

Study the roles of health policy makers in drug distribution among pharmacies

Estudiar el papel de los responsables de la política sanitaria en la distribución de medicamentos entre las farmacias

Hiva Farhadi¹ 

1. Department of Marketing, Faculty of Business and Economics, Linnaeus University, Sweden

Corresponding author

Hiva Farhadi

Department of Marketing, Faculty of Business and Economics,
Linnaeus University, Sweden

E-mail: hiva.farhadi1612@gmail.com

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Abstract

Background: Drug distribution network management is one of the most important facilities in the ministry of health. This network is faced with several issues. The present survey was done to assess the roles of health policy makers in drug distribution among pharmacies.

Methods: A Judgmental sampling method was used in this study. Five managers of the Department of Drugs, Food and Narcotics of the Ministry of Health, Tehran, Iran who were determined the country's pharmaceutical policy, were selected in this survey. Designed questionnaire was presented to all 5 health policy makers. The data were stratified and the descriptive analysis method was used to test their partial and general hypotheses. Cronbach's alpha test was used to assess the validity of the questionnaires.

Results: As the Alpha= 0.850 was obtained for questions in the presented questionnaire, they have been approved as reliable. The study hypothesis (the impact of health policymakers' trust on drug distribution marketing strategies) was accepted because 60% of respondents believed in the effect of gaining policymakers' trust in marketing strategy and 35% of them believed gaining the trust of policymakers has a huge impact on marketing strategy.

Conclusion: Findings showed that adhering to pharmacy quotas, provincial distribution criteria for drugs, adhering to approved drug prices, and having effective and efficient management affect marketing strategies. However, to found other factors affected the health policy makers drug distribution, several studies should perform.

Keywords: Health policy makers, roles, drug distribution, pharmacies.

Resumen

Antecedentes: La gestión de la red de distribución de medicamentos es uno de los servicios más importantes del Ministerio de Sanidad. Esta red se enfrenta a varios problemas. La presente encuesta se realizó para evaluar el papel de los responsables de la política sanitaria en la distribución de medicamentos entre las farmacias.

Métodos: En este estudio se utilizó un método de muestreo criterioso. En esta encuesta se seleccionaron cinco gerentes del Departamento de Medicamentos, Alimentos y Narcóticos del Ministerio de Salud de Teherán, Irán, que determinaban la política farmacéutica del país. El cuestionario diseñado se presentó a los cinco responsables de la política sanitaria. Los datos se estratificaron y se utilizó el método de análisis descriptivo para probar sus hipótesis parciales y generales. Se utilizó la prueba alfa de Cronbach para evaluar la validez de los cuestionarios.

Resultados: Al obtenerse un Alfa= 0,850 para las preguntas del cuestionario presentado, éstas han sido aprobadas como fiables. La hipótesis del estudio (el impacto de la confianza de los políticos sanitarios en las estrategias de marketing de la distribución de medicamentos) fue aceptada porque el 60% de los encuestados creía en el efecto de ganarse la confianza de los políticos en la estrategia de marketing y el 35% de ellos creía que ganarse la confianza de los políticos tiene un gran impacto en la estrategia de marketing.

Conclusión: Los resultados mostraron que el cumplimiento de las cuotas de las farmacias, los criterios de distribución provincial de los medicamentos, el cumplimiento de los precios aprobados de los medicamentos y la existencia de una gestión eficaz y eficiente afectan a las estrategias de marketing. Sin embargo, para encontrar otros factores que afecten a la distribución de medicamentos por parte de los responsables de las políticas sanitarias, habría que realizar varios estudios.

Palabras clave: Responsables de la política sanitaria, funciones, distribución de medicamentos, farmacias.

Introduction

Today, with the advancement of medical sciences, many pharmacological and non-pharmacological treatments for various diseases have been developed¹. Drug treatments are usually made available to pharmacies and then to patients by drug companies through their distribution system. Powerful and integrated drug distribution system can provide a variety of common drugs and treatments to patients in a short time². Although there are many challenges in the drug distribution system, conducting well-codified studies in this area that are often overlooked with several issues can show a good approach to drug distribution to patients in a country³.

