



Research Article

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Improving the competitiveness of pharmacies by means of informational technologies

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ABSTRACT

The article presents the results of sociological research of the consumers of pharmaceutical services and the structure of the main reasons of the consumers' visiting the pharmacies. The aspects of the informational activity of the pharmacists have been analyzed. The approach to the improvement of a pharmacy's competitiveness by means of informational technologies that is the touch information terminals placed in trade area has been worked out. The unique pharmaceutical informational basis for the customers of the pharmacies and the software for the touch information terminals have been worked out.

Key words: informational technologies in a pharmacy, pharmaceutical information, pharmaceutical service.

INTRODUCTION

Nowadays at the pharmaceutical market of Russia, we observe the tendency of increasing the number of the pharmacies. According to this fact, an intense competition arises in the conditions of the competition for customers in the pharmaceutical sphere[1,2,3]. It is essential for the modern pharmacies to use different means of increasing the competitiveness, for example, implementation of consumer services standards, improving the marketing policy, usage of personal approach to the customers, improvement of the quality of providing information[4, 5,6,7]. Recently the importance of informational technologies in the pharmacies' activity has been growing: special software for ordering and sales of goods is being used; web sites of the pharmacies, systems of the search of the medicines are being made, etc.[8,9,10, 11, 12, 13]. In our opinion, widening the range of the additional services of a pharmacy for the consumers by means of the specially worked out software is actual. These services provide the improvement of a pharmacy's information activity, carrying out preliminary consulting of a patient concerning the usage, comparison and choice of a medicine or a parapharmaceutical product, giving him the ability to get the reliable and professionally provided information by means of the touch information terminal placed in a pharmacy's trade area. As a rule, the subsequent personal consulting by a pharmacist is of subject character; it is perceived by a consumer with the greater understanding and trust, causes his satisfaction and, as a result, promotes the formation of a pharmacy's customer.

The aim of this research is working out the approaches for the improvement of a pharmacy's competitiveness by means of providing the additional services by the touch information terminals placed in trade area.

The source of the data is 300 questionnaires of the consumers' poll and 122 questionnaires of the poll of the pharmacists working the pharmacy chains, such as Aptechniy dom, Aleksa-pharm, BSU pharmacy, ARTES, Nika,

Pharma Lek, Victoria Pharm(the city of Belgorod); price lists of Catren distributing pharmaceutical company; official informational sources: 'Encyclopedia of Remedies: Register of the Remedies of Russia' (2006-2013), Vidal's Reference book 'Medicines of Russia' (2006-2012), reference book 'Remedies' by M.D. Mashkovsky, reference book of the synonyms of the medicines; Analyt: Pharmacia software; Internet sources.

We have used the following methods of research: systematization, structuring, comparison, grouping, supervision, graphic, content analysis, sociological survey (questionnaires).

EXPERIMENTAL SECTION

To reach the aim of the research, the concept of the research consisting of three blocks has been worked out: research of the approaches to the improvement of the pharmacies' competitiveness; analysis of the main characteristics of the pharmacies' informational activity; improving the competitiveness using innovative informational technologies (fig. 1).

At the first stage, as a result of the theoretic study of the approaches to improving the pharmacies' competitiveness, it has been stated that the possibility of providing the qualitative information and consulting services and the additional services, especially at the basis of information technologies, plays an important part in the creating a pharmacy's favorable image.

At the second stage, the sociological research among the population of the city of Belgorod as the consumers of pharmaceutical services has been carried out. In order to achieve this aim, the questionnaire consisting of 8 blocks has been worked out: 1) social and demographical profile of a consumer; 2) aspects of the choice of the pharmacy; 3) symptoms and medical problems which are the causes of visiting the pharmacies; 4) population's awareness of the drugs; 5) factors of the choice of drugs; 6) structure of the pharmaceutical additional services; 7) aspects of providing information services in the pharmacies; 8) perspectives of using the informational technologies to optimize informational and inquiry activity.

The profile of a customer has been defined. It is mostly a woman (68%) of 20 to 30 years old (35%), working (50%) with higher education (46%) who visits a pharmacy once a week (48%).

