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# **Identification of the Promotion Strategy Components of the Iranian Pharmaceutical Products**



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## **ABSTRACT**

**Background:** One of the most important factors in developing competition ability in Iranian pharmaceutical companies is principled and systematic planning in the marketing area. Investigating all marketing variables is outside the scope of this article. Thus, the main purpose of this research was to extent the pharmaceutical companies' applicable knowledge about promotion strategies; which is one of the most attractive subjects of marketing science.

**Methods:** To achieve deepen extensive and comprehensive understanding of the dimensions and components of the pharmaceutical companies' promotion strategy, a general framework was first developed by the literature review. Then, the required data was collected by conducting qualitative field research as well as through interviewing with the sales and marketing managers of pharmaceutical companies. The acquired data were analyzed using content analysis method. This process continued until the theoretical saturation was achieved.

**Results:** The data analysis results suggested that the promotion strategy of Iranian pharmaceutical companies has 6 main components, including advertising, sales promotion, public relations and publicity, personal sales, events and experiences, and Word of Mouth Marketing (WOM). Moreover, the methods and tools of these components have different attributes that distinguish the promotion strategies of pharmaceuticals firms from other industries.

**Conclusion:** Examining the promotion strategies of pharmaceutical companies from a close and operational perspective suggested that innovative practices and creative ways for market penetration and forerun. Some of the promotion strategies, including direct and interactive marketing were not common among Iranian pharmaceutical companies; however, many of the others were prevalent in different and innovative ways.

### **Keywords:**

Promotion, Marketing strategy, Practice management services, Drug industry

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#### 1. Introduction

he most commonly used definition for marketing mix with the goal of properly joining the target market is to supply the right product at the right place, price, and time [1-3]. To achieve this objective, a suitable and effective promotion mix plays a vital role in implementing corporate marketing strategies [4]. It is the responsibility of the marketing department to effectively communicate with customers and the target community in an enterprise. Moreover, its specific tool is integrated marketing communication models in the mixed form of promotion [5].

Promotion is a set of actions taken by an organization to communicate with its intended sectors in the target market and influence them to maintain a better position for its products and services [6]. In other words, promotion is to establish direct or indirect contact with individuals, groups or organizations to inform and encourage them to purchase the company's products and services [7]. Basically, there are three general objectives in implementing promotional strategies; information provision, customer incentives, and customer retention [8].

An important task of marketing management is to determine the most effective promotion mix. Promotional methods differ in terms of influence. Each promotion method has its unique features that determine their selection [9]. Companies need to carefully combine communication tools to create a balanced mix of promotional elements that achieves communication and marketing goals [10].

According to some marketing scholars, marketing communications is very broad concept, including all the elements of the marketing mix of products [11-13]. In contrast, others argued that marketing communications are far beyond the framework of promotion strategies [14-16]. Thus, to measure the effectiveness of communication tools and plan properly, we need to determine a specific range of communication domains in developing marketing communication strategies. Therefore, these researchers consider the promotional mix strategy for products to be synonymous with marketing communication strategies.

Marketing communications are used to indicate how and why; by whom; when and where a product is used. Additionally, they explain the emphasis of company and its name. They also provide incentives for consumers to test or use them. Although advertising is always the main element of a marketing communications plan, it does not entirely consist of creating a brand value and not even the most important part.

Marketing communications mix involves 7 important communication methods, as follows [16]: 1. Advertising: Any form of impersonal promotion and the promotion of ideas, products or services with a specific financial sponsor for which payment is made; 2. Sales promotion: Short-term incentives to encourage testing or purchasing products or services; 3. Events and experiences: Company sponsored activities and programs designed to create brand-related interactions; 4. Public relations and publicity: Programs that promote or support the company or the perception about the products; 5. Direct marketing and interactive marketing: Direct marketing involves the use of mail, phone, fax, e-mail, or the Internet to directly reach the customers or prospects or ask for an answer or dialogue with them. Interactive marketing involves online activities and programs to engage customers and prospects and create adverts, improve their mentality, or sell them directly or indirectly; 6. Word-of-Mouth (WOM) marketing: Interpersonal oral, written or electronic communications related to the advantages or experiences of the purchase or use of products or services; and 7. Personal sales: Interacting with prospects to deliver products, answer questions and receive orders.

