Analysis of the Turnover of Herbal Medicines in Pharmacy Organizations and Directions for Increasing Sales of Pharmaceutical Products

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Authors’ contributions

This work was carried out in collaboration among all authors. Author NST designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors HA and IMK managed the analyses of the study. Authors MVG, IGS and YP managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

The article analyzes the turnover of herbal products offered by a single pharmacy organization and identifies ways to increase sales of this group of pharmaceutical products. Every year, the popularity of herbal medicines sold in pharmacy chains among the population increases, this is due to the fact that the population in general is gradually moving to a healthy lifestyle nowadays and people prefer to use natural medicines recommended by pharmacists to restore their health.

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Considering the need to popularize phytoproducts among the population, the author analyzes the turnover of this group of products, identifies the most popular names of pharmaceutical products in this group and comes to the following conclusion: the largest number of herbal products is represented by the company "Pharmatsvet" (62%), the company "Evalar" is represented by 38%. The authors found that the pharmacy "Pharmacy for the Thrifty" the largest number of implemented drugs (Q1 in the amount of RUB 1239288, in the 2nd quarter in the amount of RUB 1345320) and the lowest sold of mineral waters (in the 1st quarter of selling amounted to RUB 76321, in the 2nd quarter 54321 RUB). On the basis of the analysis of the structure of the range of pharmacy "Pharmacy for the Thrifty" it is established that in the 1st quarter, the largest number were drugs from 39.04%, in the second quarter this figure had risen to 40.9%.

A study of the range of herbal products in the pharmacy "Pharmacy for the Thrifty" showed that the products of the company "Evalar" have a smaller share in the range. This is due to the fact that the cost of herbal teas of this company is much higher than similar herbal teas of the company "Farmatsvet". Evalar also publishes its own magazine, phytodoctor, which is distributed free of charge. In each magazine, you can find a tea bag that this company produces. At any purchase, each buyer is issued such a magazine, the pharmacist should invite customers to pay attention to the magazine page, where there is a sample of a particular herbal tea and talk about the advantages of Evalar products.

Keywords: Pharmacy chain; pharmaceutical products of plant origin; turnover; sales volume; sales promotion.

1. INTRODUCTION

Herbal preparations have recently become more and more popular among consumers [1-3]. The reason for this is that various herbs and herbal teas give the same health effect as synthetic medicines, but they cause less harm to the body, since they often do not have any side effects at all [4-6]. In addition, herbal products are sold in pharmacies without a prescription, which confirms their relative safety for the consumer, provided that the latter complies with the recommendations indicated on the packaging [7-9].

Taking into account the loyal attitude of consumers of this group of medicines, it should be noted that with proper advertising and sales promotion, a pharmacy organization can get additional profit from increasing the volume of sales of medicinal products by expanding their range and attracting customers [10-12]. The purpose of the study is to analyze the turnover of herbal products in the dynamics of 3 years and determine the direction of increasing sales of this group of products on the example of a specific pharmacy.

2. OBJECT AND METHODS OF RESEARCH

The object of research in the work was the pharmacy organization "Pharmacy for the Thrifty", located at the address: Belgorod, Boulevard of Youth, 35B. Analytical, computational and graphical and comparative methods were used in the work. A study was conducted on groups of pharmacy products, such as herbal teas, herbal medicines, mineral waters, and herbal collections.

3. RESULTS AND DISCUSSION

Pharmacy organization "Pharmacy for the Thrifty" is located at the address: Belgorod, Bulvar Yunosti, 35B.

The pharmacy is open 7 days a week from 9 a.m. to 9 p.m. The pharmacy sells medicines without prescriptions and according to prescription. The pharmacy's assortment consists of the following products: without a prescription and prescription medicines, parapharmaceutical products, medical cosmetics, products for the care of the elderly, herbal teas and herbal preparations.

This pharmacy organization closely cooperates with Evalar and Pharmatsvet, the leaders of the Russian pharmaceutical market in the production of herbal preparations and herbal teas. Fig. 1 shows the layout of herbal teas in the pharmacy "Pharmacy for the Thrifty" by companies "Evalar" and "Pharmatsvet".