Meanwhile, the basic factors of choosing a pharmacy are its nearest location to the place of dwelling (70%), reasonable prices (45%), high professional level of the pharmacists (43%), convenient working hours (38%), wide assortment (13%), new technologies in the field of providing the pharmaceutical services (11%), advices of the friends, relatives and advertisement (10% each). It has been stated that most of all the reasons of customers' visiting the pharmacy are catarrhal diseases (73%), headaches (66%), running nose (36%), sore throats (33%), cough (28%), high temperature (13%), nerve strain and hypovitaminosis (5% each).

Then the consumers' awareness of the remedies has been stated. Almost all the respondents need the information about the new medicines (96%). The main sources of such information according to the consumers of the pharmacies are friends, relatives (63%), pharmacists (55%), doctors (53%), Internet sources (27%), reference materials and medical encyclopedias (21%). The main factors of the choice of the medicines are price of the medicine (76%), recommendations of the medical experts (55%), doctors (41%), convenience of usage (33%) and advertisement (1%).

In the process of the research, the structure of desired additional pharmaceutical services according to the respondents' opinion has been developed. The first is a consultation of the informing pharmacist (58%), because 68% of the respondents need the additional consultation of the pharmacists after visiting a doctor, the second is blood pressure measuring (25%), the third is an individual order of the medicines (21%), the fourth is hiring the goods of a pharmaceutical assortment (16%), then go weight measuring, pharmacist consultation over the phone (8% each), information at site of the pharmacy (6%). The additional competitive advantage of a pharmacy is the opportunity of payment by plastic card (16%). Attention is paid to the fact that in 20% of the cases the patients get the consultation of the specialized doctor at a pharmacy.

Then for revealing the main reasons of the consumers' visiting the pharmacies and defining their information needs we have analyzed the visits of 500 consumers from the city of Belgorod to the BSU pharmacy from February, 2013 to March, 2014 by means of the observation method. For this research a 'List of observation' has been worked out, it includes 10 parameters of studying the visits which are combined into 3 blocks: 1) specification of the reason of a customer's visiting a pharmacy; 2) outlining the questions often asked by the consumers; 3) evaluation of the informational and consulting activity of the pharmacist from the OTC department.

