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Pharmaceutical service as a factor of the responsiveness of a pharmacy organization

I.M. Razdorskaya[1], I.A. Zanina[2]

[1]Kursk State Medical University;

3, Karl Marx St., Kursk 305041, Russian Federation;

[2]N.N. Burdenko Voronezh State Medical University;

10, Studencheskaya St., Voronezh 394036, Russian Federation

INFORMATION ABOUT THE AUTHORS

Inna M. Razdorskaya – the Head of the Department of Pharmaceutical Marketing and Management, Kursk State Medica University (KSMU), Doctor of Pharmaceutical Sciences, Professor. Tel.: +7 (903) 874-29-96. E-mail: kafedrauehf@yandex.ru

Irina A. Zanina – Associate Professor of the Department of Organization of Pharmaceutical Business, Clinical Pharmacology and Pharmacognosy, N.N. Burdenko Voronezh State Medical University, Candidate of Pharmaceutical Sciences, Associate Professor. Tel.+7(980) 342-70-66.E-mail: irin-zanina@yandex.ru

SUMMARY

Introduction. Pharmaceutical services in modern pharmacy business should be combined not only with commercial price incentives, but also with non-pharmaceutical circumstances of their provision. The concept of «responsiveness of the health system» has been proposed by the World Health Organization to assess the response of the system to the non-medical expectations of the population. However, studies of pharmacy responsiveness to non-pharmaceutical customers' expectations are virtually absent.

Objective: to develop criteria for assessing the responsiveness of pharmacy organizations (POs) and the methodology of its study and measurement.

Material and methods. The investigation material was 200 questionnaires filled out by city hospital patients and the results of traffic of 14 pharmacies in Kursk. Statistical, sociological methods, exit polls, and cartographic analysis were used.

Results. The concept of «responsiveness of a pharmacy organization» was defined, which characterizes the non-monetary aspects of the work of POs, that is to say, the methods of customer interaction. An experiment was carried out to confirm the importance of the responsiveness of POs to its attendance. The paper gives the results of a comparative analysis of the number of patients who plan to purchase and actually purchase drugs in pharmacies. It confirms the importance of the responsiveness of a pharmacy to the decision-making by a customer to choose a pharmacy to purchase a medicine. The pharmacy attendance ratio is proposed to measure the responsiveness of a pharmacy.

Conclusion. In addition to the existing health indicators of the responsiveness to non-medical expectations of the population, quantitative indicators are offered for rapid assessment of the responsiveness of POs. The responsiveness of the pharmacy system is a tool to assess the social utility of POs. The indicator can be used to comparatively analyze network pharmacies.

Key words: pharmaceutical service; responsiveness of pharmacy organization; pharmacy traffic; pharmacy attendance ratio.

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ФАРМАЦЕВТИЧЕСКАЯ УСЛУГА КАК ФАКТОР ОТЗЫВЧИВОСТИ АПТЕЧНОЙ ОРГАНИЗАЦИИ

И.М.Раздорская[1], И.А.Занина[2]

[1]Курский государственный медицинский университет; Российская Федерация, 305041, Курск, ул.К.Маркса, д.3

[2]Воронежский государственный медицинский университет им. Н.Н.Бурденко; Российская Федерация, 394036, Воронеж, ул.Студенческая, д.10

СВЕДЕНИЯ ОБ АВТОРАХ

Раздорская Инна Михайловна – заведующая кафедрой управления и экономики фармации Курского государственного медицинского университета, доктор фармацевтических наук, профессор. Тел.+7 (903) 874-29-96. E-mail:kafedrauehf@yandex.ru

Занина Ирина Александровна – доцент кафедры организации фармацевтического дела, клинической фармакологии и фармакогнозии Воронежского государственного медицинского университета им.Н.Н.Бурденко, кандидат фармацевтических наук, доцент. Тел. +7 (980) 342-70-66. E-mail: irin-zanina@ yandex.ru

РЕЗЮМЕ

Введение. Оказание фармацевтических услуг в современном аптечном бизнесе должно сочетаться не только с коммерческими ценовыми стимулами, но и с нефармацевтическими обстоятельствами их оказания. Понятие «отзывчивость системы здравоохранения» предложено Всемирной организацией здравоохранения для оценки реакции системы на немедицинские ожидания населения. Однако исследования отзывчивости аптек на нефармацевтические ожидания клиентов практически отсутствуют.