Pharma is an important commodity in modern economies because of its impact on human health. The pharmaceutical industry is currently considered as one of the world's most important and largest industries. Owning such an industry is a critical criterion for developing countries. Iran's pharmaceutical industry is among the oldest active industries in the country. Its inception has been exclusively led by the government. Despite its 70-year history, the private companies present in this industry are <30%. Thus, the lack of real competition between domestic pharmaceutical companies, as well as unwillingness to compete in the international arena, have caused a long-standing weakness in the marketing sector of Iranian pharmaceutical companies. Therefore, we conducted a detailed study on the promotion strategies and tools of pharmaceutical companies. Moreover, we identified their dimensions and components to take effective measures to improve the quality of the decisions of marketing and sales managers of these companies.



#### 2. Methods

The current study aimed to identify the dimensions and components of the pharmaceutical promotion strategies. As a result, in the first stage, we extracted these components from the literature. We reviewed recent research on promotional strategies, as well as the pharmaceutical industry. Then, we identified the early framework of key and common elements in the topic of promotion strategies. This was a qualitative research, because the collected field data were qualitative and obtained only through interviews. In terms of overall direction, it was an applied developmental research; according to definition, an investigation intended to apply its findings to solve specific problems within the organization is called applied research [17].

In this research, the obtained results were supposed be used by real and legal individuals, including the senior managers of pharmaceutical manufacturers in Iran to assist them in selecting the right promotional mix strategies for their products. This was a descriptive research; it aimed to describe the dimensions and various components of promotion strategies of pharmaceutical products. The statistical population of this research included all senior managers, deputies, and experts in the field of marketing and sales in Iranian companies producing human medicines (they were producing the studied product at the time of our study).

The statistical population of this research consisted of about 100 pharmaceutical companies. Therefore, for the qualitative stage of research, the number of companies to be studied was selected to meet the theoretical saturation, to improve the reliability of the findings. As a result, the samples were selected by targeted and convenience methods; due to the adoption of a qualitative approach, the sample size was initially unclear and the sampling process was continued to achieve theoretical saturation.

The data were obtained through semi-structured face-to-face interviews. The items on the interview were derived from the original framework based on the literature review. The internal validity of the items was examined using an interpretive validity approach. In the interpretive validity approach, the "participant feedback" and "the use of some of the interviewees' definitive statements in the final report" strategies were used. In the participant feedback strategy, the interpretations and obtained results were presented to the participants by the researcher to clear the mis-

understandings [18]. To assess the external validity or the reliability of the measuring tool, the Scott coefficient as an observer agreement validity measure was used. The values obtained by the Scott coefficient for all variables were >0.7 and acceptable.

Content analysis was used to analyze the data. We examined the text of the interviews and focus on the objective and obvious messages contained in the texts. Thus, the content analysis of the present research was descriptive and quantitative [19]. Deductive content analysis was selected for analyzing responses [20]. The text analysis unit of the interviews in the content analysis section was a sentence or phrase from the study participants' responses presented in one of the research categories.

Considering the dimensions and components discussed in the literature review section, 8 categories (advertising, promotion, personal sales, public relations, direct marketing, interactive marketing, events and experiences, and WOM marketing), and 77 concepts (newspaper, TV, magazines, free samples, etc.) were identifies.

An initial exploration into the promotion strategies in pharmaceutical companies revealed that a pharmaceutical company with several different product types may not offer all its products using a single promotional strategy and may have designed specific promotional strategies for each product or group of products. Therefore, it was decided to focus on identifying promotion strategies for a product or a group of products supplied with a specific combination of these strategies, rather than focusing on the promotion strategies of a firm.

In addition, the product life cycle theory introduced by Leavitt (1965) describes the amount of sales and product profit from production through its final sale in the 4 stages of introduction, growth, maturity and decline. Moreover, the promotion strategies of a pharmaceutical product differ in respect of each of the 4 stages of the product life cycle; this is similar to other marketing strategies that vary across the stages [16, 21]. Therefore, we extended applicability of the research data by focusing on one stage of the product life cycle that can be applied to many companies, as the growth period.

