

Community Pharmacists' Perspectives on Offering Discounted Prices for Prescription Drugs in Jordan

Ibrahim Lewis Mukattash¹, Tasneem Y Tahat², Sara Ajlouny^{2}, Tareq L. Mukattash², Yara Al Tall³, Anan S Jarab^{2,4}, Ibrahim Alabbadi⁵*

¹ Department of Marketing, Faculty of Business, Applied Science Private University, Amman, Jordan.

² Department of Clinical Pharmacy, Faculty of Pharmacy, Jordan University of Science and Technology, Irbid, Jordan.

³ Department of Pharmaceutical Technology, Faculty of Pharmacy, Jordan University of Science and Technology.

⁴ College of Pharmacy, Al-Ain University, Abu Dhabi, United Arab Emirates.

⁵ Departments of Biopharmaceutics and Clinical Pharmacy, Faculty of Pharmacy, The University of Jordan, Jordan.

ABSTRACT

Background: In Jordan, medicines are priced by the Jordan Food and Drug Administration (JFDA), which mandates pharmacists to sell pharmaceutical products without any discounts or rebates. However, discounting drug prices in community pharmacies is commonplace. The present study aims to understand the motives and perceptions of pharmacists regarding drug price discounts in community pharmacies in Jordan.

Methods: Qualitative interview sessions were conducted with a convenient sample of 20 community pharmacists. A total of 25 participants were interviewed, anonymized, and audio recorded. To ensure maximum comfort, respondents were given the option to choose the interview location or participate through audio-visual communication tools. The sessions followed a pre-designed interview guide focusing on discounts offered on prescription drugs in community pharmacies, pharmacists' experiences, and their attitudes toward these practices. Interview recordings were transcribed and analyzed thematically.

Results: Three main themes emerged: patient-related factors, pharmacist-related factors, and rules and regulations-related factors, each with several subthemes. This study identified several barriers that hinder pharmacists' adherence to medicine pricing policies in community pharmacies in Jordan, including psychosocial and economic factors, customer attraction and profit increase strategies, sales tactics, market share expansion, avoidance of medicine accumulation and expiration, and issues related to regulations and law enforcement.

Conclusion: The findings demonstrate that adherence to medicine pricing policies in community pharmacies in Jordan varies depending on different factors. Pharmacists may exhibit weak adherence under specific circumstances while demonstrating stronger adherence under others. This study provides insights that could inform the revision of regulations and laws governing pharmacy practices and adherence to pricing policies.

Keywords: Pricing, Discounting of medicines, Community pharmacies, Jordan, JFDA

INTRODUCTION

Jordan is a lower middle-income developing country in the Middle East (1). Its gross domestic product (GDP) is

approximately \$45 billion, with a per capita GDP of \$4,204.5. The total health expenditure in Jordan is almost 8% of the GDP, and pharmaceutical expenditure accounts for 2% of the GDP, comprising 27% of the total health expenditure, estimated to be more than \$334 million (2). Compared to estimates from other countries classified by the World Health Organization (WHO) as Eastern Mediterranean Region

*Corresponding author: Sara Ajlouny

alajlounysara@outlook.com

Received: 3/10/2023 Accepted: 4/3/2024.

DOI: <https://doi.org/10.35516/jjps.v17i2.1819>

(EMR) countries, expenditures in Jordan are considered high (3). The increasing burden of health issues and the necessity for affordable drugs place significant pressure on individuals seeking healthcare and medications. Many patients attempt to negotiate treatment and medication prices to alleviate economic burdens (4).

The WHO constitution asserts that all people have the right to quality healthcare, and medicines play a crucial role in achieving this. Access to a variety of medications reduces mortality and morbidity, assuming affordability. This right is universal and enshrined in various healthcare policies and systems globally (5). Access is influenced by factors such as availability, affordability, and drug pricing. Negative factors, such as limited supply or high prices, render drugs inaccessible to segments of the population and can lead to adverse health outcomes (6).

In evaluating costs and access, Jordan's healthcare system financing consists of three sources: public funding (50% in 2015), including the Ministry of Health (MoH), Royal Medical Services (RMS), Civil Health Insurance Program, the Royal Court, and others; household spending (42%), which refers to insurance, direct (out-of-pocket) expenditures on private healthcare services and medications; and donor contributions (8%), encompassing medical services provided by non-governmental agencies (NGOs) (7).

Despite approximately half of the population being covered by MoH and RMS, higher expenditures (58%) occur in the private sector, indicating that even those eligible for public sector services choose private services instead (8).

Medicines in Jordan are priced by the Jordan Food and Drug Administration (JFDA), and regulations mandate pharmacists to sell pharmaceutical products to the public without discounts or rebates (9). The Jordan Pharmacist Association (JPA) is the official union for Jordanian pharmacists, collaborating with various healthcare bodies in the Kingdom such as the JFDA, RMS, and MoH. Every registered pharmacist in Jordan is a member of the JPA by

law, totaling approximately 30,000 members in 2023. The JPA plays a crucial role in raising awareness among pharmacy professionals to ensure medicines are sold at regulated prices and takes a firm stance against unauthorized discounts in retail pharmacy sales. Additionally, the JPA is the sole authorized body for printing price labels on medicines sold in the Jordanian market (10).

Joint efforts by the JFDA and JPA are demonstrated through various awareness campaigns, mystery shopping programs, and the enforcement of fines and penalties (9). Despite these efforts, discounts and rebates remain common practice in community pharmacies in Jordan (11). The Jordanian public continues to demand discounts and is accustomed to negotiating medication prices. The average profit margin for pharmacists selling pharmaceutical products in Jordan is 20% (12). This study aims to investigate the reasons behind why some Jordanian pharmacists choose to offer discounts on pharmaceutical products.