Цель исследования: разработка критериев оценки отзывчивости аптечных организаций и методологии ее исследования и измерения.

Материал и методы: материал исследования – 200 анкет пациентов городской больницы, результаты трафика 14 аптек города Курска. Использовались статистические, социологические методы, экзитпол, картографический анализ.

Результаты: сформулировано понятие «Отзывчивость аптечной организации», характеризующее немонетарные аспекты работы аптечной организации (АО), то есть приемы взаимодействия с клиентами. Проведен эксперимент, подтверждающий значимость отзывчивости АО на ее посещаемость. Представлены результаты сравнительного анализа количества пациентов, планирующих приобретение и реально приобретающих лекарственные препараты в аптеках. Подтверждена значимость отзывчивости аптеки на принятие решения клиентом о выборе аптеки для совершения покупки. Для расчета степени отзывчивости аптеки предложен показатель «коэффициент посещаемости аптеки».

Заключение. Дополнительно к существующим в здравоохранении показателям отзывчивости на немедицинские ожидания населения предложены количественные показатели для экспресс-оценки отзывчивости АО. Отзывчивость аптечной системы является инструментом оценки социальной полезности АО. Показатель можно использовать для сравнительного анализа работы сетевых аптек.

Ключевые слова: фармацевтическая услуга, отзывчивость аптечной организации, трафик аптек, коэффициент посещаемости аптеки.

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Introduction

We know that the priority of the Mankind's modern development is the transition from the industrial civilization of Modern times to the newest type of the civilization, which is conditionally called postindustrial. From the notions of this term, for our researchwe have chosen the definition of 'service civilization', that is, civilization providing a service (in the society of the recent decades in the advanced countries). It is based not much on the production of goods as material benefits, but on the provision of consumer services (and the related activities): from state and municipal, educational and medical, scientific and domestic, financial and commercial, construction and transport, to information and entertainment services.

Medical facilities and pharmacies in particular, are suitable to the marked trend of our time. However, the sales of the medicines and related products in the so-called consumer society can't simply follow its general tendencies. The responsibility for the health and life of the consumers of pharmaceutical services requires the stricter standards for the pharmacy's sales than those acceptable in the rest of the consumer segments. However, the control of the state and the public over this branch of business should not bring the pharmacies back to the sphere of the state distribution. The experience of Soviet-type socialism has led the pharmaceutical business to the chronic shortage of complex drugs and their profiteering. The sales of the pharmaceutical products in the civilized conditions combine commercial and price incentives with the seemingly intangible, but also objective factors. Our research is about them.

The choice by the population of the supplier for the provision of pharmaceutical services among the different pharmacies is a complex process due to both their high concentration in the pharmaceutical market, the price (discount) policy actively used by the pharmacies, and the other conditions (their location, design and layout of the retail space, representation in the Internet, family tradition or personal habit to purchase the drugs). For effective struggle for a consumer,it is not always effective to use only the price policy definitely limited by the competitors' actions, and the demands of the customers picky about the quality of services. There is a need to analyze not only the satisfaction of the pharmacy's customers with the actual pharmaceutical care consisting of the population's pharmacological and pharmaceutical expectations, but also the other non-pharmacological conditions of the pharmacy's services provision. These latter determine the different degree of the pharmacy's responsiveness.

Health care system's responsiveness is an indicator proposed by the World Health Organization (WHO) to assess the health system response to the population's non-medical

expectations[1]. In the world practice there are the following criteria for assessing the responsiveness of the health care system: respect for the patients' human dignity; confidentiality; autonomy of the course of treatment taking into account the patient's participation; his informed consent to the treatment of a certain type; a doctor's communicative skills; appropriate conditions and the time of delivery (efficiency) of medical care; access to the social support network; free choice of the medical services provider; general attitude of the medical institution to the client[2].

