Evaluation of Doctors' Satisfaction with Visits by a Medical Representative

S. A. Krivosheev, L. A. Lobuteva, O. V. Zakharova, A. V. Lobuteva

Sechenov First Moscow State Medical University, Bolshaya Pirogovskaya Street, 19/1, Moscow, Russian Federation, 119146

Abstract

Direct contacts between doctors and pharmaceutical companies through medical representatives (MRs) take a special place in the Russian pharmaceutical market. However, the Russian doctors are not completely satisfied with the MRs' visits. In this research, the ways to increase the doctors' satisfaction with MRs' specific activities in Russia have been formulated based on analysis of importance and satisfaction of doctors with MRs' specific areas of work. The research was conducted in cross-section in the central region of Russia (2017) using specially designed structured questionnaire. The representativeness of the data was ensured by the sample size (with a confidence level of 0.95 and a confidence interval of ≤0.05), which included 528 doctors. The specific items of the MRs' work in the "Importance" and "Satisfaction" have been prioritized. The quality of the content provided by the MRs is the most important for doctors and provides the maximum degree of satisfaction (weighted average scores are 9.32 and 7.90). The discrepancy between "Importance" and "Satisfaction" has been revealed by 4 out of 9 items of the MRs' work. The index of the general level of doctors' satisfaction with the MRs' activity was 0.804. The items of the MRs' work on three clusters have been systematized taking into account the variability of the relative significance level indicator (from 0.384 to 1.000). The actual satisfaction of doctors with the MRs' visits has been evaluated. The ways to eliminate collisions between the "Importance" and "Satisfaction" of doctors with the items of MRs' work have been formulated to increase the general level of doctors' satisfaction with the MRs' activity.

Keywords: doctors, medical representative, pharmaceutical companies, Russian pharmaceutical market.

INTRODUCTION

In recent years, the Russian pharmaceutical market has been experiencing a slow but steady growth trend. The slowdown in growth since the beginning of 2017 was due to the stabilization of the economy characteristic of post-crisis years. Promotion of the product on the market fulfils one of the most important tasks in the implementation of the marketing strategy of the pharmaceutical company. Despite the desire of pharmaceutical manufacturers to expand the product promotion opportunities through digital communications, direct contacts of doctors with pharmaceutical companies through medical representatives (MRs) are taking the lead.

In accordance with the regulations in force in the Russian Federation, the MRs "are not entitled to visit medical professionals during working hours at workplaces, except for in cases involving clinical trials of drugs. However, the MRs are entitled to participate (in the manner prescribed by the administration of the medical organization) in the activities of medical staff to improve their professional level or for the provision of information related to drugs' security monitoring" [1].

In the modern scientific literature, the works of leading foreign and Russian scientists are devoted to the search for ways to optimize the MRs' activities. However, despite scientific research in this field, for the doctors, the issues related to the prioritization of the importance of specific items in the MRs' work with a view to identifying the main trends for increasing the actual satisfaction of the doctors with MRs' activities remained unresolved. Due to the foregoing, the topic has been selected and the goal has been formulated.

The purpose of this study is to identify the degree of importance and the actual satisfaction of doctors with specific items of the MRs' work and formulating the priority ways to raise the overall level of the doctors' satisfaction with the MRs' activities.

MATERIALS AND METHODS

To achieve the goal, a methodical approach had been developed, which included four stages.

At the *first stage* of the research, the qualitative methods of marketing research were used *to identify the items of the MRs' work most important for doctors*: in-depth interviews. These methods allowed solving the problem of obtaining the comprehensive intelligence data about the importance of specific items of the MRs' work for doctors. The following scenario had been developed for the study. It was proposed for doctors to choose from 13 basic items of the MRs' work only the most important ones. According to the developed scenario, 10 in-depth interviews were conducted, each of which involved 1 to 3 doctors.

At the *second stage* of the research, a structured questionnaire with the two sets of questions had been developed in order *to prioritize the importance for doctors of specific items of the MRs' work*. The first set included questions, the answers to which characterized the competence of experts (doctors) who participated in the research. 528 doctors participated in the expert evaluation thereby ensuring the sample's representativeness (with a confidence level of 0.95 and a confidence interval of ≤ 0.05). The second set included questions that allowed for a quantitative assessment of specific items of the MRs' work. To this end, the doctors were asked to evaluate, according to their own view, the items of the MRs' work by two categories: the "Importance" of a specific item of the MRs' work for doctors and "Satisfaction" of doctors with the practical implementation of the relevant item of the MRs' work. The evaluation was carried out on a 10-point scale (10 points - the items of the MRs' activity most important for the doctors).

