

THE CONTENT ANALYSIS OF DRUG ADVERTISEMENTS IN TWO LOCAL MEDICAL JOURNALS

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Abstract

As a communication and information channel, journals and drug advertisements in them have a significant role. However the regulation on drug advertisements may vary in countries due to the target group. Healthcare professionals, especially physicians and pharmacists are decision makers on drug-use in Turkey like in many other countries. In this respect, drug advertisements in medical journals aim to give information on drugs. Thus healthcare professionals can be more helpful for their patients if the advertisement contains scientific and unbiased information. Because of these, the content of advertisements is important for public health. In this study, the content of advertisements in two local medical journals; "JAMA Türkiye" and "Eczacı" were investigated by using content analysis. As a result, frequently used messages in advertisements were on the effectiveness of drugs. However, the lack of information about side effects, adverse effects and contraindications in drug advertisements were remarkable. Because of the missing points in drug advertisements' content, it can be stated that messages in the advertisements may not be objective. In the light of these findings both healthcare professionals and publishers of the journals should be more careful and objective while assessing drug advertisements in order to serve better for their patients.

Key words: Advertisement, Content analysis, Medical journal.

İki Medikal Yerel Dergideki İlaç Reklamlarının İçerik Analizi

Dergiler ve içerdikleri ilaç reklamları, iletişim ve bilgi kanalı olarak önem taşımaktadır. Bununla birlikte, ilaç reklamlarının hedef kitleleri ülkelerin mevzuatlarına göre değişiklik gösterebilmektedir. Pek çok ülkede olduğu gibi Türkiye'de de hekimler ve eczacılar gibi sağlık çalışanları ilaçlar konusunda karar vericilerdir. Bu bağlamda, dergilerdeki ilaç reklamları ilaçlar hakkında bilgi vermeyi amaçlamaktadır. Eğer ilaç reklamları bilimsel ve tarafsız bilgi içerirlerse sağlık personelleri hastalarına daha çok yardımcı olabilirler. Bu nedenle, reklamların içerikleri halk sağlığı açısından önem taşımaktadır. Bu çalışmada iki yerel dergi olan "JAMA Türkiye" ve "Eczacı" dergilerindeki ilaç reklamlarının içerikleri, içerik analizi ile incelenmiştir. Sonuç olarak, reklamlarda en sık kullanılan mesajın ilaçların etkililiği ile ilgili olduğu belirlenmiştir. Diğer taraftan, yan etkiler, advers etkiler ve kontrendikasyonlar hakkındaki bilgilerin eksikliği dikkat çekicidir. İlaç reklamlarındaki eksik noktalardan dolayı, reklam içeriklerinin objektif olmadığı düşünülmektedir. Bu bulgular ışığında, hastalara daha iyi hizmet verebilmek için sağlık çalışanları ve yayıncuların ilaç reklamlarını değerlendirirken daha dikkatli ve tarafsız olmaları gerekmektedir.

Anahtar kelimeler: Reklam, İçerik analizi, Medikal dergi.

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INTRODUCTION

Advertisement is a frequently used promotion mix element to introduce, remind or adopt a product and also a promotion activity for drugs. There are some features unique for drugs which make them different from other products. One is their being non-substitutable. The other one is healthcare professionals' being the decision makers for using drugs rather than patients who are the end-users. Because of these features of the drugs, drug advertisements differentiate from other products' advertisements.

The visits of sales representatives, drug advertisements in medical journals, prescribing software or mails, pharmaceutical companies' presentations and meetings are promotional activities, all aim to give information about drugs (1). However the regulation on drug advertisements may vary from country to country due to the target group (2, 3). In some countries, drug advertisements are prepared only for the healthcare professionals and in some for consumers directly. Also, drug advertisements and direct to consumer (DTC) drug advertisements are intensely discussed topics for years (4, 5). In Turkey, drug advertisements are regulated by the "Regulation on Promotional Activities of Human Medicinal Products". According to this regulation, drugs can be promoted only for healthcare professionals (6). Direct to healthcare professionals drug advertisements aim to inform them about medicinal products.

Drug advertisements contain various informing, advising, selling, providing and promoting activities (7). Drug advertisements in medical journals are one of the important parts of drug marketing. Their target groups are journal readers, in other words healthcare professionals, especially physicians (8). Thus, in many countries, only physicians can prescribe drugs. In other words physicians are the only qualified healthcare professionals those have the authority to prescribe. However advertisements aim to give information for physicians about evidence-based practices and to follow these practices (9). On the other hand in Turkey, pharmacists also have an important role on the healthcare system. Because community pharmacies are the first port for the public to counsel on various health issues. Especially ailments in minor diseases are one of the most frequently counseled issues to the community pharmacists (10). In the light of these facts, for pharmacists drug advertisements are also significant.

It is known that messages in advertisements sometimes contain information which may be misleading for consumers (11). In addition, the symbols, pictures and words transmit messages drug companies want to convey to potential prescribers. Since pictures in drug advertisements may not be sufficient to transmit messages, advertisements can be supported by several written messages (8).