Table 1 shows the range of herbal products that are available in the pharmacy "Pharmacy for the Thrifty".
Fig. 1. Display of herbal teas in the pharmacy "Pharmacy for the Thrifty"

This type of goods is in great demand among buyers of Belgorod

Table 1. Assortment of herbal medicines in the pharmacy "Pharmacy for the Thrifty"

| №  | Name of the goods                                      | Administration                                                                 | Number of packages in the pharmacy |
|----|--------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------|
| 1. | Herbal teas                                            |                                                                               |                                   |
| 1.1| Evalar BIO tea against cough                          | It improves the functional state of the respiratory tract when dry and wet coughs | 5                                 |
| 1.2| Evalar BIO tea, gynecological herbs                    | It helps to improve the functional state of the female urogenital system      | 4                                 |
| 1.3| Evalar BIO tea, hypotensive herbs                      | It helps maintain normal blood pressure                                       | 8                                 |
| 1.4| Evalar BIO tea for appetite control                    | It will help to keep your appetite under control and quickly eliminate the feeling of hunger | 3                                 |
| 1.5| Evalar BIO tea for cleansing                           | It has a mild diuretic and relaxing effect                                     | 5                                 |
| 1.6| Evalar BIO tea for the liver                           | It helps to normalize the liver and has a mild choleretic effect              | 4                                 |
| 1.7| Evalar BIO tea for kidneys                             | It helps to improve the functional state of the kidneys and urinary system    | 7                                 |
| 1.8| Evalar BIO tea for the heart and blood vessels         | It helps to improve the functional state of the cardiovascular system         | 10                                |
| 1.9| Evalar BIO tea, Mastophyt                              | It helps to maintain breast health                                            | 4                                 |
| 1.10| Evalar BIO tea when increased uric acid content        | It helps to remove uric acid salts and prevents their deposition in the joints | 2                                 |
| 1.11| Evalar BIO soothing evening tea                        | It helps to normalize the emotional state after a working day and prepares the body for sleep | 10                                |
| In total |                                              |                                                                               | 62                                |
| 2. | Mono-preparations                                     |                                                                               |                                   |
| 2.1 | *Althaea officinalis* (Farmatsvet)                     | An infusion of *Althaea officinalis* roots is often prescribed against coughing during diseases of the respiratory system. | 5                                 |
| 2.2 | *Crataegi fructus* (Farmacvet)                         | Infusion of *Crataegi fructus* has cardiotonic and spasmyolytic effects, moderately lowers blood pressure, calms the nervous system | 6                                 |
| 2.3 | *Rhizomata cum radicibus Valerianae* (Farmacvet)       | An infusion of its rhizomes with roots is taken against nervous tension, insomnia, vascular spasms and migraines | 5                                 |
| №   | Name of the goods                              | Administration                                                                                                                                                                                                 | Number of packages in the pharmacy |
|-----|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 2.4 | *Folium Vitis idaeae* (Farmacvet)             | *Folium Vitis idaeae* infusion is usually prescribed in complex therapy against inflammation of the bladder and urinary tract, as well as in other situations where a pronounced diuretic effect is required against the background of the inflammatory process. | 3                                 |
| 2.5 | *Cortex Quercus* (Farmacvet)                  | Decoction of *Cortex Quercus* is used locally for rinsing the mouth (for gingivitis and stomatitis), and the throat (for tonsillitis and pharyngitis).                                                             | 5                                 |
| 2.6 | *Hypericum* (Farmacvet)                       | An infusion of this medicinal herb is prescribed in the form of rinses for inflammation of the gums and oral mucosa – during the treatment of gingivitis, stomatitis, etc. | 4                                 |
| 2.7 | *Zeae maydis styli cum stigmatis* (Farmacvet) | Decoction of *Zeae maydis styli cum stigmatis* is prescribed for both liver diseases and kidney disorders: cholecystitis, hepatitis, biliary dyskinesia, "renal" edema and some other conditions. | 4                                 |
| 2.8 | *Linum usitatissimum* (Farmacvet)             | *Linum usitatissimum* seeds are used in the treatment of various diseases of the gastrointestinal tract – peptic ulcer, colitis, enterocolitis, esophageal inflammation | 5                                 |
| 2.9 | *Melissae officinalis herba* (Farmacvet)       | Indications for use: - increased emotional excitability; - irritability; - sleep disorders (sleep disorders, early awakening)                                                                                       | 6                                 |
| 2.10| *Artemisia absinthium* (Farmacvet)            | Infusion of *Artemisia absinthium* increases the secretion of gastric juice, increases appetite, improves digestion, has choleretic properties.                                                                 | 3                                 |
| 2.11| «pyrethri» (Farmacvet)                        | An infusion of «pyrethri» is drunk against stomach and intestinal diseases - gastritis, peptic ulcer, enteritis, colitis, flatulence, diarrhea. It helps to cope with spasms, reduce fermentation, fights germs and inflammation. | 2                                 |
| 2.12| *Achillea millefolium* (Farmacvet)            | The infusion of this medicinal herb has hemostatic, antispasmodic and anti-inflammatory effects.                                                                                                                | 6                                 |
|     | In total                                      |                                                                                                                                            | 54                                |
| 3.  | Herbal collections                            |                                                                                                                                            |                                    |
| 3.1 | Brusniver (Farmatsvet)                        | Broad-spectrum antimicrobial herbal remedy is active against Staphylococcus, Escherichia coli, Pseudomonas aeruginosa                                                                                           | 2                                 |
| 3.2 | Breast collection # 4 (Farmacvet)             | The herbal can help during the complex treatment of bronchitis, tracheitis and other respiratory diseases with difficult-to-separate sputum.                                                               | 13                                |
| 3.3 | Gastric collection # 3 (Pharmacvet)           | During diseases of the gastrointestinal tract, accompanied by pain and spasms, a decoction of Gastric collection No. 3 is indicated for use.                                                             | 5                                 |
| 3.4 | Phytogastrol-gastrointestinal collection (Tsvetfarma) | Phytogastrol is prescribed during the treatment of gastritis and gastric ulcer and duodenal ulcers, for colitis and chronic hepatitis.                                                                       | 6                                 |
| №  | Name of the goods          | Administration                                                                 | Number of packages in the pharmacy |
|----|---------------------------|--------------------------------------------------------------------------------|-----------------------------------|
| 3.5| Phytonefrol (Farmacvet)   | It is used for the treatment of infectious and inflammatory diseases of the kidneys and urinary tract: cystitis, urethritis, pyelonephritis, etc. | 11                                |
| 3.6| Elekasol (Farmatsvet)     | Elecasol is used externally and internally for respiratory, dental, gastrointestinal diseases, skin diseases, gynecology and urology. | 3                                 |