On the other hand, due to the inherent differences in promotional strategies for patented drugs, compared to competitive drugs, we focused on a single



drug group, namely, competitive drugs (and not exclusive drugs). Therefore, the analysis unit of this research was those companies that produce competitive drugs which were being in the growth stage. Prior to interviewing with pharmaceutical companies, the researcher first provide an adequate explanation about this matter, then selected the product and initiated the interview.

### 3. Results

A brief overview of various concepts, dimensions, and marketing communication strategies are explained in the following. Additionally, we present the theoretical framework of research in promotion strategies section. Marketing communications are tools that companies use to directly or indirectly convey, persuade, and remind consumers about their products and services. They represent the voice and the brand of the company and are considered appropriate to establish a two-way dialogue with consumers.

The initial framework of this research in the field of promotion strategies (or marketing communications) was developed according to the above mentioned details. The researcher's approach was to use a maximum range in the estimation of the main components of promotion strategies and to achieve a comprehensive framework. The prior research studies have considered the 4 components of advertising, personal sales, sales

promotion, and public relations as the main elements of promotion strategies. The current study which is based on the new findings in marketing science, the use of the recent categorization of leading marketing researchers, Keller and Kotler, who considered more comprehensive components was considered to obtain more accurate and reliable results. Therefore, promotion strategies were presented in 7 distinct categories [17]. Table 1 lists the basic promotion strategies framework based on the literature.

Jain and Saxena identified a series of categorized promotional strategies for Indian pharmaceutical companies [27]. The studied drugs were purely prescriptive and divided into the two categories of lifestyle drugs and generic drugs. Then, they identified promotional strategies suitable for the three main goals of marketing promotions for both groups. Table 2 presents their findings.

Lifestyle drugs are prescribed for lifestyle diseases, such as diabetes, blood pressure, asthma, obesity, and so on. These diseases are usually not cured and patients need to take drugs for a long time or sometimes for the entire life. General drugs have been termed as those not included in the lifestyle category used for curing common diseases. These diseases are usually curable and patients need to take drugs for only a limited period of time. Examples of normal diseases are

**Table 1.** The primary framework of promotion strategy in this research

Components	Elements	References
Advertising	Newspapers, television, direct mail, radio, magazines, Outdoor advertising, yellow Pages, newsletters, brochures, telephone, Internet	[5, 14, 16, 22-24]
Sales promotion	Samples, coupons, cash refund offers (rebates), price packs (cents-off deals), premiums (gifts), frequency programs, prizes (contests, sweepstakes, games), cooperation awards, free trials, product warranties, tie-in promotions, cross-promotions, POP displays and demonstrations	[5, 14, 16, 22-24]
Direct and interactive marketing	Direct mail, catalog marketing, telemarketing, interactive TV, kiosks, web sites, mobile devices	[5, 16, 23-25]
Public relations and publicity	Annual reports, publications, press kits, identity media, company magazine, speeches, seminars, community relations, charitable donations, lobbying	[5, 14, 16, 22-24]
Personal selling	Sales presentations, sales meetings, incentive programs, delivering, order taking, missionaring, technician, demand creating, solution vendor	[5, 14, 16, 22-24]
Events and experiences	Annual celebrations, art exhibitions, auctions, evenings, chance games, fashion shows, parties in unusual places, trips, collective walking	[5, 16]
WOM marketing	Social networks, Niche social networks (online communities and forums), emotional marketing, viral marketing, opinion leaders, blogs	[5, 16]





Table 2. Promotional mix strategy framework in Jain and Saxena research

Promotion Strategy Objectives				
Promotional Strategy	Lifestyle Drugs	General Drugs		
Aware	Primary tool: Symposia, conference Support tools: personal selling, direct mail, brochures, co- promotion, e-mails, and press release	Primary tool: Academic Meetings (Departmental), symposia Support tools: Co-promotion, e-mails, direct mails, WOM publicity		
Persuade	Primary tool: Personal selling Support tools: Scientific and clinical reports, clinical trials, free samples, gifts, sponsorship to doctors	Primary tool: Personal selling Support tools: Gifts, small sponsorships, promo- tional trials, trade promotion, Continuing Medical Education (CME)		
Remind	Primary tool: Updates on the drugs, newsletters, personal selling Support tools: E-mails, organizing events/ camps, symposia, promotional trials, patient support/ education programs	Primary tool: Brochures, leaflets, direct mail Support tools: Samples, journal advertising, co- promotion, e-mails, personal selling		

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cough and cold, malaria, general infection, acute pain, and so on [26].