Moreover, medical journals are one of the easiest channels for conveying drug advertisements to healthcare professionals (2, 12). It is indicated that the main reason of placing drug advertisements in medical journals is financing them (13, 14). It is also known that these advertisements have an impact on prescribing habits of physicians (14-17). Therefore, messages in the advertisements are of importance.

In this study, drug advertisements in two Turkish medical journals (one of them targeting the physicians, the other one targeting the community pharmacists) and their messages are investigated by using content analysis.

MATERIALS AND METHODS

Two medical journals' drug advertisements are examined in this study. The first one is the "JAMA Türkiye" which is published for the physicians. This journal is selected as it is known that "JAMA" is the most cited scientific medical journal in the world (18), "JAMA Türkiye" contains translated articles published in original JAMA. The second one is "Eczacı" which is published for the community pharmacists. "Eczacı" was selected among the others as it reaches the highest number of pharmacist readers in Turkey.

All drug advertisements published in the 2006 and 2007 issues of “JAMA Türkiye” and “Eczacı” were retrospectively examined. As the publication of “JAMA Türkiye” came to an end in the beginning of 2008 (19), only the issues of both journals’ between the years 2006 and 2007 are analyzed in terms of published drug advertisements.

These journals were obtained from the Libraries of Hacettepe, Ankara and Gazi University Faculties of Medicine and the Library of Hacettepe University Faculty of Pharmacy. For the missing issues of the journals, the first author of this study contacted with publishers and these missing issues are sent to her by regular mail.

Journal collection and drug advertisements’ photocopying process began in October 2008 and completed in April 2009.

Some journal issues had their own advertisement indices, missing indices were created by the first author. Photocopies of these drug advertisements were taken in the light of these indices. The number of allocated pages for advertisements, the number of all advertisements and drug advertisements were determined to understand the distribution of advertisements in the journals. Then, the Anatomical Therapeutic Chemical Classification System (ATC) was used to classify the drugs in advertisements.

Content analysis

As a research method, content analysis classifies the content of the communication systematically (20) . This method is used for understanding political statements, advertisements and web content frequently (21-23). With content analysis, verbal, written and other materials in messages are transformed to numerical data and then inferences are made (11). The aim of the content analysis is to explain content of messages, not to explain the effect of them (24). For this study, the frequency of the words in verbal messages is determined with content analysis in investigated medical journal advertisements.

RESULTS

Content analysis was made for 288 drug advertisements and for 62 different drugs in two journals (Table 1).

As there were no advertisements on other ATC classified drugs (Systemic hormonal preparations, excluding sex hormones and insulins; Antiparasitic products, insecticides and replekments; Sensory organs and Various), these therapeutic classes were not provided in Table 1.

The messages in analyzed advertisements were classified in two groups according to drugs’ effect and use, also their frequencies were determined (Table 2).

The drugs features about their effect are separated into five groups: Effectiveness, duration, newness, results of effect and power. *Result of effect* is the most used characteristics in advertisements (38.56 %). This is followed by *effectiveness* (15.03%), *newness* (14.38%), *power* (7.19%) and *duration* (6.53%) (Table 2).

The drugs’ features concerning their use are *safety*, *dosage*, *ease of use* and *price*. The frequency of *safety* is the highest (8.50%). The other frequencies are *ease of use* (7.19%), *dosage* (1.96%) and *price* (0.65%).

Table 1. Content analysis applied for the advertisements in two local journals.

ATC Classification	Number of Drugs	Number of Advertisements N
Alimentary tract and metabolism	14	69
Cardiovascular system	11	48
Antiinfectives for systemic use	8	43
Antineoplastic and immunomodulating agents	3	31
Genito-urinary system and sex hormones	4	26
Respiratory system	7	24
Nervous system	8	23
Musculo-skeletal system	3	8
Dermatologicals	3	4
Blood and blood forming organs	1	2
TOTAL	62	288

Table 2. The frequency of words in drug advertisements.

Features of Drugs	Word for Describing Drugs	Frequency (f _j)	Proportional Frequency
Effectiveness	Efficient	14	14/153=0.0915
	Effect	5	5/153=0.0327
	Effective	4	4/153=0.0261
	Total	23	23/153=0.1503
Duration	Quick	5	5/153=0.0327
	Original	2	2/153=0.0131
	Consistent	1	1/153=0.0065
	Long	1	1/153=0.0065
	Stable	1	1/153=0.0065
	Total	10	10/153=0.0653
Newness	Only	8	8/153=0.0523
	Brand	8	8/153=0.0523
	First	6	6/153=0.0392
	Total	22	22/153=0.1438
Result of effect	Treatment	23	23/153=0.1503
	Protect	7	7/153=0.0457
	Cure	6	6/153=0.0392
	Decrease	5	5/153=0.0327
	Increase	4	4/153=0.0261
	Prolong	3	3/153=0.0196
	Solution	3	3/153=0.0196
	Prevent	2	2/153=0.0131
	Prohibit	2	2/153=0.0131
	Control	2	2/153=0.0131
	Health	2	2/153=0.0131
Total	59	59/153=0.3856	
Power	Powerful	4	4/153=0.0261
	High	4	4/153=0.0261
	Wide	2	2/153=0.0131
	Superior	1	1/153=0.0065
	Total	11	11/153=0.0719
Safety	Safety	7	7/153=0.0457
	Clinically	4	4/153=0.0261
	Proven	2	2/153=0.0131
	Total	13	13/153=0.0850
Dosage	Single dose	3	3/153=0.0196
	Total	3	3/153=0.0196
Ease of use	Easy	5	5/153=0.0327
	Appropriate	2	2/153=0.0131
	Compatible	1	1/153=0.0065
	Don't leave any mark	1	1/153=0.0065
	Aromatic	1	1/153=0.0065
	Natural	1	1/153=0.0065
	Total	11	11/153=0.0719
Price	Economical	1	1/153=0.0065
	Total	1	1/153=0.0065
	$\sum f_j$	153	