| Subtotal | 40 |
| Total    | 156 |

Thus, in the assortment of the pharmacy organization "Pharmacy for the Thrifty" there are 156 names of herbal preparations.

Fig. 2 shows the structure of the assortment of herbal products that are available in the sale of pharmacies "Pharmacy for the Thrifty".

As shown in Fig. 2, in the structure of herbal preparations, the largest share is made up of herbal teas-40%; monopreparations - 35%; herbal collections-25%.

As can be seen in Table 1, the pharmacy organization sells herbal products from two manufacturers-Evalar and Pharmatsvet. Fig. 3 shows the structure of manufacturers of herbal medicines that are sold in the pharmacy "Pharmacy for the Thrifty".

As can be seen in Fig. 3, at the pharmacy, "Pharmacy for the Thrifty" the largest number of medicines of plant origin is represented by "Farmatsvet" (62%), the company percentage of medicines "Evalar" is 38%.

Let's analyze sales of medicinal plant raw materials in the "Pharmacy for the Thrifty" for the 1st and 2nd quarters of 2020 (Table 2).

Fig. 4 shows the structure of sales of herbal products for the 1st and 2nd quarters of 2020.

| Group of medicinal plant raw | 1 quarter of 2020 | 2 quarter of 2020 | Deviation, RUB. |
|------------------------------|-------------------|-------------------|-----------------|
| Monopreparations             | 198198            | 199281            | 1083            |
| Herbal collections           | 145948            | 166721            | 20773           |
| Herbal tea                   | 120191            | 134932            | 14741           |
| Subtotal                     | 464337            | 500934            | 36597           |
Fig. 3. Structure of manufacturers of herbal medicinal products, presented in the pharmacy, "Pharmacy for the Thrifty"

Fig. 4. Structure of sales of herbal products for the 1st and 2nd quarters of 2020

The study (Table 2 and Fig. 6) showed that in the 1st quarter of 2020 monotherapies were sold in the amount of RUB 198,198, in the 2nd quarter of 2020 in the amount of RUB 19,929,1 (an increase of RUB 10,83), in the 1st quarter of 2020 they were sold in the amount of RUB 14,594,8, in the 2nd quarter of 2020 in the amount of RUB 16,672,1 (an increase of RUB 20,773). In 1 quarter 2020 herbal teas were sold in the amount of RUB 120,201, in the 2nd quarter - in the amount of RUB 134,932, (an increase of RUB 14,741). Let's analyze the turnover of the "Pharmacy for the Thrifty" for all product groups for the 1st and 2nd quarters of 2020 (Table 3).

