

Community Pharmacists' Knowledge of Marketing Mix: A Cross-Sectional Questionnaire-Based Study in Jordan

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Abstract: Background: Community pharmacies play a vital role in the healthcare system. Adopting innovative marketing strategies is essential for these pharmacies to effectively reach and engage their target customers while addressing potential challenges. **Objective:** This study aims to assess community pharmacists' familiarity with the marketing mix and identify areas for growth and improvement. **Methods:** A descriptive, cross-sectional survey was conducted to evaluate community pharmacists' knowledge and application of the marketing mix. **Results:** The findings reveal significant disparities in pharmacists' ability to apply the marketing mix, particularly in the 'product' component, where only 24.5% of respondents demonstrated a clear understanding. In contrast, knowledge of price (63.1%), promotion (64.8%), and place (54.7%) was more robust. These disparities indicate an uneven understanding of marketing principles, which may affect the effective implementation of marketing strategies in practice. **Conclusion:** These insights highlight the need to enhance pharmacists' understanding and utilization of the marketing mix within Jordan's pharmaceutical landscape. Addressing these gaps is crucial for improving marketing practices, which could lead to better service delivery, patient care, and adherence to regulatory standards. Targeted educational interventions could play a vital role in bridging these knowledge gaps and empowering pharmacists to implement more effective marketing strategies.

Keywords: Community pharmacists, Jordan, Marketing mix.

Introduction

Community pharmacies, being a cornerstone of the healthcare system, are not just urged but essential to implement new and different marketing strategies and techniques in their marketing plans to market their services to target customers and overcome obstacles that might arise [1]. They are widely considered the most accessible and trusted healthcare providers [2]. Many patients often seek medical advice in the pharmacy before going to their physician, highlighting the integral role of community pharmacies in the healthcare system [3].

Patients in Jordan not only visit the community pharmacy to purchase their medications but also seek many services offered by pharmacists in that setting, such as medication counseling, blood pressure measuring, and over-the-counter medications and product needs and requirements. This makes the community pharmacy a hub for various services provided by pharmacists [2]. Another critical point is that pharmacists practicing in community pharmacies showed positive attitudes toward providing pharmaceutical care activities in their pharmacies [4].

The pharmacist's role is not static but evolving, shifting from medication dispensing to providing patient counseling and more detailed communication, significantly enhancing overall patient outcomes, both preventative and treatment [5]. This shift is a testament to the evolving nature of the pharmaceutical profession and the increasing importance of patient care in pharmacy practice [5]. Implementing pharmaceutical care in pharmacy practice should be built on a good understanding of the marketing mix; this helps pharmacists understand the value

of the service they provide rather than focus on the tangible assay of the product they deliver [1].

Previous research demonstrated that community pharmacy products encompass medicines, health-related services, and advice (counseling) provided to customers [6]. Several studies must demonstrate a more consistent understanding of this component among community pharmacists. However, other studies displayed that pharmacists have a significant and integral role in patients' overall health and well-being while managing healthcare costs [7]. Furthermore, studies regarding the price of products by community pharmacists could be more extensive. Though medicines are essential for public health, price is a susceptible issue, considering that Jordan is a lower-middle-income country with regulated and fixed retail prices [8].

Studies on the promotional aspect of the marketing mix have increased, including examples of pharmacy health promotion [9]. For instance, research indicates that community pharmacies have an increased role in promoting healthcare activities to their customers [9]. According to research findings, community pharmacies most effectively use sales promotion tools such as merchandising [10]. The research argues that the location and accessibility of the pharmacy play essential roles in the considerations of the community pharmacy market [11]. Pharmacies are among the most accessible healthcare services, and their location influences patient satisfaction with the services provided [12]. However, limited literature compares different pharmacy locations [12].

This study aims to evaluate the level of community pharmacists' knowledge of the marketing mix in Jordan and explore how this knowledge influences their marketing practices.

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It seeks to determine the extent to which community pharmacists understand and apply the four components of the marketing mix (product, price, place, and promotion) and how discrepancies in their knowledge impact their ability to implement effective marketing strategies in their practice.

Methods

Study Design, Setting and Population

A descriptive, cross-sectional survey was designed and distributed online to assess community pharmacists' knowledge of the marketing mix. The study population consisted of community pharmacists in Jordan. The survey was distributed electronically via five local pharmacy Facebook groups.