Literature indicates that pharmacists play an important primary care role due to their accessibility (13). Evidence from Jordan suggests that patients often visit pharmacies to save money by purchasing prescription medications directly, without a prescription from a physician (14). We hypothesize that one reason pharmacists offer discounts is to enhance the marketability of their pharmacies, within the context of general poverty and high unemployment rates in the population (15). It is noteworthy that institutional payers for pharmaceuticals are increasingly negotiating discounts off the official listing price of pharmaceuticals purchased in the community setting worldwide (16). Discounts and rebates granted by pharmacists to the public are documented in the literature (17). However, these discounts and rebates may negatively impact the net profit of community pharmacies and potentially lead to closures (18).

This study is particularly important as well as innovative in that it aims to understand the motives behind drug price discounts in community pharmacies in Jordan and generate a

hypothesis about the discounting practice in community pharmacies that can later be tested on a larger scale.

METHODOLOGY

Study Design and Setting

In this qualitative, inductive approach study, in-depth interviews were conducted with a selected group of pharmacists to understand the motives behind offering price discounts on medications sold in community pharmacies. An inductive approach was employed for coding the data. The study was conducted over a 1-month period starting in February 2021.

The study protocol was approved by the Institutional Review Board (IRB) at Jordan University of Science and Technology (reference number: 748/2020). Written informed consent was obtained from all participants after explaining the study objectives. Participants were assured that their participation was for scientific research purposes and would involve no anticipated harmful effects. Confidentiality of their responses was maintained, and participants were informed of their voluntary participation right to withdraw at any time. The study included three sections of interview plans, detailed in the Study Interview Guide.

Study Population, and Sampling Procedure

The study sample comprised 30 pharmacists in Jordan. A convenient sampling method was used, initially identifying pharmacies through internet searches. Pharmacists were contacted using collected phone numbers. Inclusion and exclusion criteria were uniform for both objectives of the study.

Inclusion criteria:

1. Jordanian pharmacist.
2. Provided written or verbally informed consent to participate in the study.
3. Gave sufficient information for taking part in this study.

Exclusion criteria:

Pharmacists who did not consent to participate or refused audio recording were excluded.

Every participant in the study received a consent form outlining the voluntary nature of participation. One-on-one phone interviews were conducted, with the option of face-to-face interviews if preferred. Participants were informed that interviews would be recorded. To maximize comfort, interviews could be conducted at a location of their choice or via audio-visual communication tools. Each session lasted between half an hour to an hour. After conducting 25 interviews, data collection achieved saturation based on the principle of theoretical sufficiency (19).

Interviews with pharmacists were conducted privately in community pharmacies, using Jordanian Arabic for discretion and confidentiality. Participants were assured that interviews would be anonymized and recorded. A structured interview guide focused on understanding medication price discounts in community pharmacies and barriers to adherence to pricing policies. Researchers took notes during sessions to capture key points. Interviews began with questions about the pharmacist's sociodemographic profile, followed by discussions such as: "What are the advantages of offering discounts on drug prices to the public?", "What are the disadvantages?", and "What obstacles do pharmacists face in offering drug price discounts?" Subsequent questions and discussions followed the structured interview guide (see Appendix 1). Participants were encouraged to express their views through closed-ended statements, with follow-up probing questions like "What do you mean by that?" or "Could you elaborate, please?" All interviews were conducted by the same researcher to ensure consistency of understanding.

Data collection involved assigning each participant a number to maintain anonymity, with access restricted to the authors. Although 30 participants were planned, only 25 responded and were enrolled in the study.

Study Interview-guide

The interview-guide assesses and evaluates barriers to adherence to medication pricing policies amongst community pharmacists. An interview-guide was developed after an extensive literature review done by 4 experts in pharmacy practice and health services management (14)(17)(20)(21)(22)(23)(24)(25). It consisted of two parts:

The interview guide assesses and evaluates barriers to adherence to medication pricing policies among community pharmacists. The interview guide was developed following an extensive literature review conducted by four experts in pharmacy practice and health services management (14, 17, 20-25). It consists of two parts:

First Part: Includes socio-demographic information about the participant such as gender, years of experience, pharmacy location, and position.

Second Part: Covers information on the perceived advantages and disadvantages of offering discounts on medicine prices to the public, the motives behind pharmacists providing such discounts, reasons for public demand for discounts, perceived difficulties faced by pharmacists in providing discounts, and the effectiveness of laws and regulations preventing discounts.

Analysis

Interviews were digitally recorded and transcribed verbatim. Two certified translators performed forward and backward translations, which were reviewed by a Pharmacy Practice consultant (26, 27). Results were imported into QSR International's NVivo 11 Software® (28). All audio recordings and interviewer notes were also imported into NVivo for assessment and analysis. Thematic analysis was conducted by the authors based on transcriptions. Direct quotations were lightly edited to remove non-essential content (repetitions, stutters, etc.) and corrected for grammar. Ellipses were used to indicate

removal of such content. Square brackets were used in quotations to clarify omitted words or replace sensitive information like names.

Descriptive statistical analysis of the collected data was performed using Excel software®. Descriptive statistics were used to summarize socio-demographic variables, with mean and standard deviation for continuous variables, and frequency and percentage for categorical variables.