The responsiveness indicator can be used to assess the performance of the health facilities and the specific actions of health care workers. It testifies to the character of personal relationships between the patient and the medical institution, its personnel, that is, the doctor, nurse, administrative and technical staff; it determines the level of requirements of patients, determined by the conditions in which the citizens of the country live [3,4].

As for the pharmaceutical system, which is an important part of the health care system, the research of its responsiveness to the population's non-pharmaceutical expectations is practically absent.

Traditionally, monitoring of the pharmacy system's responsiveness (referred to as customer satisfaction with the provision of pharmaceutical care) is reduced to the analysis of the assortment of drugs in the pharmacy. However, the assortment at the pharmacy currently does not usually represent a problem of accessibility for the population due to the large number of suppliers of drugs to the pharmacies, and even more, it does not cover the level of responsiveness.

In contrast, the high degree of economic factors' influence on the pharmacy's welfare and each employee's salary significantly hinders the phenomenon of the pharmaceutical system responsiveness. The pharmaceutical system as the integral part of health care has gone beyond the state ownership and represents a classic consumer market. Currently, retail is dominated by private and municipal property. The pharmaceutical system has been operating since the early 1990s on the basis of self-sufficiency and self-financing principles. The flourishing of these principles took place in the years 2000-2010. Therefore, the pharmacy's responsiveness has its own specifics and complements the criteria peculiar to health care.

The degree of responsiveness of the pharmaceutical system and the elements of its responsiveness are associated not only with economic characteristics, but also with the ideas postulated by the theory of behavioral and cognitive economics. [5,6].

The aim of the research is to work out the criteria for assessing the responsiveness of the pharmaceutical system and the methodology of its study taking into account the peculiarities of the pharmaceutical system, and of pharmacies, in particular.

Material and methods

The objects of research are the patients of medical and pharmaceutical organizations of the city of Kursk, their consumer preferences and the traffic in the area of the pharmacies under study. For the research the following methods have been used: exit polls, map analysis, sociological methods (questionnaires, polls) and statistic method.

Results and discussion

Prior to the experiment, we had offered a hypothesis that the consumers who are sensitive to the price (it is the bulk of the visitors to the municipal polyclinic) show a desire natural for their life situation in the foreground of economic choice - to save on any purchase including that one of the drugs. It is worth explaining that it is the basic, mass, but not exhaustive contingent of consumers of medical (including pharmaceutical) services in modern Russia. These are pensioners and middle-income and low-income workers. We have assumed that only a small segment of the representatives of the so-called 'middle class', the higher-paid and financially wealthy consumers and their family members can be influenced by the other factors including the prestige of the purchase, reliability, pharmacy's reputation,quicknessof the relevant services. For this segment of consumers,the indicators of the pharmacy's responsiveness are non-price factors.

The study of consumer preferences is an attempt to understand where and when the consumer prefers to buy, what characteristics make influence on his choice of the place and time of purchase, how the pharmacy's responsiveness affects him with the different approaches to the provision of pharmaceutical services. When choosing a pharmacy as an object of making a purchase, the consumer is influenced by various factors: price (the cost of the drug, the cost of the course of treatment) and non-price ones (the pharmacy's image and its reputation, service, design of the trade area, consultations and assortment)[7,8].

We have made an attempt to formulate the concept characterizing non-monetary aspects of the pharmacy's work, the methods of interaction with the clients that is, its responsiveness.

Responsiveness of the pharmaceutical care is the response of the system to the customer expectations, not related to the professional competences typical for the pharmacy (the knowledge in the field of pharmacology, pharmacotherapy, drug preparation technology, etc.). That is, the subject of the research (responsiveness) is a product of intellectual labor,the pharmacy's human and client capital, which is not directly related to the drugs and pharmaceutical knowledge.

In September 2017, we made the research of the consumers' preferences when choosing a pharmacy to make a purchase. Exit poll method was used for this purpose.

While preparation for the survey, we made a cartographic analysis of the district of Soyuznaya street and the adjacent streets of the city of Kursk. The survey questionnaire consisted of the list of pharmacies in the district where Kursk city hospital № 6 is located. The list included 14 pharmacies with the explanation of their location in the area. It is the business center of one of the three administrative districts of a typical Russian metropolis of medium size (with the population of about 500,000 people). All listed pharmacies are within the walking distance for the vast majority of the patients of the hospital mentioned, located at the distance of about one kilometer, they are connected by public transport in the form of buses.