Sample Size and Sampling Methods

The sample size was determined based on previous studies conducted among community pharmacists in Jordan, which found that a sample of over 250 participants was sufficient to achieve statistical power for detecting differences in knowledge and practice. Although a power analysis was not conducted, this sample size was deemed adequate for representation. A convenience sampling method was used to reach the largest possible sample during the data collection period, as it allowed for quicker recruitment. However, this approach carries limitations, such as potential selection bias and reduced generalizability, the convenience sampling method may not fully capture all demographic variations within the population.

Data Collection Form and Questionnaire

The primary questionnaire was formulated based on previous literature [1, 6, 8-10, 13-17]. It was reviewed by eight experts specializing in marketing, pharmaceutical economics and marketing, social and administrative pharmacy, and clinical pharmacy, who provided feedback on the pharmacists' knowledge and practice of pharmaceutical marketing. Two experts in pharmaceutical marketing evaluated the revised version of the questionnaire, and additional modifications were made based on their expertise. Face and content validity were ensured by piloting the questionnaire with 10 community pharmacists. The Cronbach α for internal consistency was calculated ($\alpha = 0.717$), indicating acceptable reliability.

Questionnaire Structure

The questionnaire evaluated pharmacists' knowledge of the classic 4Ps of marketing: product, place, price, and promotion. It contained 61 questions, categorized into six sections. The first section gathered demographic information to explore potential correlations between pharmacists' characteristics and their marketing mix proficiency. The remaining sections assessed general knowledge of the marketing mix (11 questions), as well as specific knowledge and application of the product (10 questions), price (12 questions), place (11 questions), and promotion (10 questions) components. Responses were captured using a five-point Likert scale. An average score for each element was calculated and converted into a percentile score, with practice scores categorized as poor (50-59%), acceptable (60-69%), fair (70-79%), good (80-89%), and excellent (>90%).

Validity and Reliability of the Tool

To ensure the preservation of content fidelity, the questionnaire was initially drafted in English and then translated into Arabic, with a back-translation conducted to ensure accuracy.

Statistical Analysis

Following data collection from January 10th to May 30th, 2024, the responses were coded and entered a customized database using the Statistical Package for the Social Sciences, version 22.0 (IBM et al.). Descriptive statistics, including means \pm SD for continuous variables and percentages for qualitative variables, were reported. Univariate analysis using simple linear regressions was conducted to explore associations between demographic characteristics and practice scores.

Results and Discussion

Of 46

4 pharmacists who viewed the electronic questionnaire, 449 agreed to participate in the study, yielding a response rate of 96.7%. Most respondents were female (82.8%), held a Bachelor

of Pharmacy degree (65.9%), worked as a staff pharmacist (55.3%), and had a working experience of less than three years (74.4%). Complete demographic details of respondents are presented in Table 1.

When asked about their familiarity with the marketing mix, around two-thirds of respondents (59.9%) indicated familiarity with it. Similarly, 57.3% correctly identified the four Ps of the marketing mix (Price, Product, Promotion, and Place).

Furthermore, respondents were asked to choose the definition of each element of the marketing mix. Of the respondents, 63.1% were able to define a price, 64.8% were able to define promotion, 54.7% were able to define place, and 24.5% defined the product. When asked about the role of each element in the marketing mix, 53% were able to define the role of price, 51.3% were able to define the role of place, 67.0% were able to define the role of promotion, and 37% were able to define the role of product (Table 3). When asked about their knowledge of the responsible authority for pricing medicines in Jordan, 66.8% correctly chose the Jordan Food and Drug Administration (JFDA).

Regarding their average practice scores regarding applying different elements of the marketing mix in their practice, respondents reported a score of 68.69% for the product element, 67.3% for the price element, 69.9% for the place element, and 68.8% for the promotion element, with a total practice score of 68.7% for all the elements combined.

Except for respondents' role in the pharmacy, demographic variables did not significantly influence their knowledge and

practice of the marketing mix in their pharmacies. Table 2 presents the results of the univariate analysis of respondents' demographic details and practice scores. The univariate analysis examined the correlation between demographic variables and the total practice scores of pharmacists. While most demographic variables, such as age, gender, years of experience (how long), academic qualifications, and type of pharmacy work, showed no statistically significant impact on practice scores ($p > 0.05$), the analysis revealed that the pharmacists' role in the community pharmacy was a significant predictor of marketing mix knowledge and practice ($p = 0.002$).