At the *third stage, the general level of doctors' satisfaction with* the MRs' activity has been evaluated. To this end, the *Satisfaction index* was calculated as the ratio of the sum of medium-weighted points on all items of the MRs' work in the "Satisfaction" category to the total largest medium-weighted points of these items in the "Importance" category.

At the *fourth stage* of the research, the items of the MRs' work in the "Importance" and "Satisfaction" categories were systematized in three clusters in order *to find ways to increase the general level of doctors' satisfaction with the MRs' activities.* The clustering was based on the variability of the relative significance factor (RSF) for the relevant items of the MRs' work. This factor was calculated as the ratio of the sum of points given by all experts for a specific item of the MRs' work, to the sum of the points of the work item with the maximum point total in the relevant categories. The first (higher) cluster included items of the MRs' work, the RSF indicator of which was more than 0.9 points (the most important for doctors or with a high degree of the doctors' satisfaction). The second cluster included work items for which the RSF value varied in the average range from 0.8 to 0.9 points. The third (inferior) cluster included items with the RSF

less than 0.8 points (the least important for doctors or the degree of doctors' satisfaction was minimal).

RESULTS

Using the in-depth interview method (10 interviews with 1-3 doctors in a group) from the basic list of 13 items, 9 *most important items of the MRs' work were selected for further analysis.* In order *to prioritize the importance for doctors of the selected items of the MRs' work*, a survey of 528 doctors (experts) was conducted. Among the experts, 81.6% were doctors and 18.4% were department heads. Every third expert (36.9%) had work experience of more than 5 years. Almost half of the doctors (44.7%) had qualification category (or a scientific degree). The value of the calculated competence ratio (0.67) indicated a sufficiently high level of competence of experts who participated in the research.

Table 1 shows the results of the experts' evaluation of the items of the MRs' work by two categories: the "Importance" of a specific item of the MRs' work for doctors and "Satisfaction" of doctors with the practical implementation of the relevant item of the MRs' work.

The average scores in Table 1 were calculated using the *arithmetic weighted average* formula. The *relative significance factors* (RSF) in Table 1 had been used to more clearly visualize the separation from other items of the most important for doctors item of the MRs' work.

It has been established that "*the depth and breadth of the MRs' basic knowledge of the information actually provided by them*" was the most important item for doctors (in the "Importance" category, the average weighted score was 9.32 and RSF was 1.000). According to doctors, it was the quality content that formed the positive attitude of doctors to the MRs and ultimately ensured their loyalty. In the doctors' opinion, the same item was maximally implemented in the MRs' practical work and ensured the maximum satisfaction of doctors (in the "Satisfaction" category the average weighted score was 7.90 and RSF was 1.000).

"Regularity and frequency of MRs' visits (Visiting activity)" was the least important item of the MRs' work for doctors (in the "Importance" category, the average weighted score was 6.13 and RSF was 0.658). According to doctors, the regularity and frequency of the MRs' visits did not necessarily require adequate and timely information support.

As noted by experts, the MRs' item of work *"Provision of souvenirs for doctors and patients"* (on the "Satisfaction" category, the weighted average score was 3.03 and RSF was 0.384) was the least practical one. The minimum degree of practical use of this item in the MRs' work was due to the existing restrictions on health care in the Russian Federation. Doctors "do not have the right to accept gifts and cash from companies involved in the production and sale of medicines" (and the companies - to give gifts, pay cash), "to receive samples of drugs from companies for delivery to patients"[1, 2].

To evaluate the overall level of doctors' satisfaction with the MRs' activity, the *Satisfaction Index* had been calculated, which was 0.804. The value of the calculated index characterized the incomplete degree of the doctors' satisfaction with the MRs' activity. Due to this, it was considered expedient to continue the research.

To solve the problem, *ways of increasing the doctors' satisfaction with the MRs' activities were formulated.* This became possible due to the systematization of the MRs' work items into three clusters, based on the variability of the RSF indicators (Table 2).