These researchers also assessed the importance and priority of the promotion strategies of these two pharmaceutical groups from the perspective of senior managers of pharmaceutical companies. Then, they divided

them into two categories of traditional and innovative promotion strategies. Traditional promotion strategies, based on their priority and importance in use by companies, were as follows: personal selling; symposia and doctor meetings; sponsorships to doctors; trade promotion; newsletter, brochures, flyers; gifts; organizing camps; sponsorships of events / conferences;

Table 3. Pharmaceutical promotion strategies in Sattar and Maqsood research

Category	Promotion Strategies
	1. Detailing aid: Product literature, folders, brochures or display cards, which are meant to help the salesperson during the discussion with the doctors
	2. Leave behind material: Folders, brochures, leaflets, prescription pads, and stickers to act as a reminder
In-clinic promotions	3. Samples: Samples of medicines
	4. Gift/ giveaways: Give out expansive gifts to physicians to establish a relationship, to oblige them, and to ensure support on products
	5. Direct mailers: Sending reminders to physicians by non-personal means
	1. Clinical trials: Only those companies that are sure about their quality standards adopt this technique
	2. Seminars/ symposia/ round table discussion
	3. Sponsorships: The medical practitioners throughout the country have their representative bodies, which are either general medical bodies who have their quarterly, bi-annual or annual conferences, where latest research findings are discussed and papers are presented.
Out-of-clinic promotions	4. Film shows: A modern audio-visual technique that progressive companies are adopting and prefer it to seminars and other forms of direct communication
	$5. \   \text{Advertisements: Numerous medical newspapers/ journals to communicate with the physicians through advertisements}$
	6. Public relations: Pharmaceutical companies voicing their messages at public forums and through newspapers to increase awareness amongst the masses about their product
	7. Other activities: Free medical camps/ corporate marketing/ hospital/ ward improvement programs/ e-marketing





Table 4. Initial encoding of sales promotion category

Concept	Frequency of Agreement	% of Agreement	Code
Samples	//////	87.5	PSPX1
Coupons		0	PSPX2
Cash refund offers (rebates)		0	PSPX3
Price packs (cents-off deals)	///////	100	PSPX4
Premiums (gifts)	//////	87.5	PSPX5
Frequency programs	///	37.5	PSPX6
Prizes (contests, sweepstakes, games)		0	PSPX7
Cooperation awards*1	//////	87.5	PSPX8
Free trials		0	PSPX9
Product warranties		0	PSPX10
Tie-in Promotions	/	12.5	PSPX11
Cross-Promotions	////	50	PSPX12
POP displays		0	PSPX13
Sales awards*1	//////	87.5	PSPX14
Delayed payment period	/////	62.5	PSPX15
Prescription prizes for physicians	//	25	PSPX16

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drug samples; WOM publicity; press releases; journal advertising; direct mail, and mass media advertising. Innovative promotion strategies were also prioritized as scientific and clinical reports; promotional trials; clinical trials; patient care services; co-promotion; Internet promotion; e-detailing, and telemarketing [26].

Sattar and Maqsood classified the promotion strategies of pharmaceutical products into two general categories of in-clinic promotion and out-of-clinic promotion (Table 3). In-clinic promotion strategies are used by pharmaceutical companies through their sales representatives visiting physicians in their offices and persuading and encouraging them to prescribe the drug. Out-of-clinic promotion strategies are offered outside of physicians' office to directly or indirectly influence on their decisions about prescribing a drug. Table 3 indicates the different types of these two strategy groups [27].

Aditya Khajuria and Vijay Khajuria in their research entitled "The Effect of Pharmaceutical Marketing Com-

munication Strategies on Physicians' Prescription" presented a list of functional promotion strategies with references for each. These strategies include the cost of product, brochures and booklets, seminars, directories having medicine details (along with manufacturer name), publications, the reputation of company, packaging inserts, exhibits in conferences, sampling, catalog, sponsoring medical fraternity events, peer group/senior doctor reference, audiovisual material, product launch parties, mailing, gifts, print, and broadcast ads (TV/newspaper). The order of strategies is based on the results that these researchers obtained in their survey on the extent to which these strategies influence the prescription of medication by physicians [28].