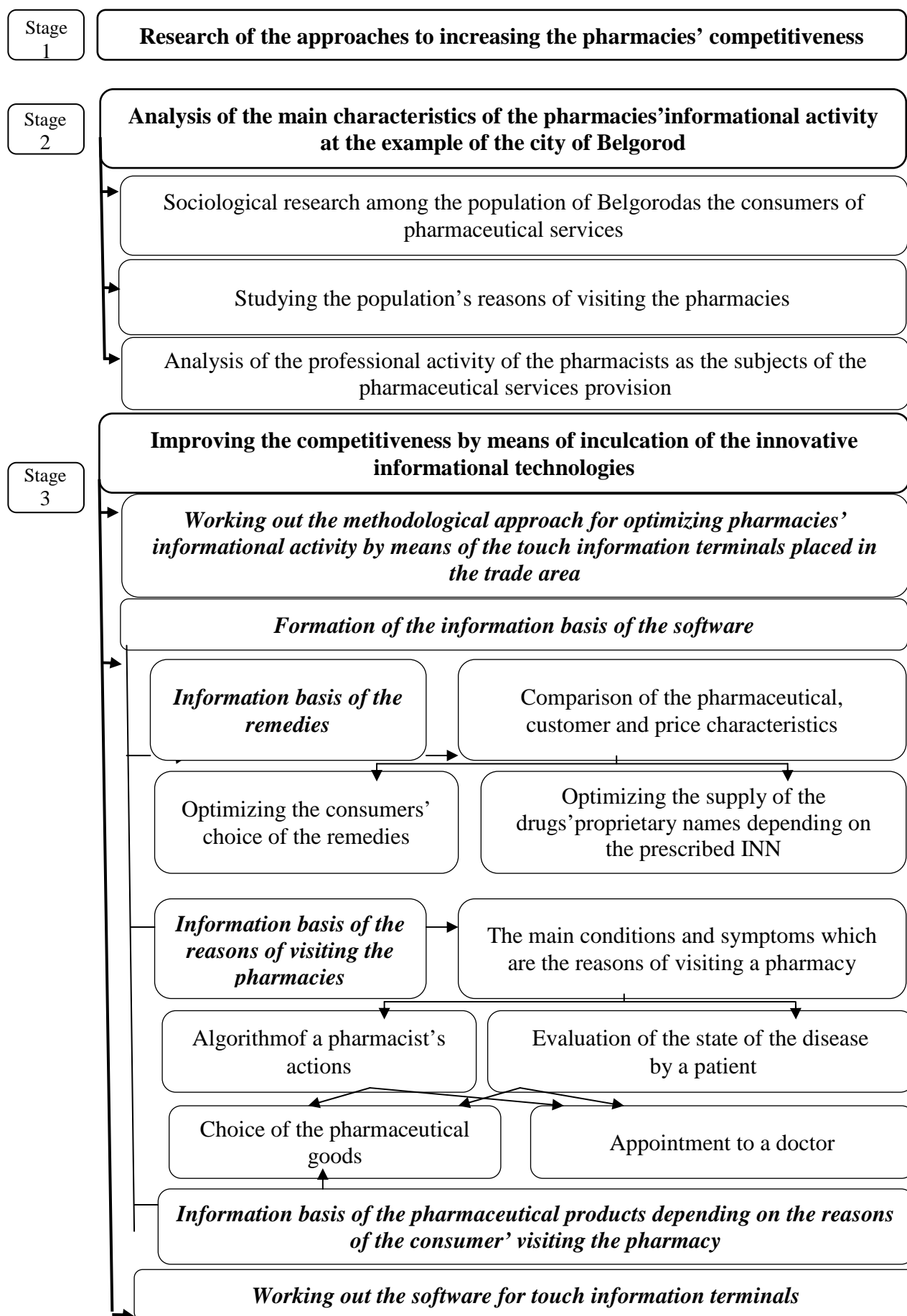


Fig. 1. The concept of the research

After processing the observation data, the structure of reasons of visiting a pharmacy by the consumers has been formed. It reflects the main groups of the diseases and symptoms. The prevailing among the stated nosologies are the diseases of the cardiovascular system (22.7 %), infectious and parasitical diseases (22.1 %), diseases of the organs of the digestive(14.8 %), respiratory (9.2 %),urogenital (6.4 %) and nervous system (5.8 %).

The greatest quantity in the structure of the patients' visiting the pharmacies are the complaints of the symptoms and problems of medical character: headaches (15.7 %), common cold (14.5 %), rhinitis and hypovitaminosis (13.3 % each), cough (7.9 %), sore throat (7,6%), skin damages (3.7 %), nerve strain (3.4 %), hypertension, heartaches, allergy (2.2 % each), high temperature, muscle and joint pain (1,7 %), diarrhea (1.5 %).

Moreover, it has been stated that some consumers come with dental, cosmetological and dermatological problems, the main of them are acne (16.7 %), xeroderma (13.3 %), darkened dental enamel (11.7 %), hair loss, dandruff and wrinkles (10 % each), callosities and increased sweating (6.7 %), slow hair growth (5 %), burns, telangiectasia and gingivitis (3.3 % each).

In the process of the research, the most intensely wanted remedies(TOP-drugs) which are taken for every symptom or medical problem have been found out. They are of five pharmaceutical categories: nasal medications, antiseptic drugs and antibiotics, analgesics and antipyretics, non-steroid anti-inflammatory drugs and medicines for catarrhal diseases. TOP-drugs are Theraflu (28%), Naphthyzin (16%), Strepsils (12%), Pentalgin (11%), Nurofen (10%), Tyzine spray (9%), Antigrippine, Spasmalgon (8% each), Rhinonorm (7%).

During the observation, a consulting activity of the pharmacists has been analyzed. It has been stated that the time of consulting of the patients (1-2 minutes) is not enough to provide all the information of the remedies because of the great number of consumers. This fact allows to suppose that 90.4% of the pharmacies' consumers don't get the necessary information (the method of usage and dosage, side effects, etc.)from a pharmacist.