The uncertainty of drug and medical service distribution channels is conditioned by the dynamic and complex market and pharmaceutical environment that leads to the realization of new trends, new products, and services in a short time frame. Nowadays, drug distribution faces some of the toughest challenges in the market⁴, such as the growth of new viruses and diseases, new drugs, use of advanced technologies, and increased customer demands. All these challenges generate risks that affect the sustainability of drug distribution, and it is necessary to provide effective support for the pharmaceutical industry⁵.

Totally, 11 complications were identified for the drug distribution network in Iran⁶. Drug availability or shortage, supply of near-expiration drugs, supply of counterfeit drugs, over-the-counter drug sales, black market activity, severe price fluctuations, insufficient interaction with the consumer in the pharmacy, high distribution costs, low performance of distribution network in emergency deliveries, long time to search and find medicine (in the case of certain drugs) and poor quality of responding to consumer complaints are some of the identified complications⁷⁻⁹.

In Iran, the role of health policy makers in drug distribution is so important. In this regard, health policymakers' have a decisive role in the distribution of drugs. In general, decision-makers in the Ministry of Health give the final opinion on drug distribution. Thus, the present survey was conducted to assess the roles of health policy makers in drug distribution among pharmacies.

Materials and methods

Study area

From the year 2008 to 2009, data collected from the Darupakhsh company, Tehran, Iran was used in this study. A questionnaires were answered by 5 health policymakers and experts in the Ministry of Health, Tehran, Iran.

Sampling

A Judgmental sampling method was used for this purpose. In this regard, 5 managers and officials of the Department of Drugs, Food and Narcotics of the Ministry of Health, Tehran, Iran who were determined the country's pharmaceutical policy, were considered to have completed the entire statistical community. For this purpose, a questionnaire was sent for them and all of them answered the questions.

Questionnaire analysis

The data obtained from the questionnaire were stratified and the descriptive analysis method was used to test their partial and general hypotheses. Cronbach's alpha test was used to assess the validity of the questionnaires. In order to design the questionnaire questions, according to the opinions of experts, very detailed and accurate indicators were determined and questions were designed to evaluate each one. The method of answering the questionnaire was determined based on the Likert scale and the respondents were asked to determine the role of each indicator on the subject in the question on marketing strategies. **Table I** shows the general information of the managers who have answered the questionnaires in Darupakhsh Distribution Company.

Table I: General information of the managers who have answered the questionnaires in Darupakhsh Distribution Company.

No	Jobs
1	Executive Vice President of Darupakhsh Holding
2	Deputy Minister of Finance
3	Managing Director
4	Managing Director
5	Strategic Manager
6	Chief financial officer
7	Former CEO of Tamin Pharmaceutical Holding and Head of Syndication of Iranian Pharmaceutical Industries
8	Former Chief executive officer (CEO) of Darupakhsh Holding
9	The current CEO of Darupakhsh Holding
10	Head of Sales and Marketing

Validity test

Cronbach's alpha test was used to determine the validity of questionnaire. This method was used to calculate the internal consistency of measuring instruments, such as questionnaires or tests that measure various characteristics. In this tool, the answer to each question can take different numerical values. To calculate the Cronbach's alpha coefficient, authors must first calculate the variance of the scores of each subset of the questionnaire (or subtest) questions and the total variance. Then, the value of alpha coefficient was calculated using the following formula^{10,11}:

Formula No 1

$$r_a = \frac{J}{J-1} \left(1 - \frac{\sum S_j^2}{S^2} \right)$$

Whereas:

J = Number of question or test question subsets

S_j^2 = Variance following j test

S^2 = Total test variance

In this research, in relation to the use of secondary data, an attempt has been made to use reliable data and information that is approved by the organization's monitoring system, so the information is reliable and seems to be far from biases and distortions.

Results

Evaluation of the validity of the questions in questionnaire

For the questionnaire questions, Alpha = 0.850 was obtained. Considering that the alpha value is greater than 0.7, it was concluded that the questionnaire was reliable.