Specifically, pharmacists in leadership or management positions, such as pharmacy owners, demonstrated a better

understanding and application of marketing strategies compared to staff pharmacists.

The overall R-squared value of 0.090 (adjusted R-squared = 0.047) indicates that the model explains a small proportion of the variance in total practice scores.

Table 1: Demographic variables of the respondents

Variable	Number	Percentage
Age	10	2.2%
<20	215	64.3%
25-29	128	27.6%
30-34	52	11.2%
35-39	23	5.0%
40-44	14	3.0%
45-50	11	2.4%
>50	11	2.4%
Gender		
Male	80	17.2%
Female	384	82.8%
Academic Degree		
Bachelor of Pharmacy	304	65.9%
PharmD	59	12.8%
Pharmacy Diploma	77	16.7%
Postgraduate Degree	21	4.6%
Practicing Years (Experience)		
0-3	345	74.4%
3-5	40	8.6%
5-7	24	5.2%
7-10	13	2.8%
>10	42	9.1%
Role		
Pharmacy owner	59	12.8%
Staff Pharmacist	372	80.7%
Assistant Pharmacist	30	6.9%
Type of Pharmacy		
Independent Pharmacy	338	73.4%
Chain Pharmacy	87	18.9%
Hospital Pharmacy (outpatient)	36	7.8%

Table 2 Correlation between respondent's demographic details and total practice scores (Univariate Analysis)

Demographic Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
AGE	7785.414	7	1112.202	1.008	0.425	0.016
GENDER	275.498	1	275.498	0.250	0.618	0.001
HOW_LONG	1315.614	4	328.904	0.298	0.879	0.003
YOUR_ROLE_COMMUNITY	16838.727	3	5612.909	5.087	0.002	0.033
ACADEMIC	2193.323	3	731.108	0.663	0.575	0.004
Pharmacy work	690.376	3	230.125	0.209	0.890	0.001
a. R Squared = .090 (Adjusted R Squared = .047)						

Table 3 Correct definitions and roles for elements of the Marketing Mix

Element	Definition	%	Role	%
Product	Anything that can be offered to a market for attention, acquisition, use or consumption. It includes physical objects, services, persons, places, organizations and ideas.	24.5%	might satisfy a want or need	37.0%
Price	Price is the amount that consumers will be willing to pay for a product set depending on factors of strategic goals of the pharmacy, pricing strategy of the competitors and cost of production.	63.1%	Setting a value to the product or service offered.	53.0%
Promotion	All activities to communicate with the customers.	64.8%	To influence the consumer buying behaviour through information and persuasion.	67.0%
Place	To include logistics and supply chain management	54.7%	To determine how and where the product or service will be distributed.	51.3%

Discussion

The study's findings offer valuable insights into community pharmacists' attitudes and understanding of the marketing mix, especially in the context of Jordan's pharmaceutical industry. Comprehending these results is crucial for enhancing pharmaceutical marketing tactics and guaranteeing adherence to regulatory structures. Even though patient-oriented initiatives in pharmaceutical education were first introduced about 20 years ago, community pharmacies' ability to provide patient care was hampered by pharmacists' inability to grasp basic marketing concepts, which caused them to focus more on tangible products rather than the value they held.

A considerable portion of the participants were reasonably familiar with the marketing mix concept, with approximately 59.9% indicating their awareness. Similarly, 57.3% of participants accurately recognized and named the four fundamental marketing mix components: Price, Product, Promotion, and Place. Nevertheless, a more thorough examination uncovered different degrees of comprehension when participants were prompted to articulate the definition of each component. The definitions for price (63.1%) and promotion (64.8%) were relatively unambiguous, while the definitions for place (54.7%) and especially product (24.5%) were less clearly delineated. Pharmacists understand the different parts of the marketing mix, but there may be unneeded clarifications when applying these elements in the pharmaceutical industry.

Prior studies emphasize the significance of thoroughly comprehending the marketing mix to improve marketing effectiveness and make strategic decisions [18]. More precisely, the concept of the product element goes beyond just the physical characteristics of medicines. It includes the perceived value, and the health benefits patients receive from using them. However,

current perceptions among pharmacists need to give this distinction more importance [6].