RESULTS

Sociodemographic Details of Participants

Thirty pharmacists were invited to participate in the study, of whom 25 responded. Five participants withdrew: two declined to discuss the subject, and three refused to have their responses recorded. Among the recruited participants, 16 were female (64.0%). In terms of work experience, eight participants (32.0%) had two to five years of experience. The majority (n=17, 68%) were staff pharmacists (employees), while the remaining eight (32%) were pharmacy owners. Participant locations were categorized into two regions: the northern region including Irbid, Ajloun, Jerash, Zarqa, and Mafraq governorates, and the southern region including Balqa, Madaba, Amman, Tafilah, Maan, Aqaba, and Karak. Additional demographic details are provided in Tables 1 and 2.

Almost all participants confirmed that they had engaged in discounts in community pharmacies and did not adhere to medication pricing policies. Three major themes emerged and were classified as: patient-related, pharmacist-related, and rules-and-regulations-related. Each theme was classified into sub-themes, which are presented in Table 3 and Figure 1.

Emerging Themes

Theme 1: Patient-related factors

Patient-related factors can be assessed by looking at the two subthemes which have emerged through the analysis, namely psychosocial factors and economic factors.

Table 1: Sociodemographic characteristic of the participants

Variable	Number	Frequency (%)
Gender		
Male	9	36%
Female	16	64%
Work experience (years)		
Up to 1 year	4	16%
2–5 years	8	32%
6–10 years	3	12%
11–15 years	10	40%
Living area		
North	14	56%
South	11	44%
Position		
Owner of a pharmacy	8	32%
Ordinary employee	17	68%

Table 2: Demographic characteristic of the participants (n=25)

Participant ID	Gender	Work experience (years)	Position
FS 1	Male	5	Employee
FS 2	Male	4	Employee
FS 3	Female	1	Employee
FS 4	Male	3	Employee
FS 5	Female	12	Owner
FS 6	Female	13	Owner
FS 7	Male	1	Employee
FS 8	Female	2	Employee
FS 9	Male	15	Owner
FS 10	Female	4	Employee
FS 11	Female	7	Employee
FS 12	Male	1	Employee
FS 13	Female	8	Employee
FS 14	Female	5	Employee
FS 15	Male	1	Employee
FS 16	Female	3	Employee
FS 17	Female	9	Employee
FS 18	Male	4	Employee
FS 19	Female	11	Owner
FS 20	Female	14	Employee
FS 21	Female	13	Owner
FS 22	Female	15	Owner
FS 23	Female	11	Employee
FS 24	Female	13	Owner
FS 25	Male	14	Owner

Table 3: List of themes and sub-themes that affect Adherence of medicines' prices

Main themes	Sub-themes	Selected quotes
Patient-related Factors	• Psychosocial Factors	<p>“If there is no discount on medicines in the pharmacy, the patient would say I will find a discount in other pharmacies, which is my right”, FS 2, FS11.</p> <p>“The pharmacy profit is high; there is no discount on medicines?” Patient asked the pharmacist FS 18, FS 30.</p> <p>“I am your colleague in the medical profession. There is no discount for fellow medical professionals on medicines?”. Patient said to pharmacist, FS 11, FS 12.</p>
	• Economic Factors	<p>“I suffer from chronic diseases and I take several medicines. Is there a discount on treatment? Because I do not have health insurance to become a customer of the pharmacy.”. patient said, FS 20, FS 22.</p> <p>“I am a patient suffering from reproductive problems and I want IVF treatments, and the cost is high. Are there any discounts?” patient said, FS24.</p>
Pharmacist-related Factors	• Attract Customers, increase profit	“I make discounts in order to win customers, and if I make a one-time discount, the patient will ask for the discount every time, so he would tell me that you discounted my drug the previous time, so you have to make the discount this time as well”, FS 21.
	• General Selling Tactics and Market-Share	<p>“The prevailing idea among pharmacies is to make discounts, so I have to make a discount”, FS 24.</p> <p>“I make discounts on medicines to attract customers”, FS 19.</p>
	• Avoiding Accumulated Medicines	“In the event of a stock of medications, and the company does not guarantee the exchange of this medication close to the expiration date, I have to make a deduction to get rid of this medication”, FS 23.
Rules and regulations related factors	• Effective Mandating	“My belief is that the factor of tightening control over the policy of pricing and standardizing medicines is important so that if the patient goes to more than one pharmacy with the aim of pricing a medicine and finds that all pharmacies agree on one price, it will assure the patient that there is no discount from community pharmacies”,FS1.
	• Rule of Law	“The application of the law to all violation of the Jordanian drug pricing policy”, FS 17.

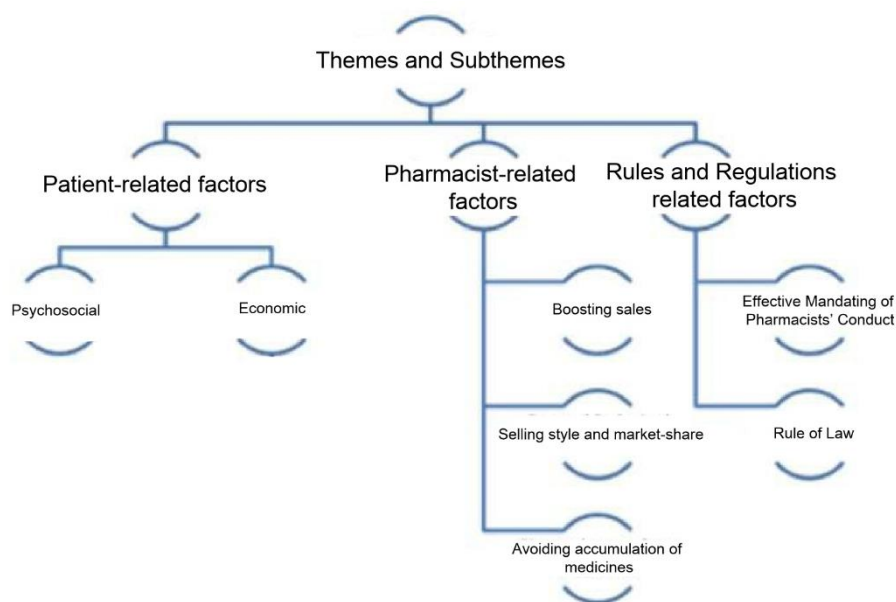


Figure 1: Schematic representation of themes and subthemes that affect adherence to medicines’ pricing policies