Questionnaire analysis

Table II shows the designed questionnaire and responses given to each question.

According to the results obtained in the table, the research hypothesis (the impact of health policymakers' trust on drug distribution marketing strategies) can be accepted because 60% of respondents believed in the effect of gaining policymakers' trust in marketing strategy and 35% of them believed Gaining the trust of policymakers has a huge impact on marketing strategy (**Table III**).

Discussion

Recently, many diseases have threatened human life¹²⁻²¹. However, proper management of drug distribution can avert severe epidemics and can control the diseases expansion in the community.

The social factors of health comprise the health systems under which people live and utilize health services. One social determinant, for which pharmacists are responsible, is designing drug distribution systems

that ensure patients have safe and convenient access to medications. The World Health Organization (WHO) describes the health social determinants of as the circumstances in which people are born, grow, live and age and the wider set of forces and systems shaping daily life. These systems comprise economic policies and systems, development agendas, social norms, social policies and political systems²². WHO makes it obvious that it is significant to address health social determinants that create barriers to good care. This would comprise health systems, of which medication distribution is a fundamental component²³.

The drug distribution network is one of the most important pillars of the Iranian pharmaceutical system which plays a vital role in rapid and easy access to drugs. The purpose of this study is to explain the roles of health policy makers in drug distribution among pharmacies. Findings showed that the adhering to pharmacy quotas, provincial distribution criteria for drugs, adhering to approved drug prices, and having effective and efficient management affect marketing strategies. Totally, we found that the high impact of health policymakers' trust on drug distribution marketing strategies in Iran.

Scarce data are available in this area globally. High role of health policymakers' in drug distribution for the control of corona virus diseases 2019 (COVID-19) in New York showed by Dzierba et al. (2020)²⁴. A Serbian survey¹ revealed that the significant roils of health policymakers' in quality and quantity of drug distribution networks. Similar findings were reported from India²⁵, Australia²⁶, and United Kingdome²⁷.

Drug distribution channels are multifaceted and amassed from entities, including logistics organizations, pharmaceutical companies and employees, hospitals, pharmacies, customers, doctors, governmental institutions, and health policymakers'. The role if health policymakers' decisions may be significant, including their extensive attentions to diseases outbreak and dissemination, emotional stability, social support, openness to experience, self-discipline, and cognitive flexibility. Drug distribution is a sequence of procedures envisioned to recover primary care and comprises

Table II: Designed questionnaire in the present study.

No questions	Questions	Number of participants	Responses (%)				
			Very low	Low	Medium	High	Very high
1	Does adhering to pharmacy quotas affect marketing strategies?	5	-	1 (20)	2 (40)	1 (20)	1 (20)
2	Do provincial distribution criteria for drugs affect marketing strategies?	5	-	1 (20)	2 (40)	1 (20)	1 (20)
3	Does adhering to approved drug prices affect marketing strategies?	5	-	1 (20)	1 (20)	1 (20)	2 (40)
4	Does having effective and efficient management affect marketing strategies?	5	-	-	-	2 (40)	3 (60)

Table III: Frequency of the effect of gaining the trust of policy makers on marketing strategies.

Criteria	Frequency	Percent	The cumulative percentage
Very low	0	0	0
Low	3	15	15
Medium	5	25	40
High	5	25	65
Very high	7	35	100

manufacture, procurement, distribution, and waste disposal, storage, transportation, and delivery of drugs²⁸. Thus, it is essential to assess the roles of different factors on its quality.

Conclusions

This survey showed that the health policymakers of the Darupakhsh company and also those of the Iranian Ministry of Health have a significant roles in drug

distribution. As far as we know, this study is the first report of the roles of health policy makers in drug distribution among pharmacies. Findings showed that adhering to pharmacy quotas, provincial distribution criteria for drugs, adhering to approved drug prices, and having effective and efficient management affect marketing strategies. However, to found other factors affected the health policy makers drug distribution, several studies should perform.

Interests conflict

The researchers declare that they have no conflict of interest.

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