At the first stage of the research, 200 patients of Kursk city hospital № 6 (polyclinic and in-patient department, women - 58%, men - 42%), who visited the doctors and planned to buy the drugs prescribed by the doctors were interviewed.

The survey has shown that the respondents declared 'Sotsialochka' pharmacy network to be a prospective object of making a purchase with an obvious advantage (38%), followed by 'Tselitel', 'Pharmacy № 73', 'Compass', 'Zdorovye', 'Econa' pharmacies. Each of them was preferred by 7.5 % - 9.5% of the respondents. At the first moment of prescribing a drug by a doctor, the consumers behaved in accordance with the model of expected utility, that is, from the point of view of 'economic man', in which human behavior is considered to be fully rational. In this situation, the potential customer of the pharmacy is evidently affected by the image of the pharmacy with the low prices claimed by 'Sotsialochka' pharmacy network[9].

The majority of respondents are planning a visit to 'Sotsialochka' pharmacy justifying their choice with the low prices of the drugs. However, they also inform of the low level of service in the pharmacies of this network. The image of 'the pharmacies with the low prices' does not contribute to the positive reputation of these pharmacies according to the customers' opinion. According to the respondents' answers, it can be assumed that the price factors are insufficient for the final economic decisions making concerning the purchase of the drugs, despite the high sensitivity of this segment of the consumers to the prices.

Patients of Kursk city hospital № 6 have mentioned the following characteristics of the pharmacies networks that are promising to visit and buy the drugs there: they employ the specialists who are able to solve possible conflicts; the pharmacists are able to consult the customers lucidly and carefully; the pharmacists are stress-resistant to the consumers' drawbacks and even whims; those pharmacists that really love their profession, are sociable, serve the customers quickly and competently, are friendly, attentive, polite and neat generally cause trust.

We see the image of the pharmacy of the future desirable for an average Russian visitor, when the level of income and general lifestyle will allow him/her to visit not the first, not the closest to his place of residence and even not the pharmacy with the lowest prices, but to make the deal on the purchase of medicinal services with safety and dignity in response to the responsiveness of the pharmacy and its staff.

The list of the pharmacies with the qualities above mentioned (essentially non-economic) included the following pharmacies: 'Evalar', 'Pharmaceutical t raditions','Zdorovye','Compass', 'Pharmia'. The respondents have noted the high responsiveness of pharmacists who work at these pharmacies. Here it is appropriate to recall a relatively new kind of economics, behavioral, which takes into account the influence of social, cognitive and emotional factors on economic decision-making [5]. The postulates of this theory have been confirmed by the results of our field research.

The second phase of the study was conducted parallel to the first one from September to October 2017. To analyze the real reasons for the decision on the purchase of a medicine, to confirm Herbert Simon's theory of bounded rationality [9] and the results of the first phase of research, we have studied the pedestrian traffic of the six

pharmacies mentioned by the respondents, 'Evalar', 'Pharmaceutical traditions', 'Zdorovye', 'Compass', 'Pharmia', 'Sotsialochka'.

Traffic of a pharmacy is the amount of people passing close to the entrance of the pharmacy in a unit of time [10]. The optimal time for the calculation of visitor traffic has been established taking into account the schedule of the work of the clinic. These were the periods from 11 a.m. till noon and from 4 p.m. to 5 p.m.

To calculate the degree of responsiveness, we have proposed the indicator of 'pharmacy's traffic coefficient', the formula of which is presented below:

$$C_t = \frac{P_2 - P_1}{P_2},$$

where: C_t is the coefficient of traffic, that can have either positive or negative indices, P_1 is the number of people planning to visit i-pharmacy (the data of exit poll),P_2 is the number of people who went to the i-pharmacy to make a purchase (data of the traffic).

In our point of view, this term can be used to determine the pharmacy's responsiveness.

The average indicators of the traffic of each pharmacy which the visitors considered to be the most responsive and the results of the calculation of the proposed coefficient are presented in the table.