As noted above, none of these studies conducted a field and original research to identify the specific dimensions and components of the promotion strategies for competitive pharmaceutical products in Iran. Furthermore, The Iranian pharmaceutical market has different socio-cultural and legal requirements, in comparison with other countries. The prohibition of



Table 5. The final framework of the pharmaceutical companies' promotion strategy

Category	Concept
Advertising	Direct mail, magazines, outdoor advertising, yellow pages, newsletters, brochures, telephone, internet, sending a company representative to pharmacies (pharma Rep), sending distributing companies' sales representatives to pharmacies, sending sales representatives to physicians (Med Rep), participation in the publication of scientific books, provision of simple scientific pamphlets at physicians' clinics to promote public awareness, environmental advertising in specialized seminars, environmental advertising in pharmacies, video broadcast in specialized conferences
Sales promotion	Samples, Price packs (cents-off deals), premiums (gifts), frequency programs, cooperation awards, tie-in promotions, cross-promotions, sales awards, delayed payment period, prescription prizes for physicians
Direct and interactive marketing	Annual reports, press kits, identity media, company magazine, speeches, seminars, charitable donations, lobbying, holding workshops for distributing companies' sales reps, holding workshops for physicians, holding stands or specialized workshops during major scientific seminars or conferences organized by major scientific institutions or government agencies, scientific visits of students from the manufacturing plant, maintaining communication with scientific associations
Public relations and Publicity	Sales presentations, sales meetings, incentive programs, delivering, order taking, missionaring, technician
Personal selling	Annual celebrations, scientific competitions in exhibitions with prizes, holding Iftar banquet in Ramadan
Events and experiences	Social networks, niche social networks(online communities and forums), emotional marketing, Key Opinion Leaders (KOL)

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Direct to Consumer Advertisement (DTCA), the ban on the importation of many different drugs and the high share of pharmaceutical companies' subsidies from the state budget, which has kept the prices of many drugs down, are examples that require studying the distinction between human medicines in Iran and other countries.

The process of analyzing research data began with the start of the first interview. First, the coding method for categories and concepts was developed. The data analysis then continued according to the coding method until achieving theoretical saturation. The coding instruction was as follows: first, each of the concepts extracted from the literature review was assigned an initial code. Upon the completion of each interview, each new concept identified under each category was added in a different color to the total number of codes available for that category.

Any code with no positive comments to be confirmed were deleted after reaching the theoretical saturation. If all the concepts under a category were not approved by the interviews, the category was also removed from the final framework of the promotion strategy. The codes similar in meaning were combined in consultation with the advisor of project and research committee [20].

Therefore, all the recognized concepts in the analysis process are displayed in Table 4 with no change. For each code, the frequency of agreeing comments and their percentage were measured. New concepts recognized through interviews were placed after the previous concepts and the indicators that could have been combined due to similarity are indicated by an asterisk (\*) and a common superscript (e.g. "Cooperation Awards\*1" and "Sales Awards\*1"). As per Table 4, codes with no agreement on their inclusion in the proposed framework of a category have no value in their corresponding frequency and percentage boxes and can be eliminated. Table 4 only presents a part of the content analysis for the second category of promotion strategies. The final analysis of data indicated that in various categories, some items were deleted, new items were added, and some items were combined. The simultaneous process of data collection and data analysis continued until the theoretical saturation was achieved.

By continuing to analyze the data from the 14<sup>th</sup> interview, no new content was identified within the framework of research components, and no change was made in the previously obtained results, suggesting that the theoretical saturation was obtained. However, to achieve certainty about the validity of the obtained results, 5 more interviews were conducted. A total of 19 persons from 8 pharmaceutical companies were in-



terviewed. The final outcome from data analysis was a variable framework of the strategy for promoting pharmaceutical products developed with 6 categories or main components and 53 concepts for final identification. Table 5 lists the final results of data analysis.