The first (higher) cluster included four items of the MRs' work, three of which were described both in the "Importance" and in the "Satisfaction" category. Such items were the following ones: *"the depth and breadth of the MRs' basic knowledge of the information actually provided by them"* (RSF was 1.000 for both categories), *"The MRs' compliance with the rules of business etiquette"* (RSF was 0.901 and 0.930), *and "High communication skills and flexibility of MRs"* (RSF was 0.941 and 0.903). The availability of the listed items of the first cluster in both categories indicated that the high importance for doctors of these items of the MRs' work corresponded to the high degree of satisfaction of doctors with the practical use of these items. Thus, in these areas of the MRs' work, the relevance of proposals was ensured, taking into account the variability of information needs of doctors, and the communication achieved its goal.

Table 1. Importance and degree of doctors' satisfaction with the items of the MRs' work

MRs' work items	Importance		Satisfaction	
	Average score	RSF	Average score	RSF
Regularity and frequency of MRs' visits (Visiting activity)	6.13	0.658	5.68	0.719
Depth and breadth of the MRs' basic knowledge (Content quality)	9.32	1.000	7.90	1.000
Possession of presentation skills by MRs	7.48	0.803	7.77	0.984
MRs' ability to adapt information (Adaptability)	7.81	0.838	7.06	0.894
MRs' compliance with the rules of business etiquette	8.40	0.901	7.35	0.930
High communication skills and flexibility of the MRs	8.77	0.941	7.13	0.903
Providing information materials for use by doctors	8.41	0.902	6.68	0.846
Provision of information materials to be transferred to patients	7.94	0.852	5.26	0.666
Providing souvenirs for doctors and patients	7.74	0.830	3.03	0.384

Table 2. Systematization of the MRs' work items in the "Importance" and "Satisfaction" categories by three clusters

MRs' work items	I	S	I	S	I	S
	> 0.9		0.8-0.9		< 0.8	
Regularity and frequency of MRs' visits (Visiting activity)	-	-	-	-	0.658	0.719
Depth and breadth of the MRs' basic knowledge (Content quality)	1.000	1.000	-	-	-	-
Possession of presentation skills by MRs	-	0.984	0.803	-	-	-
MRs' ability to adapt information (Adaptability)	-	-	0.838	0.894	-	-
MRs' compliance with the rules of business etiquette	0.901	0.930	-	-	-	-
High communication skills and flexibility of the MRs	0.941	0.903	-	-	-	-
Provision of information materials for use by doctors	0.902	-	-	0.846	-	-
Provision of information materials to be transferred to patients	-	-	0.852	-	-	0.666
Provision of souvenirs for doctors and patients	-	-	0.830	-	-	0.384

The clustering results made it possible to formulate the following statements.

The most important item of the MRs' work included in the first cluster was also *"The provision of information materials for further use by doctors as information sources"* (RSF was 0.902). However, the degree of the doctors' satisfaction with the practical implementation of this item in the MRs' work was lower (described in the second cluster, RSF was 0.846). A personified approach for verifying (detailing) the parameters of the information source that was required by a particular doctor would allow improving the MRs' work in this area.

The second cluster included four items of the MRs' work, only one of which was described in both categories ("Importance" and "Satisfaction") - *"The ability of the MRs to quickly adapt the information provided, taking into account the doctor's requirements in a specific situation"* (RSF was 0.838 and 0.894). The presence of this item of the second cluster in both categories indicated the correspondence of the degree of importance of this item for doctors and the degree of the doctors' satisfaction with its practical implementation. The item of the MRs' work *"Possession of presentation skills by MRs"* (RSF was 0.803) in the "Satisfaction" category was included in the second cluster in the "Importance" category and described in the first (highest) cluster (RSF was 0.984). Thus, the degree of the doctors' satisfaction with the scope of implementation of this trend was even higher than its significance for them.

The items of the MRs' work, which were also included in the second cluster in the "Importance" category, namely the *"Provision of information materials for subsequent transfer to patients in the form accessible for them"* and *"Provision of souvenirs for doctors and patients"* were also important for doctors (RSF was 0.852 and 0.830). However, doctors were not satisfied with the degree of practical implementation of these items in the MRs' work (both items were described in the third cluster in the "Satisfaction" category, RSF was 0.666 and 0.384).

At the same time, the absolutely low RSF indicator of the "*Provision of souvenirs for doctors and patients*" item (by "Satisfaction" category – 0.384) indicated that according to doctors this item in the MRs' work was practically not used. The current situation, as noted above, was explained by the Russian regulations in force.