DISCUSSION

Drug advertisements in medical journals are one of the promotion methods for informing healthcare professionals. Direct to healthcare professionals drug advertisement is allowed in many countries (25).

On the other hand there are many studies about drug advertisements. A large part of them which contains content analysis is about DTC advertising (22, 24, 26-29).

It is thought that there is a relation between drug advertisements and drug use. Because drugs analyzed by the content analysis in this study are the same with the most used drug categories. So, the categories of alimentary tract and metabolism drugs, cardiovascular system drugs and antiinfectives for systemic use have the highest number of advertisements. It is remarkable that they are the most used drugs in Turkey (30, 31). Thus it can be stated that decision makers on drugs are affected by drug advertisements.

According to the findings of our study, *result of the effect* is the most frequent message in drug advertisements in “Eczacı” and “JAMA Türkiye”. For showing the effect, the most used word is *treatment*. On the other hand, *efficient*, *effect* and *effective* are also used in drug advertisements for emphasizing the effect of drugs. However in another study Cook et al. found that the most frequent used word in treatment methods advertisement is *effective* (%23) (9). Similar to these findings, Bell et al. showed that *effective* (%54) and *treatment* (%3) were used for drug advertisements (24). Distinct from these findings, in a research about oncology drug advertisements, the word *efficient* (%95) was used remarkably high (26). Parallel to this finding, antineoplastic drug advertisements in both “JAMA Türkiye” and “Eczacı” the words *efficient*, *effect* and *treatment* were used widely. It is remarkable that drug advertisement mostly put forward the words *treatment* and *efficient*. So, effect-related words are dominant in drug advertisements.

Safety and *easy* are also frequently used word in advertisements (11). Most probably these words are used in drug advertisements in order to convince the prescribers that the use of these drugs are the advantages. Thus by using these words the prescribing of drugs can be increased.

Furthermore, the words *easy*, *appropriate* and *economical* are used in the definition of rational drug use (32). In the light of this fact, it is thought that these words take place in drug advertisements for increasing healthcare professionals’ awareness on rational drug use.

However, the word *economical* in drug advertisements is not enough for explaining drugs being effective at the same time. By using a pharmaco-economical expression (i.e. cost-effective), drug advertisements will be more meaningful.

Innovation and improvement in health sciences have an effect on drug advertisements. Using the word *new* in drug advertisement is a sign of this effect. Physicians who are up to date and develop themselves are keen on prescribing these brand new drugs.

There are studies that drug advertisements affect physicians prescribing habits although they deny it (15). In addition to this, some studies expose that drug promotions have negative impact on rational drug use (33).

Thus being careful and keeping their own knowledge forefront are required issues for healthcare professionals while evaluating drug advertisements (34). Instead of being influenced by slogans in drug advertisements, it is important to read those with a critical eye. Another significant point is to evaluate the drug advertisement with references in it.

Positive messages in drug advertisements are likable for their target group (35). In parallel with this point the words in investigated advertisements give positive messages too. It is thought that it is a marketing strategy for companies. But it shouldn’t be forgotten that products’ advertisements with positive messages could have negative features.

Though our study is the first one in terms of analyzing the drug advertisements’ content in two different medical journals, we had some limitations. At the very initial phase of our study, we wanted to include scientific Turkish medical journals (i.e. indexed in SCI) but none of these general medicine and pharmaceutical journals targeting physicians and pharmacists contained

drug advertisements. As a result, “JAMA Türkiye” is selected besides “Eczacı”. However the publication of “JAMA Türkiye” was ended in the beginning of 2008. So we had to limit our investigation only for 2006-2007 published issues of the both journals.

CONCLUSION

In conclusion, according to the results of our study, messages about *effectiveness* of drugs take more places in drug advertisements instead of side effects, contraindications and adverse effects. There is a need to emphasize equally both positive and negative aspects of drugs while preparing and publishing advertisements direct to healthcare professionals. Moreover, healthcare professionals should preserve their impartiality by assessing drug advertisements objectively. Finally, it should be kept in mind by the medical journal’s responsible person and/or department being unbiased when accepting the advertisement. Also protecting and improving public health should be the key points when publishing drug advertisements.

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