## 4. Discussion

In this research, unlike the prior research we examined in the previous section, the investigated items exceeded the advertising and sales promotion. In previous research studies, only limited factors such as advertising strategies, personal selling, sales promotion, and public relations were assessed. However, in this study, items such as the WOM marketing strategies, events, and direct and interactive marketing strategies were also addressed. Furthermore, a comprehensive look at the scope of audience marketing was the other distinctive feature of this study. In contrast to previous research, we considered a wide range of marketing audiences. These groups included distribution companies, pharmacies, physicians, pharmaceuticals professors, patients, and the general population.

Based on the achieved results, in the advertising category, the 4 concepts of newspaper, TV, direct mail, radio, and outdoor advertising were excluded as there were no relevant agreeing comments from managers of pharmaceutical companies. In contrast, 8 new concepts (sending a company representative to pharmacies (Pharma Rep), sending distributing companies' sales representatives to pharmacies, sending sales representatives to physicians (Med Rep), participation in the publication of scientific books, the provision of simple scientific pamphlets at physicians' offices to promote public awareness, environmental advertising in specialized seminars, environmental advertising in pharmacies, and video broadcast in specialized conferences) were added.

In the category of sales promotion, 6 items (coupons, refunds, prizes [competitions, lotteries, games], free trails, warranties, and Point-of-Purchase [POP] displays) were deleted, and 3 new items (sales awards, delayed payment period and prescription prizes for physicians) were added. In the category of public relations, two concepts of publications and community relations were deleted and five new concepts of holding workshops for distributing companies' sales representatives, holding workshops for physicians, holding stands or specialized workshops in major scientific seminars or conferences organized by major scientific institutions or government agencies, scientific visits of students

from the manufacturing plant and maintaining communication with scientific associations were added to the existing framework. In the personal sales category, the 2 concepts of demand creating and solution vendor were removed; while no new item was added.

In the events and experiences category, the 8 concepts of art exhibitions, auctions, evenings, chance games, fashion shows, parties in unusual places, trips, and collective walking were removed, and the two new concepts of scientific competitions in exhibitions with prizes and holding lftar banquet in Ramadan were added to the framework. In the WOM marketing category, the two concepts of viral marketing and blogs were removed, while no new concept was added. The direct and interactive marketing category was completely excluded as no agreeing views were found on their subset concepts.

#### 5. Conclusion

The present study aimed to identify the components of pharmaceutical marketing promotion strategies in Iranian pharmaceutical companies. An initial framework of the dimensions and components of the promotional strategies used by the general industries was first developed by the literature review. This basic framework described the promotion strategy in 7 dimensions or categories and 77 components or concepts. The main dimensions and components of the promotion strategy of a competitive pharmaceutical product were identified in 6 main categories and 53 concepts or components.

The first category is advertising, consisting of 15 components. The second category is sales promotion, which consists of 10 components. The third category is public relations, consisting of 12 components. The fourth category is personal sales, consisting of 7 components. The fifth category is events and experiences, which consists of three components. Finally, the sixth category is the WOM marketing that consists of 4 components. The direct and interactive marketing category was not among the strategies to promote Iranian pharmaceutical products due to lack of legal platforms.

The first subset of promotional strategies was advertising that included 15 components. The second subset was sales promotion, which included 10 components. The third was public relations, which included 12 components. The fourth subset was the personal selling with 7 components. The fifth one was the case of events and experiences that included three compo-



nents. Finally, the sixth subset of Hebat's mouth-tomouth marketing included 4 components. The direct and interactive marketing category was not among the strategies to promote Iranian pharmaceutical products due to lack of legal platforms.

## **Ethical Considerations**

## Compliance with ethical guidelines

There was no ethical considerations to be considered in this research.

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#### Conflict of interest

The authors declared no conflict of interest.