Taking into account the importance for the doctors of the analyzed items of the MRs' work, it is considered to be possible to energize the MRs' activities in these areas while complying with the Russian law. For example, the provision of souvenirs to doctors, for subsequent transfer to patients: these can be notebooks with colorful tabs with diet recommended to the patient, a set of sound physical exercises, healthy lifestyle recommendations, etc.

In the third cluster, the "Importance" category included only one item of the MRs' work "Regularity and frequency of MRs' visits (Visiting activity)" (RSF was 0.658). This situation was explained by the inclusion in the analyzed list of only the most important items in the MRs' work in the first stage of the study (as noted above, 9 out of 13 basic ones). The "*Visiting activity*" item in the "Satisfaction" category was also assigned to the third cluster (RSF was 0.719). The doctors explained the low satisfaction with the implementation of this trend in practice by the desire to reduce frequent, in their opinion, MRs' visits up to 1-2 times a month when the MRs had new up-to-date information.

DISCUSSION

Russia ranks 14th in the world in terms of the size of the pharmaceutical market, where imports exceed exports 14 times. The active marketing strategy of the pharmaceutical companies to promote the product to the market can help overcoming the slowdown in the growth rate of the Russian pharmaceutical market in 2017.

Despite the willingness of the Russian and foreign pharmaceutical manufacturers to empower product promotion through digital channels, the proportion of digital communications with doctors in Russia is only about 10%. Even taking into account the possible advantages of digital marketing tools, direct contacts of doctors with pharmaceutical companies through the MRs as the traditional communication model, firmly hold their positions on the Russian pharmaceutical market.

The firm positions of the traditional communication model do not mask the problems in the sphere of relationships between the MRs and doctors. The works of leading Russian and foreign scientists were devoted to searching for effective ways to meet the information needs of doctors and to the issues of improving the MRs' activities.

Russian researchers A.T. Bychkov and A.V. Shakhov offer the original concept of a Meaningful visit with the strong trust relationship between the MRs and doctors as the foundation [3]. S.I. Paukov recommends his own tactics of working with the main target groups [4]. O.A. Gatsura, T.N. Budarina note the important social and professional role of the MR, which influences the promotion of drugs [5, 6]. E.E. Chupandina, A.Yu., Klimova, A.Ya. Yakobson, et al. analyze in detail the place of MRs in the system of marketing communications in the Russian pharmaceutical market [7-9].

The Indian researchers Anirudh Kotlo (with coauthors) note that "the work of MRs includes a lot of stress and burnout". Therefore, their research is devoted to the analysis of factors affecting the quality of life of MRs [10]. This problem is confirmed by the researchers Atif M (with coauthors) in Pakistan [11]. According to M. Bahlol (with coauthors), "the MRs' services for promotion are the most effective and in demand in Egypt" [12]. Al-Areefi M.A. (with coauthors) studies in detail the opinions of doctors on interactions with MRs in Yemen [13].

To reveal the degree of actual satisfaction of the doctors with the MRs' activity, in this scientific research, a quantitative assessment of the specific elements of the MRs' work in two categories was carried out for the first time: the "Importance" of a specific element of the MRs' work for doctors and the degree of the doctors' "Satisfaction" with the practical implementation of the relevant element of the MRs' work. In order to increase the level of doctors' satisfaction with the specific items of the MRs' work, the items have been systematized by three clusters based on the variability of the RSF indicators for the respective items of the MRs' work.

The research concluded that the item of the MRs' work "*The depth and breadth of the MRs' basic knowledge of the information actually provided by them*" included in the first (higher) cluster was the most important for doctors and was implemented in practice with the maximum degree of satisfaction (RSF indicators for both categories were 1.000). The importance of high-quality content was confirmed in the studies of other authors. O.A. Gatsura considers the MRs "as a source of pharmaceutical information for a practicing doctor" [14,15]. T.P. Lagutkina notes that "the degree of trust in the MRs and the information they provide about drugs is an extremely important factor, ultimately determining the effectiveness of their activities" [16]. T.N. Sukhanova emphasizes that doctors "assess the information provided by the MRs as relevant, however, the majority (65%) believe that information needs verification" [17].

The importance of the item of the MRs' work "*High communication skills and flexibility of the MRs*" included in the first cluster was confirmed in the studies of O.V. Yastreb, while the difference in the MRs' "professional flexibility" in different age groups was revealed [18].