1. Psychosocial factors:

Participants emphasized that psychological factors significantly influence patients' demand for discounts in community pharmacies. The Jordanian public perceives drug prices as high and believes pharmacists make substantial profits from direct-to-consumer sales. This perception encourages patients to seek discounts. Additionally, participants noted that consumers in Jordan are accustomed to receiving price reductions due to the competitive nature of the pharmaceutical market, reinforcing their expectation of discounts. One participant (FS 21) remarked, "I struggle to adhere to drug pricing policies because once a discount is given, patients expect discounts in future transactions."

2. Economic Factors:

Participants highlighted economic factors as crucial in the decision to offer discounts in community pharmacies. Patients' limited income, common in a middle to low-income country, often prompts requests for medication discounts. Another participant (FS 21) noted, "Both pharmacists and patients face challenging economic

conditions." Furthermore, patients managing multiple chronic conditions with several prescriptions per month, especially without insurance coverage, are more likely to request discounts. Pharmacists respond to these economic pressures to retain their clientele.

Theme 2: Pharmacist related factors

Attracting more patients and boosting pharmacy sales, the general readiness for community pharmacists to give discounts to enhance their pharmacy’s market-share, and the desire to liquidate inventories are several subthemes emerging for this theme and are possible factors for a pharmacist to willingly give discounts in community pharmacies.

1. Attracting more patients and boosting pharmacy sales:

Pharmacists aim to attract patients and appear more reliable and sociable by giving discounts in pharmacies to increase the net profit that returns to the owner of the pharmacy. One participant (FS 11) said: "for a pharmacist to have distinct reputation and marketability, one should engage in giving discounts". This is especially true when a

staff pharmacist is hoping for a raise, or an incentive/commission-based reward added to his/her salary.

2. General Selling Tactics and Market-Share:

Most pharmacies give out discounts to patients on medicines with the intention of increasing the size of their pharmacies' market-share, which in turn puts pressure on other pharmacies to give discounts on medicines thus making it a norm amongst community pharmacists. *"The main advantage of buying medications from a community pharmacy is receiving discounts"* FS4 shared.

3. Avoiding accumulated medicines:

Sometimes pharmacists are inclined to give discounts to avoid having frozen capital and accumulating inventory. *"In the event of a stack of medications, and the company does not guarantee the exchange of this medication close to the expiration date, I have to make a deduction to get rid of this medication"* FS 23 shared.

Theme 3: Rules and regulations related factors

Factors related to rules and regulations of drug discounting are: 1) effective mandating of pharmacists' conduct and 2) justice and law enforcement. Those two factors emerging as subthemes are crucial to unifying drug prices in community pharmacies.

1. Effective Mandating of Pharmacists' Conduct:

Authorities bear the responsibility of tackling the burden of fluctuating prices in accordance with set rules that are committed to transparency and effectively respond to various forces that participate in these operations i.e. consumerism and drug safety. They also bear professional and ethical responsibility for applying these laws. *"My belief is that the factor of tightening control over the policy of pricing and standardizing medicines is important."* FS 1 shares.

2. Rule of Law

The situation in Jordan for discounting medicine prices in community pharmacies has brought on detrimental consequences. Community pharmacists compete with each other trying to undercut prices. Those tactics contribute to the frequency and severity of discount pricing and price competition. Most respondents were found wanting the

problem to be addressed.

"The application of the law should be to all violations of the Jordanian drug pricing policy", FS 17 said. Our respondents advocate for a strict rule of law in enforcing minimum pricing strategies, emphasizing the need for stringent measures against violations to ensure fair and ethical business practices within the pharmaceutical industry.

DISCUSSION

Medicines play a crucial role in healthcare. Proper usage and compliance with pharmacotherapy are cost-effective elements of modern healthcare (29), contributing to better quality of life and improved health outcomes. The Jordan Food and Drug Administration (JFDA) is an independent body that governs national retail prices for drugs in the kingdom. It is responsible for continuous assessment of medication prices and sets a fixed income margin for drug manufacturers and importers (30). Pharmacists in Jordan are prohibited from offering discounts on the retail price of medicines. It is noteworthy that patients in Jordan are not legally subjected to pharmacy prescription charges, which are an important source of income for pharmacists globally, from which they are exempt (31).

Although adherence to drug pricing policies in Jordanian community pharmacies is mandatory, the high cost of drugs remains one of the biggest obstacles in Jordan's healthcare system. This study identified several barriers that prevent pharmacists from strictly adhering to the law and from rejecting patient requests for discounts.

Factors Affect Discounting of Medicines' Prices in Community Pharmacies

Patient-related Factors

Patient-related factors contain the sub-themes: psychosocial factors and economic factors.

Given the rising burden of providing affordable drugs, there is significant pressure on people seeking quality healthcare and medication. This is why many patients try to negotiate treatment and medication prices to alleviate

the economic burden they often face (4).