As shown by the study (Table 3) in the pharmacy, "Pharmacy for the Thrifty" the largest number of medicines are sold (Q1 in the amount of RUB 123,928, in the 2nd quarter in the amount of RUB 134,5320), and the lowest sold is of mineral waters (in the 1st quarter of implementation amounted to RUB 76,321, in the 2nd quarter 54,321 RUB).

Fig. 5 shows the dynamics of turnover of pharmacy products by group for the 1st and 2nd quarters of 2020. Basing on the analysis of the dynamics of turnover, we will analyze the structure of turnover of goods sold by the pharmacy "Pharmacy for Thrifty" for the 1st and 2nd quarters of 2020. The results are listed in Table 4.

Fig. 5 shows the structure of turnover of the pharmacy "Pharmacy for the Thrifty" by groups for the 1st and 2nd quarters of 2020.

Based on the structure analysis of the assortment of "Pharmacy for the Thrifty", it was found that in the 1st quarter the largest number made up medicines - 39.04%, in the second quarter this indicator increased to 40.9%.

The analysis of medicinal plant raw materials showed that in the 1st quarter its structure in the total turnover was 14.26%, and in the 2nd quarter this indicator increased to 15.23%.
Table 3. Analysis of turnover of "Pharmacy for the Thrifty" for the 1st and 2nd quarters of 2020, RUB

| Group of goods               | 1 quarter of 2020 | 2 quarter of 2020 | Deviation, rub. |
|------------------------------|-------------------|-------------------|-----------------|
| Medicines                    | 1239288           | 1345320           | -106032         |
| Medicinal plant raw materials| 464337            | 500934            | 36597           |
| Dietary supplements          | 432918            | 321811            | -111107         |
| Vitamins                     | 443923            | 487361            | 43438           |
| Medical devices              | 209181            | 298171            | 88990           |
| Cosmetics and hygiene        | 309187            | 281761            | -27426          |
| Mineral water                | 76321             | 54321             | -22000          |
| Subtotal                     | 3175155           | 3289679           | 114524          |

Fig. 5. Dynamics of sales of goods in the turnover of "Pharmacy for the Thrifty" for the 1st and 2nd quarters of 2020, RUB

Table 4. Analysis of the pharmacy turnover structure for the 1st and 2nd quarters of 2020, %

| Group of goods               | 1 quarter of 2020 | 2 quarter of 2020 | Rate of growth, % |
|------------------------------|-------------------|-------------------|-------------------|
| Medicines                    | 39,04             | 40,90             | 1,86              |
| Medicinal plant raw materials| 14,62             | 15,23             | 0,61              |
| Biologically active additives| 13,63             | 9,78              | -3,85             |
| Vitamins                     | 13,98             | 14,81             | 0,83              |
| Medical devices              | 6,59              | 9,06              | 2,47              |
| Cosmetics and hygiene        | 9,74              | 8,57              | -1,17             |
| Mineral water                | 2,40              | 1,65              | -0,75             |
| Subtotal                     | 100,0             | 100,0             | 0                 |

Biologically active additives in the structure of trade turnover in the 1st quarter amounted to 13.63%, in the 2nd quarter this indicator is decreasing and is 9.78%.

Medical preparations accounted for 6.59% of the turnover in the 1st quarter, and this indicator increased to 9.06% in the second quarter.

The category of goods "vitamins" in the structure of trade turnover in the 1st quarter of 2020 was 13.98%, in the second quarter this indicator is increasing to 14.81%.
Products of the category "cosmetics and hygiene" in the structure of trade turnover in the 1st quarter amounted to 9.74%, and in the second quarter this indicator decreases to 8.57%.

The smallest share in the assortment structure is mineral waters in Q1 this indicator was 2.40% and in the second quarter it fell to 1.65%.

A study of the range of herbal products in the pharmacy "Pharmacy for the Thrifty" showed that the products of the company "Evalar" have a smaller share in the range. This is due to the fact that the cost of herbal teas of this company is much higher than similar herbal teas of the company "Pharmatsvet".