The study discovered different levels of understanding regarding the functions of each element in the marketing mix. The survey found that 67.0% of participants could clearly explain the purpose of promotion. However, the level of comprehension was significantly lower for price (53%), place (51.3%), and product (37%). This discrepancy implies a need for more connection between theoretical understanding and practical implementation. This indicates that pharmacists could gain advantages from a more profound understanding of how each component strategically contributes to the effective marketing of pharmaceutical products [1]. The findings underscore the need for targeted educational interventions to bridge the knowledge gaps observed in the marketing mix, especially in understanding the 'product' component. Integrating comprehensive marketing education into pharmacy curricula could enhance pharmacists' abilities to apply marketing principles in their practice. This is essential not only for improving marketing effectiveness but also for better patient outcomes and service delivery. By equipping pharmacists with a deeper understanding of marketing strategies, educational programs can help them become more adept at promoting health-related services and medicines. Based on the study's findings, several recommendations emerge for improving marketing knowledge among pharmacists. Pharmacy educators should develop specialized training that focuses on the practical application of all marketing mix elements, particularly the product and place components, where knowledge gaps were identified. Pharmacy policymakers should advocate for continuous professional development programs that enhance pharmacists' marketing skills, aligning them with modern marketing strategies, including digital marketing. Additionally, pharmacists should be encouraged to participate in workshops and training programs that emphasize the application of marketing principles in day-to-day practice, improving both their professional development and patient care. Future research should explore the impact of emerging digital marketing strategies in pharmacy practice, given the increasing reliance on digital platforms for health promotion and patient engagement. Moreover, studies could assess the effectiveness of targeted educational interventions in improving pharmacists' marketing knowledge and their real-world application. Research into the influence of pharmacy size, location, and ownership on marketing practices could further enhance our understanding of the factors shaping marketing efficacy.

Community pharmacists in Jordan possess practical skills in implementing marketing strategies. However, there are areas where their theoretical knowledge of the marketing mix, particularly the product element, could be enhanced. This presents opportunities for improvement through focused education and regulatory awareness initiatives. Addressing these deficiencies could help the pharmacy sector progress towards effectively meeting both business objectives and the healthcare needs of Jordanian communities. A concerted effort to integrate marketing education into pharmacy training and practice will ensure that pharmacists are better equipped to deliver high-quality services and navigate the evolving healthcare landscape.

Limitations

The study's reliance on convenience sampling introduces potential biases and limits the generalizability of the findings. Although regional representation was sought, the non-random nature of the sampling method may not fully capture the diversity of Jordan's community pharmacists. Additionally, the cross-sectional design prevents the study from assessing changes in pharmacists' marketing knowledge and practices over time. Future studies should consider longitudinal designs to track the evolution of marketing competencies among pharmacists.

Conclusions

The survey findings reveal that a significant proportion of the participants possess a considerable level of knowledge regarding the marketing mix, with approximately 60% demonstrating the ability to recognize and explain the four Ps

(Price, Product, Promotion, and Place). Nevertheless, there are evident deficiencies in understanding, specifically regarding the "Product" component, with less than one quarter of respondents able to provide an accurate definition. A significant percentage of participants (66.8%) accurately recognized the Jordan Food and Drug Administration (JFDA) as the governing body in charge of setting medicine prices, indicating a high level of knowledge regarding regulatory frameworks in the healthcare industry.

Ethics approval and consent to participate

The study followed ethical guidelines outlined in the Declaration of Helsinki. Ethical approval was granted by the Deanship of Research at the University of Jordan. Informed consent was obtained electronically, and all participation was voluntary. Participants could withdraw at any point without consequence. Privacy and confidentiality were maintained, with anonymized data stored securely on a password-protected system.

Consent for publication

Not applicable

Availability of data and materials

The raw data required to reproduce these findings are available in the body and illustrations of this manuscript.

Author's contribution

Author's contribution should be added, for example

The authors confirm contribution to the paper as follows: Idea and Conceptual framework Mukattash, Shatnawi, and Abbadi, Data Collection and Drafting was carried out by Dabaneh, Data Analysis was carried out by Mahasneh, Manuscript Drafting was carried out by Mukattash and Ajlouny, and Proof reading and editing was carried by AbuFarha and Momani.

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Conflicts of interest

The authors declare that there is no conflict of interest regarding the publication of this article

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