1. Psychosocial Factors

The subthemes identified as psychosocial include personal expectations of service and perceptions of professional status. A study conducted in the United Kingdom affirms that factors influencing pharmacy selection are regular access to quality pharmaceutical advice and professional services, rather than cost and medication promotions (32). In contrast, our study participants (FS 2, 11, 12) expressed a belief in a "right" to discounts based on their medical profession, or a sense of unfairness when pharmacies offer discounts selectively, highlighting cost-related and psychosocial expectations.

Similarly, research on community pharmacy practice in Malaysia indicates that over 85% of participants reported that the prevalence of discounts influences patient loyalty, a psychosocial behavior (21). Literature also suggests that acknowledged discounts positively affect patient confidence, happiness, and satisfaction (33).

2. Economic Factors

In developing countries like Jordan, patients' economic status is a significant factor influencing their choice of pharmacy. Price sensitivity is crucial, especially in the absence of health insurance and with the prevalence of polypharmacy. Patients prefer pharmacies offering the lowest prices, posing a dilemma for pharmacists adhering to drug pricing policies versus risking losing sales. Our study found patients (FS 18, 30) requesting discounts due to perceived high pharmacy profits. Consistent with our findings, Mathews et al. reported that 87% of respondents felt pharmacists may be seen as profiteering (21).

A study in Poland identified fair pricing (78%) and discounts on medications (66%) as primary factors influencing pharmacy choice (32). Similarly, a Greek study categorized 16% of participants as "convenience and price-sensitive customers," with price being a key factor in pharmacy purchases (34). FS24 requested discounts due to the high costs of IVF treatment, aligning with findings in Thailand where customers choose pharmacies based on

medication prices (35). Additionally, in Jordan, Ghattas et al. identified sales promotions, including discounts, as statistically significant factors influencing pharmacy selection (36).

Pharmacist-Related Factors

This theme encompasses several sub-themes, including attracting more patients and boosting pharmacy sales, employing general selling tactics to increase market share, and the desire to liquidate stock units. These factors drive pharmacists to agree to giving discounted prices in community pharmacies.

Our study reveals that pharmacists may deviate from drug pricing policies to avoid profit loss in community pharmacy settings. Participants reported a prevalent practice in Jordan where pharmacies offer discounts to attract customers and increase sales, as seen with FS24. FS21 confirmed that discounts are used to attract customers, but once initiated, patients consistently expect discounts regardless of fixed pricing, negatively impacting profitability and credibility. This reflects the concept of Competitive Pricing Strategy in community pharmacy to enhance sales (37).

Encouraging patients to take advantage of set-price, product-based markets relative to competition, discounts are an effective tactic. These findings are consistent with a study in Malaysia where new community pharmacists adjust prices to remain competitive (21). Medicine pricing was identified globally as a key factor in repeat sales, aligning with our study's findings. In contrast, a Dutch study suggests patients are less likely to switch pharmacies based on price alone (38).

Pharmacists continually strive to provide trustworthy, reliable, and professional service to foster customer loyalty and expand market share. While this may diverge from traditional pharmacy roles, it aligns with findings from the Malaysian study (21). However, as retail businesses, offering discounts and promotions on medicines enhances marketability and provides a competitive edge.

Medicines are unique products with expiration dates

crucial to patient desirability and effectiveness. From a revenue efficiency perspective, concern arises that unsold medicine units nearing expiration lose capital value, potentially leading to significant profit loss, as noted by FS23 (33) (34).

Regulations and Law Related Factors:

Medicine pricing policies in Jordan are based on international standards that reference retail prices in various countries, distinguishing between originator and generic brands. The role of the Jordan Food and Drug Administration (JFDA) in these policies is crucial, aiming to mitigate the negative impacts of discounting while meeting the healthcare needs of the Jordanian public. The pricing guidelines must remain dynamic and adaptable to evolving economic and social circumstances, akin to minimum selling price (MSP) practices or price-capping.

Medications are essential public goods that should not be subject solely to market forces such as supply and demand. Therefore, the procurement of medicine and provision of health services should be governed by unified laws or regulatory frameworks rather than individual discretion.

In Jordan, pharmacists often receive compensation around or below the minimum monthly wage set by the Jordan Pharmacists Association (JPA), which is JD350. This stands in contrast to practices in other countries where pharmacists are increasingly compensated separately for dispensing services, proportional to the quantity of items in a prescription (e.g., United States, Australia, Canada). This underscores the need for Jordan to review and establish new laws and regulations to enhance pharmacists' income, mitigate the consequences of discounting, and improve livelihoods.

Significantly, the importance of strict pricing provisions and standardization of medicines was highlighted by nearly all participants. FS1 emphasized the need for such measures to discourage patient requests for discounts. This aligns with findings by Mathews et al., who advocate for healthcare authorities to address

pharmaceutical costs and implement MSPs to ensure fairness among community pharmacists. Survey participants suggested that introducing price control protocols could effectively enhance pharmacy practices (21).

Limitations

This study faces a significant limitation due to its small sample size, which restricts the generalizability of findings to all community pharmacists in Jordan. However, the qualitative design allowed for determining the final sample size based on thematic saturation. Despite careful preparation of the interview guide and personalized data collection, complete elimination of recall bias is impossible.

To reduce response burden, minimal demographic information was collected. Including additional demographic data (such as age and educational level) or practice site information (such as weekly prescription volume and pharmacy revenue) could have provided a more comprehensive understanding of community pharmacists' perceptions. Furthermore, the convenience sampling method used introduces potential response bias into the analysis.