At the basis of the questioning, the informational needs of the pharmacists have been found out. At the first place is the information about the remedies (38.5 %),the second is information of the latest changes in the sphere of the state regulation of pharmaceutical activity (32 %), then comes the data of the clinical manifestations of the diseases, approaches to pharmacotherapy and pharmacotherapeutic complexes, fake remedies (23.8 % each).

The main difficulties in the pharmacists' work have also been defined. According to the respondents' opinion, they are the necessity of increasing the knowledge of the new remedies (41 %), difficulties in communication with the patients (32 %), the problem of performing some working duties simultaneously or for a short period of time (23.8 %), and the last is a difficult task of memorizing the great amount of information (14.7 %).

Due to the lack of a pharmacist's opportunity to conduct a long conversation with the consumers, the usage of alternative informational technologies is efficient in case of the placement of touch information terminals in the trade area.

As a result of the analysis of the data of sociological survey, the ability of their usage has been evaluated and the attitude of the consumers to the implementation of the touch information terminals into the activity of the pharmacies has been defined. According to45% of respondents, touch information terminals can be convenient to get the exact information about drugs and diseases(68%), the prices for drugs and other services (50%). Moreover, there are other advantages of their usage: anonymity of information's delivery, the lack of queues (10% each) and the lack of the probability of arising of the conflict situations (8%).

The aim of the next stage of the research has been the development of the unique informational basis for touch information terminals which consists of the 3 blocks: 1) data basis for comparison of the trade names of drugs according to the pharmaceutical, customer and price characteristics; 2) data basis for prevention of self-medication; 3) data basis of the pharmaceutical assortment of goods for the elimination of the main problems of the customers' visiting the pharmacy.

The usage of data basis for comparison of the drugs in the limits of one international nonproprietary name (INN) has allowed to make a consumer's choice of the trade name (TN) depending on his/her preferences of one of the criteria (manufacturer, price, form and others). It gives the opportunity to inform the pharmacies' customers of the availability of different proprietary names for one International Nonproprietary Name (INN)that is the most important fact in the conditions of law amendments about the principles of the prescription of the medicines. According to the new requirements, a doctor prescribes a medicine according to INN, and a pharmacist offers a patient the remedies containing the necessary active substance with the different trade names.

Sick people often come to a pharmacy to get the consultation because of the diseases that have different symptoms. It makes the pharmacists face the embarrassing situation when they are asked to recommend the drugs for treating the unidentified nosologies. To eliminate such situations the informational basis for prevention of self-medication has been formed. It allows a patient to choose the main symptom or a medical problem that has brought him to the pharmacy; to see what diseases or conditions can cause it; to evaluate the risk of untimely visiting a doctor and self-medication; to form the subsequent behavior. For example, 18 reasons can correspond to the symptom of a running nose. Such approach allows the patients to realize the severity of the symptoms and visit the doctor obligatorily.

For the cases of consumers' visiting the pharmacies for OTC-drugs or with problems not demanding the immediate consulting a doctor which can be eliminated by a patient (hair, face, nail care and others) the information basis of the OTC-drugs and other pharmaceutical goods has been formed. It allows the consumers to choose the goods themselves according to their preferences.

RESULTS AND DISCUSSION

Thus, using the created data basis the unique software has been worked out.

The software allows to increase the consumers' pharmaceutical literacy and a pharmacy's informational activity, to carry out the preliminary consulting of the consumers, to acquire the reliable and professionally provided information of the remedies by means of the touch information terminals, to shorten the queue to the pharmacists, to decrease the possibility of self-medication, to form a positive opinion of a pharmacy and the wish to visit it again.

In the process of the research, it has been stated that the visitors of the pharmacies need the widened range of consulting services because of the information deficit after a doctor's consultation. However, the busyness of the pharmacists and the lack of the guarantee of anonymousness demand the implementation of informational off-contact technologies adapted to the pharmaceutical sphere. The usage of these technologies leads to creation of a pharmacy's positive image, the emergence of the regular customers and the positive image of a pharmacy, increasing its turnover and, as a result, the increasing of a pharmacy's competitiveness at the pharmaceutical market.

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