The results of the research also revealed that the "*Regularity and frequency of the MRs' visits (Visiting activity)*" was least important for the doctors providing the minimum degree of satisfaction with the implementation of this trend in practice (it was included in the third - the lowest cluster - in both categories with the RSF indicators being equal to 0.658 and 0.719, respectively). Low ratings of doctors can be interpreted as follows. On the one hand, the frequency of the MRs' visits does not imply quality information support; on the other hand, it implies the desire of doctors to reduce frequent MRs' visits down to 1-2 times a month with the appearance of new information. This result also corresponds to the previous studies of other authors. The works of TN. Budarina also confirm the tendency "to shorten the time of MRs' visits" [19].

This research has also found that the "Provision of souvenirs for doctors and patients" (RSF was 0.830) was an important item of the MRs' work, included in the second cluster in the "Importance" category. However, the doctors were categorically not satisfied with the degree of practical implementation of this item of the MRs' work (it was described in the third cluster in the "Satisfaction" category with the lowest RSF - 0.384). The current situation is explained by the restrictions in force in the Russian Federation imposed on organizations that carry out drug circulation activities, when receiving (providing) gifts and money [1, 2]. It should be noted that the researchers in different countries actively study this area of the MRs' work. The work of Nabeel Khan (with coauthors) has shown that in some countries "the pharmaceutical companies tend to engage in unethical drug promotion through incentives and other advantages through their MRs" [20]. The researchers Bakhlol Mohammed M. Kh.A., Lagutkina T.P. stress out that "pharmaceutical companies make extensive use of MRs as an effective and widely used technology in Egypt, but sometimes they do not meet ethical criteria for the promotion of drugs" [21].

The research has shown that the calculated value of the Satisfaction Index (0.804) indicates an incomplete degree of overall doctors' satisfaction with the MRs' activity. No studies that confirm or disprove these satisfaction index values have been found among the studied literature.

As known, this is the first study in Russia, offering a new approach to the identification of correspondences between the importance for doctors of specific items of MRs' work and the satisfaction of doctors with the practical implementation of these trends. This study could be the basis for further research when looking for ways to maximize the relevance of the proposals taking into account the information needs of doctors in order to improve the overall level of satisfaction with the MRs' activities. The study has some limitations, which are associated with the presence of a little-time limit for doctors for detailed answers to questions of interest to researchers. To facilitate the collection of data, the study was conducted using a questionnaire, where most of questions were closed.

CONCLUSION

The most important for doctors elements of the MRs' work have been revealed. The specific items of the MRs' work in the "Importance" and "Satisfaction" categories have been prioritized. The overall satisfaction of doctors with the MRs' activities has been evaluated. The frustration has been revealed, in which the degree of doctors' satisfaction with the MRs' visits does not fully meet their expectations. The MRs' work elements by three clusters have been systematized, allowing to adapt the practical implementation of specific items of the MRs' work taking into account the individual needs of doctors. The proposed approach allowed formulating priority ways of increasing the actual satisfaction of doctors with the MRs' activities.