CONCLUSIONS

Pharmacy practice and well-established, data-driven drug pricing guidelines can play a crucial role in achieving universal affordability, improved accessibility, and availability of essential medicines.

Our study provides valuable insights for public authorities tasked with managing the challenge of fluctuating drug prices through transparent guidelines and responsive legislation that considers the perspectives of stakeholders such as patients, suppliers, and the pharmaceutical industry. These findings will assist policymakers in developing and enforcing laws governing drug pricing and final retail prices in community pharmacies across Jordan.

The study identifies three major themes: Patient-

related factors, Pharmacist-Related Factors, and Discounts Regulation and Law Related Factors. Subthemes include psychosocial and economic factors, strategies to attract customers and increase pharmacist profits, general selling tactics, market share considerations, and inventory management practices—all of which potentially influence adherence to drug pricing policies in Jordan.

In a price-sensitive environment, it is crucial to further investigate variations in drug pricing practices within

pharmacy settings to ensure fairness and mitigate cost-related non-adherence, which could lead to adverse health outcomes. Several avenues for future research are suggested. Qualitative studies could explore the systematic practice of drug price discounting across different products in community pharmacies. Additionally, quantitative research could examine the relationship between discounting frequency and factors such as the density of competing pharmacies or regional demographics.

Appendix 1: Interview Guide

Participant information
Gender
Number of years of work
Pharmacy location
Pharmacist job (Staff/Owner)

Questions related to compliance with the drug pricing policy:

1. In your opinion, what are the advantages of offering the public a discount on drug prices?
2. In your opinion, what are the disadvantages of offering the public a discount on drug prices?
3. What are the motives that prompt pharmacists to offer discounts on drug prices?
4. What are the obstacles and difficulties facing the pharmacist regarding offering drug price discounts?
5. Why do you think the public requests discounts on medicines?
6. In your opinion, how effective is the law that prevents discounts on medicines? Should it be modified?
7. In your opinion, what benefit does a pharmacist gain from the discounts offered to the public on medicine?

REFERENCES

1. The World Bank. Jordan home. Available from: <http://www.worldbank.org/en/country/jordan>.
2. Jordan Department of Statistics. Jordan statistical yearbook 2013. Available from: <http://webdosgovjo>.
3. Jordan High Health Council. Jordan National Health Account (NHA) 2012. The Technical.
4. Grepperud, S., & Pedersen, P. A. (2020). Positioning and negotiations: The case of pharmaceutical pricing. *European Journal of Political Economy*, 62, 101853. <https://doi.org/10.1016/j.ejpoleco.2020.101853>.
5. "Constitution of the World Health Organization", *American Journal of Public Health* 36, no. 11 (November 1, 1946): pp. 1315-1323. <https://doi.org/10.2105/AJPH.36.11.1315>
PMID: 18016450
6. Shukar S, Zahoor F, Hayat K, Saeed A, Gillani AH, Omer S, Hu S, Babar Z-U-D, Fang Y and Yang C (2021) Drug Shortage: Causes, Impact, and Mitigation Strategies. *Front. Pharmacol.* 12:693426. doi: 10.3389/fphar.2021.693426
7. WHO. Health System Profile–Jordan. Regional Health Systems Observatory–EMRO retrieved from <http://apps.who.int/medicinedocs/documents/s17296e/s17296e.pdf>. 2006.
8. "The National Strategy for Health Sector in Jordan 2015-2019." Accessed February 22, 2024. <http://www.hhc.gov.jo/uploadedimages/The%20National%20Strategy%20for%20Health%20Sector%20in%20Jordan%202015-2019.Pdf>." Accessed February 22, 2024. <http://www.hhc.gov.jo/uploadedimages/The%20National%20Strategy%20for%20Health%20Sector%20in%20Jordan%202015-2019.pdf>.
9. JFDA. Jordanian Food and Drug Organization. Medicine and Pharmacy Law. 2013.
10. Abbott, R. B., Bader, R., Bajjali, L., ElSamen, T. A., Obeidat, T., Sboul, H., ... & Alabbadi, I (2012) The price of medicines in Jordan: the cost of trade-based intellectual property. *Journal of Generic Medicines*, 9(2), 75-85.
11. Mukattash, T. L., Bazzi, N. H., Nuseir, K. Q., Jarab, A. S., Abu-Farha, R. K., & Khdour, MR (2018) Pharmaceutical care in community pharmacies in Jordan: a public survey. *Pharmacy Practice (Granada)*, 16(2).
12. World Health Organization. (2007). Jordan: Medicine prices, availability, affordability and price components (No WHO-EM/EDB/087/E).
13. Tsuyuki RT, Beahm NP, Okada H, Al Hamarneh YN. Pharmacists as accessible primary health care providers: Review of the evidence. *Canadian pharmacists journal : CPJ = Revue des pharmaciens du Canada : RPC*. 2018;151(1):4-5.
14. El-Dahiyat, F. A., & Kayyali, R. (2013). Community pharmacists' perceptions towards generic medicines and their opinions on future generic substitution policy. A descriptive study from Jordan. *Journal of Generic Medicines*, 10(2),97-104.
15. Karir, V., Bygrave, H., Cepuch, C., Davis, B., Elder, G., Jobanputra, K., & Reddy, A. (2018) ACCESSIBILITY TO MEDICINES FOR MAJOR NON-COMMUNICABLE DISEASES IN JORDAN–2018 (INTERNAL BRIEFING DOCUMENT).
16. Morgan, Steven G., Sabine Vogler, and Anita K. Wagner. "Payers' experiences with confidential pharmaceutical price discounts: a survey of public and statutory health systems in North America, Europe,." *Health Policy* 121.4 (2017): 354-362.
17. Mukattash TL, Bazzi NH, Nuseir KQ, Jarab AS, Abu-Farha RK, Khdour MR. Pharmaceutical care in community pharmacies in Jordan: a public survey. *Pharm Pract (Granada)*. 2018;16(2):1126.