The high cost of Evalar's herbal teas is due to the following advantages:

- 100% natural herbal teas;
- Herbs included in the composition have a pleasant taste and delicate aroma of Altai herbs;
- High microbiological frequency of teas provides an innovative soft method of processing "instant steam" on a modern French installation;
- For the best preservation of the useful properties of plants, each filter bag is packed in a multi-layer protective envelope;
- Most of the herbs that are part of teas are collected in the Altai or grown on their own plantations "Evalar" in the ecologically clean foothills of the Altai without the use of chemicals;
- Raw materials and finished products are carefully checked for radiation safety and the absence of harmful substances.

Fig. 7. Advertisement of the herbal tea of the company “Evalar”
To promote the sale of herbal products of the “Evalar” company, it is necessary to put up a poster advertising this product inside the pharmacy. An example of such a poster is shown in Fig. 7.

The company "Evalar" also publishes its own magazine "Phytodoctor" which is distributed free of charge. In every magazine, you can find a tea bag that this company produces. Fig. 8 shows an advertising move with a "sample" of tea in the magazine "Phytodoctor", produced by the company "Evalar".

At any purchase, each customer is given such a magazine, the pharmacist should invite customers to pay attention to page 25 in the magazine, where there is a tea bag and talk about the advantages of “Evalar” products.

4. CONCLUSION

Thus, the analysis of the assortment of medicinal plant raw materials in the pharmacy "Pharmacy for the Thrifty", which is located at the address: Belgorod, Bulvar Yunosti, 35B.

The pharmacy sells medicines without prescriptions and by prescription [13-15]. The pharmacy's assortment consists of the following products: Without prescription and prescription medicines, parapharmaceutical products, medical cosmetics, products for the care of the elderly, herbal teas and herbal preparations [16-18].

This pharmacy organization closely cooperates with “Evalar” and "Pharmatsvet", the leaders of the Russian pharmaceutical market in the production of herbal preparations and herbal teas [19,20].

The analysis of the structure of the assortment of drugs of plant origin that are available in the sale of pharmacies "Pharmacy for the Thrifty" showed that the largest number of drugs of plant origin is represented by the firm "Pharmatsvet" (62%), the company "Evalar" is represented by 38%.

Study on the implementation of medicines of plant origin showed that in the 1st quarter of 2020 monotherapies in the amount of RUB 198198 were sold, in the 2nd quarter of 2020 monotherapies in the amount of 199291 (an increase was 1083 RUB) were sold. In the 1st quarter of 2020 teas were sold in the amount of RUB 145948, in the 2nd quarter of 2020 in the amount of RUB 166721 (an increase of RUB 20773). In the 1 quarter of 2020 herbal teas in the amount of RUB 120201 was sold, in the 2nd quarter herbal teas in the amount of RUB 134932 was sold, (an increase of RUB 14741).

As shown by a study in pharmacy "Pharmacy for the Thrifty" the largest number of implemented medicines (the 1st quarter of the year it was sold in the amount of RUB 1239288, in the 2nd quarter in the amount of RUB 1345320) and the lowest sold of mineral waters (in the 1st quarter of implementation amounted to RUB 76321, in the 2nd quarter - 54321 RUB). Based on the analysis of the structure of the range of pharmacy "Pharmacy for the Thrifty" it was established that in the 1st quarter, the largest number were medicines -39.04%, in the second
quarter this figure had risen to 40.9%. The analysis of medicinal plant raw materials showed that in the 1st quarter its structure in the total turnover was 14.26% and in the 2nd quarter this indicator increased to 15.23%. A study of the range of herbal products in the pharmacy "Pharmacy for the Thrifty" showed that the products of the company "Evalar" have a smaller share in the range. This is due to the fact that the cost of herbal teas of this company is much higher than similar herbal teas of the company "Pharmatsvet".

To promote the sale of herbal teas of the company "Evalar", it is necessary to put up a poster advertising this product inside the pharmacy. Evalar also publishes its own magazine, phytodoctor, which is distributed free of charge. In every magazine, you can find a tea bag that this company produces.

At any purchase, each customer is given such a magazine, the pharmacist should invite customers to pay attention to page 25 in the magazine, where there is a tea bag and talk about the advantages of “Evalar” products.

DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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