Based on the obtained data, we see a seemingly paradoxical picture. Pharmacy network 'Sotsialochka' leading in the preliminary survey about the respondents' intent to attend the pharmacy has nearly the same traffic and the ratio image, as well as the pharmacies that have received positive feedback in the additional survey (taking into account non-economic factors).

We have calculated the correlation coefficient between the total traffic volume and the calculated coefficients of the image. Its quantitative index was -0.352, which confirms our hypothesis that the pharmacy's responsiveness is no less important factor than the price incentives when consumers choose a pharmacy. The significance of the correlation coefficient was confirmed by t-criterion of Student, the calculated index of which was 30.67 at a critical value of 2,228 and at a significance level of $p<0.05$.

When choosing a pharmacy for the purchase of drugs, the consumers are guided not only by price policy, but also by their personal preferences, up to the personality of the pharmacist and the quality of service. The consumers want to satisfy their cognitive needs while maximizing the purchased product

Results of the calculation of the coefficient of the pharmacies' traffic

Number	Pharmacy's name	Traffic	Amount of people planning to visit a pharmacy (P_1) stage I	Amount of people planning to visit a pharmacy (P_2) stage II	C traffic
1	2	3	4	5	6
1	Pharmaceutical Traditions*	261	7 (3,5%)	30	0,77
2	Pharmacy №73	Nodata	16 (8%)	Nodata	
3	Garant	Nodata	0 (0%)	Nodata	
4	Zdorovye*	322	19 (9,5)	35	0,46
5	KurskPharmacy	Nodata	2 (1%)	Nodata	
6	Compass*	281	15 (7,5%)	33	0,55
7	Semeynaya	Nodata	0 (0%)	Nodata	
8	Sotsialochka	293	76 (38%)	39	-0,95
9	Farmak-apteka	Nodata	4 (20%)	Nodata	
10	Pharmacor	Nodata	7 (3,5%)	Nodata	
11	Tselitel	Nodata	17 (8,5%)	Nodata	
12	Pharmia*	276	12 (6%)	27	0,56
13	Evalar*	263	9 (4,5)	22	0,59
14	Econa	Nodata	16 (8%)	Nodata	

* marked by the visitors as having the best service

utility. There is the inclusion of psychological factors in the decision making on the purchase, especially those relating to the person's actual judgments and the pharmacists' actions to form the pharmacy's responsiveness.

Without reducing the importance of indicators characterizing the responsiveness of the health care system and agreeing with the need to regard them as the factors of responsiveness in pharmacy, we have proposed additional quantitative indicators for the express evaluation of a pharmacy's responsiveness:

- Image coefficient (formed on the basis of the study of pharmacy traffic and the results of the survey of consumers at the place of high concentration of the pharmacies about their intentions to visit a particular pharmacy);
- The results of the survey of patients of medical establishments after visiting the doctors about their intention to visit a particular pharmacy;
- The number of re-purchases for a certain period;
- The number of regular customers.

The results of the study have showed that in the process of choosing a pharmacy for the purchase of pharmaceutical goods a significant impact on the choice is made by the pharmacists' style and manner of communication, the quality of services in the pharmacy, the population's opinion on its image in general, reputation, pre- and after-sales consulting of the patients. These factors form the loyalty of visitors, change the structure of motivation and intensify the volume and frequency of purchases.

Conclusion

Thus, the clients of pharmacies involved in our research demonstrate a desire to satisfy their emotional and psychological needs in the process of purchase, but not only an absolute interest in the price of medicines suitable for them in the terms of income. Accordingly, the pharmacies taking into account the characteristics of the behavioral economics should study the consumers' personal settings and psychological aspects of decision making.

Responsiveness of the system can serve as a tool for assessing the pharmacies' social usefulness, for the formation of the image and prestige of a pharmacy as an integral part of health care. In practice, the indicator can be used for comparative analysis of the work of the pharmacy networks.

In the competition, it is necessary to use not only the specialists' professional knowledge, but also to form the responsiveness of the pharmaceutical system to the customers' needs and requirements, to take into account the peculiarities of the structure of the pharmaceutical market as a health care market.

Conflict of interest

The authors declare no conflict of interest.

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