18. Vogler, Sabine, et al. "Discounts and rebates granted to public payers for medicines in European countries" *Southern med review* 51 (2012): .38.
19. Dey I. *Grounding grounded theory: guidelines for grounded theory inquiry*. San Diego, USA: Academic Press; 1999.
20. Gernant, S. A., Polomoff, C. M., Marsh, J., Martineau, S., Hardie, C., & Jeffery, S. M. (2020). Pharmacists' Experiences, Perceptions, and Knowledge of Direct-to-Consumer Prescription Coupons. *Journal of Managed Care & Specialty Pharmacy*, 26(9). <https://doi.org/10.18553/jmcp.2020.26.9.1130>
21. Mathews, A., Ming, L. C., Che Rose, F. Z., & Abbas, S. A. (2020). Cross-sectional Study on the Impact of Discount Pricing and Price Competition on Community Pharmacy Practice. *Cureus*, 12(8). <https://doi.org/10.7759/cureus.9903>
22. Munigala, S., Brandon, M., Goff, Z. D., Sagall, R., & Hauptman, P. J. (2019). Drug discount cards in an era of higher prescription drug prices: A retrospective population-based study. *Journal of the American Pharmacists Association*, 59(6), 804-808.e1. <https://doi.org/10.1016/j.japh.2019.05.021>
23. Kentucky, Joey Mattingly PharmD, Mba Prospect., "Understanding Drug Pricing," June 20, 2012. <https://www.uspharmacist.com/article/understanding-drug-pricing>.
24. Rodgers R, Gammie S, Loo RL, Corlett S, Krska J. Comparison of pharmacist and public views and experiences of community pharmacy medicines-related services in England. *Patient Prefer Adherence*. 2016;10:1749-1758 <https://doi.org/10.2147/PPA.S112931>
25. KFF. "Public Opinion on Prescription Drugs and Their Prices | KFF," August 29, 2023. <https://www.kff.org/health-costs/poll-finding/public-opinion-on-prescription-drugs-and-their-prices/>.
26. Toma, G., Guetterman, T. C., Yaqub, T., Talaat, N., & Fetters, M. D. (2017). A systematic approach for accurate translation of instruments: Experience with translating the Connor–Davidson Resilience Scale into Arabic. *Methodological Innovations*, 10(3), 205979911774140. doi:10.1177/2059799117741406
27. Gawlewicz A. (2020). *Translation in qualitative methods*. SAGE Publications Limited.
28. NVivo qualitative data analysis. Version 11 [software]. QSR International Pty Ltd. 2018. Available from: <https://support.qsrinternational.com/nvivo/s/>.
29. Bansal D, Purohit VK. Accessibility and use of essential medicines in health care: Current progress and challenges in India. *Journal of Pharmacology and Pharmacotherapeutics*. 2013;4(1):13-8.
30. Alefan, Q., Amairi, R., & Tawalbeh, S. (2018). Availability, prices and affordability of selected essential medicines in Jordan: a national survey. *BMC health services research*, 18(1), 787.
31. Abbott, R. B., Bader, R., Bajjali, L., ElSamen, T. A., Obeidat, T., Sboul, H., ... & Alabbadi, I. (2012). The price of medicines in Jordan: the cost of trade-based intellectual property. *Journal of Generic Medicines*, 9(2), 75-85.
32. Merks, P., Kaźmierczak, J., Olszewska, A. E., & Kołtowska-Häggström, M. (2014). Comparison of factors influencing patient choice of community pharmacy in Poland and in the UK, and identification of components of pharmaceutical care. *Patient Preference and Adherence*, 8, 715-726.
33. Ali F, Amin M, Cobanoglu C: An integrated model of service experience, emotions, satisfaction, and price acceptance: an empirical analysis in the Chinese hospitality industry. *J. Hosp. Market. Manag.* 2016;25(4):449–475. <https://doi.org/10.2147/PPA.S53829>

