 [cited 2024 Feb 10]. Available from: [https://doi.org/10.31521/modecon.v31\(2022\)-15](https://doi.org/10.31521/modecon.v31(2022)-15).
19. Гладкова О, Братішко Ю, Деренська Я. Конкурентні переваги аптечних закладів та управління ними. *Економіка та суспільство* [Internet]. 2022;(35) [cited 2024 Feb 10]. Available from: <https://doi.org/10.32782/2524-0072/2022-35-22>.
20. Tkachenko N, Ryzhov O, Chervonenko N, et. al. Comparative analysis among Ukrainian and polish consumers' attitude to pharmacies and preferences regarding their choice. *Azerbaijan Pharmaceutical & Pharmacotherapy Journal* [Internet]. 2022;22(1):35-41 [cited 2024 Feb 10]. Available from: <http://dspace.zsmu.edu.ua/bitstream/123456789/17357/1/article%20-%20N.%20Tkachenko.pdf>

## Conclusions

Conducted research of the marketing communications system's elements influence on the consumer preferences of Ukrainians in the conditions of war allowed us to identify specific features compared to peacetime: reducing the influence of pharmacy advertising on the process of choosing medicines, strengthening the role of such a tool as „sales promotion“ due to personalized information communications, loyalty programs and price discounts, as well as increasing the activity of pharmacies in the online space.

This showed the need to focus the attention of management (appropriate management decisions) and resources on building clear communication links with patients using digital technologies of an informational and reference nature.

In addition, in order to increase the physical availability of drugs, it is necessary to activate the risk management of the product range of the pharmacy, and to increase the economic availability of pharmaceutical products and increase sales, it is necessary to apply various types of discounts, loyalty programs and merchandising elements.