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## References

- [1] Mason RB, Staude G. A marketing mix model for a complex and turbulent environment. Acta Commercii. 2007; 7(1):236-54. [DOI:10.4102/ac.v7i1.34]
- [2] Khan MT. The concept of 'marketing mix' and its elements (A conceptual review paper). Int J Inf Bus Manag. 2014; 6(2):95.
- [3] Dibb S, Wensley R. Segmentation analysis for industrial markets: Problems of integrating customer requirements into operations strategy. Eur J Mark. 2002; 36(1/2):231-51. [DOI:10.1108/03090560210412773]
- [4] Kustin RA. Marketing mix standardization: A cross cultural study of four countries. Int Bus Rev. 2004; 13(5):637-49. [DOI:10.1016/j. ibusrev.2004.07.001]
- [5] Keller KL, Kotler P. Marketing management. London: Pearson; 2016. [DOI:10.1556/9789630597784]
- [6] Raghubir P, Corfman K. When do price promotions affect pretrial brand evaluations. J Mark Res. 1999; 36(2):211-22. [DOI:10.1177 /002224379903600206]

- [7] Manrai LA, Manrai AK, Lascu DN. A country-cluster analysis of the distribution and promotion infrastructure in Central and Eastern Europe. Int Bus Rev. 2001; 10(5):517-49. [DOI:10.1016/S0969-5931(01)00031-2]
- [8] Mela CF, Gupta S, Lehmann DR. The long-term impact of promotion and advertising on consumer brand choice. J Mark Res. 1997; 34(2):248-61. [DOI:10.1177/002224379703400205]
- [9] Linsen MA. Cavring out sales. J Progress Grocer. 1993; 72:43-4.
- [10] Hill DJ, Piggott RR, Griffith GR. Profitability of incremental generic promotion of Australian dairy products. Agric Econ. 2001; 26(3):253-66. [DOI:10.1111/j.1574-0862.2001.tb00068.x]
- [11] Warren J, Moriarty SE, Duncan TD, Keegan TR. Marketing. Upper Saddle River, New Jersey: Prentice Hall; 1995.
- [12] Shimp TA. Promotion management & marketing communications: Instructor's manual and test bank. New York: Dryden Press; 1993.
- [13] Kitchen DB, Decornez H, Furr JR, Bajorath J. Docking and scoring in virtual screening for drug discovery: Methods and applications. Nature Rev Drug Discov. 2004; 3(11):935-49. [DOI:10.1038/nrd1549]
- [14] Kotler P, Armstrong G. Principles of marketing. London: Pearson Education; 2010.
- [15] Belch GE, Belch MA. Advertising and promotion: An integrated marketing communications perspective. New York: McGraw-Hill; 2004.
- [16] Keller KL, Kotler PT. Framework for marketing management. London: Pearson; 2015.
- [17] Danaeifard H, Alvani M, Azar A. [Quantitative research methodology in management: A comprehensive approach (Persian)]. Tehran: Safar Eshraghi; 2004.
- [18] Johnson RB. Examining the validity structure of qualitative research. Educ. 1997; 118(2):282-92.
- [19] Stemler S. An overview of content analysis. Pract Assess, Res Eval. 2001; 7(17):137-46.
- [20] Krippendorff K. Content analysis: An introduction to its methodology. Thousand Oaks, California: SAGE; 2004.
- [21] Kvesic DZ. Product life cycle management: Marketing strategies for the pharmaceutical industry. J Med Mark. 2008; 8(4):293-301. [DOI:10.1057/jmm.2008.23]
- [22] Belch GE, Blech MA. Advertising and promotion: An integrated marketing communications perspective. New York: McGraw-Hill; 2014.
- [23] Duncan T, Ouwersloot H. Integrated marketing communication. European edition. New York: McGraw-Hill. 2008.
- [24] Fill C. Simply marketing communications. London: Pearson Education; 2006.
- [25] Kim YA, Song HS, Kim SH. A new marketing strategy map for direct marketing. Knowl Based Syst. 2009; 22(5):327-35. [DOI:10.1016/j.knosys.2009.02.013]
- [26] Jain S, Saxena K. Lifestyle and general medicines: A study of promotional-mix strategies in India. J Med Mark. 2011; 11(2):119-26. [DOI:10.1057/jmm.2010.35]



[27] Sattar I, Maqsood A. A marketing mix model for pharmaceutical industry-a Pakistani perspective. J Indep Stud Res. 2003; 1(2). [DOI:10.31384/jisrmsse/2003.01.2.1]

[28] Khajuria A, Khajuria V. Impact of pharmaceutical marketing communication strategies on prescription practices of physicians. Res J Pharm, Biol Chem Sci. 2013; 4(3):882-9.