34. Kevrekidis, D. P., Minarikova, D., Markos, A., Malovecka, I., & Minarik, P. (2017). Community pharmacy customer segmentation based on factors influencing their selection of pharmacy and over-the-counter medicines. *Saudi Pharmaceutical Journal*, 26(1), 33-43. <https://doi.org/10.1016/j.jsps.2017.11.002>
35. Erilia Kesumahati, Teddy Jurnal, (2020) *Analysis of Factors Influencing Customer Satisfaction and Purchase Intention at Pharmacy in Batam City* [10.2991/aebmr.k.200915.050](https://doi.org/10.2991/aebmr.k.200915.050)
36. Ghattas D, Al-Abdallah G. Factors affecting customers selection of community pharmacies: The mediating effect of branded pharmacies and the moderating effect of demographics. *Management Science Letters*. 2020;10(8):1813-26.
37. Lee, K. S., Kassab, Y. W., Taha, N. A., & Zainal, Z. A. (2021). A systematic review of pharmaceutical price mark-up practice and its implementation. *Exploratory Research in Clinical and Social Pharmacy*, 2. <https://doi.org/10.1016/j.rcsop.2021.100020>
38. H. Buurma, M. Bouvy, P. De Smet, A. Floor-Schreuderling, H. Leufkens, A. Egberts Prevalence and determinants of pharmacy shopping behavior *J Clin Pharm Therapeut*, 33 (1) (2008), pp. 17-23
39. Török I. "Ertécsökkent gyógyszer?" [Does medicine lose its value near the expiration date?]. *Acta Pharm Hung*. 2001 Aug;71(2):213-4. Hungarian. PMID: 11862672.
40. Saadeh, A., Jarab, A. S. ., Jaradat, R., & Al Daqqa, R. (2023). Community Pharmacists' Attitudes, Preferences and Barriers toward Continuing Pharmaceutical Education: A Cross Sectional Study in Jordan. *Jordan Journal of Pharmaceutical Sciences*, 16(2), 245–257. <https://doi.org/10.35516/jjps.v16i2.1328>
41. Al-Taani, G. M., Muflih, S. ., Alsharedeh, R. ., & Altaany, Z. . (2023). Knowledge, Willingness to Pay and Beliefs for Seasonal Influenza Vaccination, A Cross-Sectional Study from Jordan. *Jordan Journal of Pharmaceutical Sciences*, 16(4), 842–856. <https://doi.org/10.35516/jjps.v16i4.607>
42. .Elayeh, E. R., Haddadin, R. N., Dawud, R. J., Alsinjlawi, H. o., & Zidan, R. k. (2024). Navigating Changes in Patient Drug and Non-Drug Item Demands in Community Pharmacies Amidst the COVID-19 Pandemic: Changes in drug demand during COVID19. *Jordan Journal of Pharmaceutical Sciences*, 17(1), 31–44. <https://doi.org/10.35516/jjps.v17i1.1426>

وجهات نظر صيادلة المجتمع حول تقديم أسعار مخفضة لأدوية الوصفات في الأردن

ابراهيم لويس مقطش¹، تسنيم الطاهات²، سارة العجلوني*²، طارق مقطش²، يارا التل³، عنان جراب⁴، ابراهيم العبادي⁵

¹ قسم التسويق، كلية الاعمال، جامعة العلوم التطبيقية، عمان، الاردن.

² قسم الصيدلة السريرية، كلية الصيدلة، جامعة العلوم و التكنولوجيا الاردنية، اربد، الاردن.

³ قسم التكنولوجيا الصيدلانية، كلية الصيدلة، جامعة العلوم و التكنولوجيا الاردنية، اربد، الاردن.

⁴ كلية الصيدلة، جامعة العين، ابو ظبي، الامارات العربية المتحدة.

⁵ قسم الصيدلة السريرية و الصيدلانيات الحيوية، كلية الصيدلة، الجامعة الاردنية، عمان، الاردن.

ملخص

في الأردن، يتم تسعير الأدوية من قبل مؤسسة الغذاء والدواء الأردنية (JFDA) التي تلزم الصيادلة ببيع المنتجات الصيدلانية دون أي تخفيضات أو حسومات. ومع ذلك، فإن خصم أسعار الدواء في صيدليات المجتمع أمر شائع. تهدف الدراسة الحالية إلى فهم دوافع و توجهات الصيادلة المؤدية لتخفيض أسعار الأدوية في صيدليات المجتمع في الأردن. تم إجراء المقابلات النوعية مع عينة مكونة من 20 صيدلاني من صيادلة المجتمع. تمت مقابلة 25 مشاركاً، مع إخفاء هويتهم، وتم تسجيل المقابلات صوتياً. ولتحقيق أقصى قدر من الراحة، أُتيحت للمستجيبين فرصة حضور المقابلة في مكان من اختيارهم أو عبر أدوات التواصل السمعية والبصرية. تم إجراء المقابلات باستخدام دليل مصمم مسبقاً. يناقش دليل المقابلة تقديم تخفيضات على الأدوية الموصوفة في صيدليات المجتمع وتجارب الصيادلة ومواقفهم على هذا الصعيد. تم نسخ تسجيلات المقابلة وتحليلها موضوعياً.

النتائج: ظهرت ثلاثة محاور رئيسية، بما في ذلك العوامل المتعلقة بالمرضى، والعوامل المتعلقة بالصيدلاني، والعوامل المرتبطة بالقوانين واللوائح، ولكل منها بعض المواضيع الفرعية. بينت هذه الدراسة عدة عوامل أعاققت التزام الصيادلة بسياسات تسعير الأدوية في صيدليات المجتمع في الأردن منها العوامل النفسية الاجتماعية، العوامل الاقتصادية، جذب العملاء وزيادة ربح الصيدلي، أساليب البيع، زيادة الحصص السوقية، تجنب تراكم الأدوية وانتهاء صلاحيتها وإنفاذ القانون. نستنتج من النتائج التي تم جمعها أن الالتزام بسياسات تسعير الأدوية في صيدليات المجتمع في الأردن ليس مثالياً ولكنه يعتمد على عوامل مختلفة. وبالتالي، قد يُظهر الصيادلة التزاماً ضعيفاً في ظل ظروف معينة بينما يكون لديهم التزام أفضل في ظل ظروف أخرى. تقدم هذه الدراسة رؤى لإعادة النظر في السياسات والقوانين المتعلقة بممارسة الصيدلة والالتزام بتعليمات التسعير.

الكلمات الدالة: التسعير، الخصم على الأدوية، صيدليات المجتمع، الأردن، المؤسسة العامة للغذاء والدواء.

* المؤلف المراسل: سارة العجلوني

alajlounysara@outlook.com

تاريخ استلام البحث 2023/10/3 وتاريخ قبوله للنشر 2024/3/4.