REFERENCES

1. Federal Law dated 12.04.2010 N 61-FZ (as amended on 28.12.2017) "On the circulation of medicines" Chapter 14.1. Article 67.1.
2. Federal Law dated 21.11.2011 N 323-FZ (as amended on 07.03.2018) "On the Fundamentals of Protection of the Public Health". Article 74.
3. Bychkov, A.T., Shakhov, A.V., *Zdravstvuyte, ya — meditsinskiy predstavitel'…* [Hello, I'm a medical representative...], Moscow 2007.
4. Paukov, S.I., *Rukovodstvo dlya meditsinskogo predstavitelya farmatsevticheskoy kompanii* [Manual for the medical representative of the pharmaceutical company], Geotar-Meditsina, Moscow 2007.
5. Gatsura, S.V., Gatsura, O.A., A physician's view of the social role of a drug representative influences the effect of drug promotion, *European Journal of Public Health* 2011, *21(1)*, 72-73.
6. Butarina, T.N., *Meditsinskiye predstaviteli kak professional'naya gruppa* [Medical representatives as a professional team], VolGMU, Volgograd 2005.
7. Chupandina, E.E., Rodivilova, A.Yu., Rol' meditsinskogo predstavitelya v sisteme prodvizheniya lekarstvennykh preparatov [The role of the medical representative in the system of promotion of medicines], *Bulletin of the Voronezh State University. Series: Chemistry. Biology. Pharmacy* 2017, *4*, 148-151.
8. Klimova, A.V., Meditsinskiy predstavitel' i yego mesto v sovremennom farmatsevticheskom biznese [Medical representative and his place in the modern pharmaceutical business], *Ekonomicheskiye i gumanitarnyye issledovaniya regionov* [Economic and humanitarian studies of the regions] 2015, *4*, 65-68.
9. Yakobson, A.Ya., Lidin, K.L., Yakobson, Yu.A., Rabota meditsinskogo predstavitelya v sisteme marketingovykh kommunikatsiy [The work of a medical representative in the marketing communications system], *Voprosy novoy ekonomiki* [Questions of the new economy] 2017, *3(43)*, 85-90.
10. Kotlo, A., Maram, A., Muragundi, P.M., Janodia, M., Ligade, V., Health Related Quality of Life among Medical Representatives, *J. Young Pharm.* 2015, *8(1)*, 18-22.
11. Atif, M., Bashir, A., Saleem, Q., Hussain, R., Scahill, S., Babar, Z.U., Health-related quality of life and depression among medical sales representatives in Pakistan, *Springerplus* 2016, *5(1)*, 1048.
12. Bakhlol M.M., Lagutkina T.P., Analiz deyatel'nosti farmatsevticheskikh kompaniy v yegipte, napravlennoy na spetsialistov [Analysis of the activities of pharmaceutical companies in Egypt, aimed at specialists], *Bulletin of Siberian Medicine* 2016, *15(1)*, 5-13. DOI: 10.20538/1682-0363-2016-1-5-13.
13. Al-Areefi, M.A., Ibrahim, M.I.M., Hassali, M.A.A., Alfadl, A.A., Perceptions of Yemeni physicians about interactions with medical representatives, *Journal of Pharmaceutical Health Services Research* 2017, *8(4)*, 255-60.
14. Gatsura, S.V., Meditsinskiy predstavitel' kak istochnik farmatsevticheskoy informatsii dlya praktikuyushchego vracha [Medical representative as a source of pharmaceutical information for a practicing physician], *Remedium* 2010, *8*, 26-9.
15. Gatsura, S.V., Khatsura, O.A., Zimina, E.V., Nekotoryye aspekty vzaimodeystviya vracha-terapevta s meditsinskim predstavitelem farmatsevticheskoy kompanii: rezul'taty oprosa [Some aspects of the interaction of a therapist with a medical representative of a pharmaceutical company: the results of a survey], *Farmateka* 2009, *19(193)*, 69-71.
16. Lagutkina, T.P., Etika vzaimootnosheniy aptechnoy organizatsii s institutom meditsinskikh predstaviteley [Ethics of the relationship between the pharmacy organization and the Institute of Medical Representatives], *Economic bulletin of pharmacy* 2003, *3*, 53-54.
17. Sukhova, T.N., *Sposoby vrachebnoy otsenki informatsii, predostavlyayemoy farmatsevticheskimi kompaniyami* [Methods of medical evaluation of information provided by pharmaceutical companies], VolGU, Volgograd 2007.
18. Yastreb, O.V., Differentsiatsiya professional'nykh kachestv spetsialistov v razlichnykh vozrastnykh gruppakh na primere meditsinskikh predstaviteley kaliningradskoy oblasti [Differentiation of professional qualities of specialists in different age groups by the example of medical representatives of the Kaliningrad region], *News of the Baltic State Academy of Fisheries Fleet: Psychological and Pedagogical Sciences* 2015, *3(33)*, 181-185.
19. Butarina, T.N., *Osnovnyye trebovaniya k professional'noy roli meditsinskogo predstavitelya* [Basic requirements for the professional role of the medical representative], VolGMU, Volgograd 2006.
20. Khan, N., Naqvi, A.A., Ahmad, R., Ahmed, F.R., McGarry, K., Fazlani, R.Y., Ahsan, M., Perceptions and Attitudes of Medical Sales Representatives (MSRs) and Prescribers Regarding Pharmaceutical Sales Promotion and Prescribing Practices in Pakistan, *J. Young Pharm.* 2016, *8(3)*, 244-50.
21. Bakhlol, M.M., Lagutkina, T.P., Analiz deyatel'nosti meditsinskikh predstaviteley v Yegipte [Analysis of the activities of medical representatives in Egypt], *Bulletin of modern clinical medicine* 2016, *9(1)*, 17-23. DOI: 10.20969/vskm.2016.9(1).17-23.