

Bahraini Community Pharmacies and Self-care: Context, Challenges, and Opportunities

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ABSTRACT

Self-care practices are increasingly recognized as vital components of healthcare systems worldwide, with community pharmacists emerging as key facilitators. The potential of community pharmacists to play a key role in educating and promoting self-care behaviors in communities is immense, which will undoubtedly positively affect the healthcare system. The Kingdom of Bahrain has shown recent developments in the pharmacy sector; however, further improvements are required since there is a lack of national programs, strategies, or policies focusing on community pharmacists and self-care in the Kingdom of Bahrain. The future implementation of community pharmacy practice and self-care programs is necessary and holds great promise. This article explores the presence of self-care in the Kingdom of Bahrain and whether any policies or programs are present. It describes current pharmacy practice and the challenges that lie within; in addition, it highlights the current national laws, programs, and educational levels concerning pharmacy and self-care. Furthermore, this article addresses development opportunities in Bahrain Community Pharmacy concerning self-care and the development of the healthcare system. Recommendations were listed taking into consideration the key factors stated by the World Health Organization (WHO) (agency, availability, quality, cost, information, accessibility, utilization, social support, acceptability, and efficiency) to support the implementation of self-care practices in the Kingdom of Bahrain, guided by community pharmacists.



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1. INTRODUCTION

Self-care is a broad term with multiple definitions provided by various organizations and studies. The World Health Organization (WHO) defines self-care as “the ability of individuals, families, and communities to promote health, prevent disease, maintain health, and cope with illness and disability with or without the

support of a health worker" [1]. This definition includes several key aspects: health promotion, which focuses on empowering individuals to control their health [2]; disease prevention, which focuses on reducing disease burden [3]; health maintenance; and ending with current complications and disabilities. This process can be done either with or without the guidance of a health practitioner.

The increased interest in self-care has introduced new concepts, particularly self-diagnosis and self-medication, which are especially relevant in pharmacy settings. Self-diagnosis refers to the process of identifying a medical condition independently, which is facilitated by increased access to online resources and information related to disease management [4]. On the other hand, Self-medication involves the use of medical products to manage a self-diagnosed condition, whether new or recurring [5]. While these practices can empower patients, they also pose risks, including antibiotic resistance and adverse drug interactions [6].

The evolution of self-care has been accompanied by the development of innovative tools and interventions. Examples include advanced medical devices, high-quality medications, digital platforms, and diagnostic tools that patients can access without professional referral. According to [7], self-care interacts with daily life and health systems through three primary interventions: self-management, self-testing, and self-awareness. These interventions can improve patients' quality of life and access to resources and reduce hospital visits, resulting in cost-effective outcomes.

Pharmacists play a critical role in self-care, extending well beyond just dispensing. Their contributions include assessing patients, preventing diseases, maintaining health, and managing complicated cases [8]. These expanded roles highlight the importance of evaluating the current and future integration of self-care practices within community pharmacies in the Kingdom of Bahrain.

2. KINGDOM OF BAHRAIN HEALTH CARE SYSTEM

Over the years, Bahrain's healthcare system has undergone significant development, reflecting considerable improvements in health outcomes. For instance, life expectancy in Bahrain increased from 70.5 years in 2000 to 75.8 years in 2019, surpassing the global average of 73.4 years reported in 2019 [9]. The Ministry of Health (MOH) has a clear vision: to form a healthy society that enjoys comprehensive, sustainable, and health-promoting preventive care [10]. This vision drives efforts across public and private healthcare systems to enhance service quality and expand infrastructure. The National Health Regulatory Authority (NHRA) 2022 annual report has stated that the number of eligible hospitals and medical centers reached 23 hospitals and 70 medical centers equipped with all fundamental facilities to deliver high-quality services through skilled and licensed healthcare providers [11].

The governmental healthcare system in the Kingdom of Bahrain provides several services for citizens and foreigners through the National Social Health Insurance Program (SEHATI), which ensures free healthcare services for citizens and nominal fees for foreigners, promoting equitable access to care [12].

An essential component of Bahrain's healthcare ecosystem is the I-SEHA system, a national health information platform that integrates services such as appointments, radiology, prescriptions, and laboratory results. This advanced algorithmic system enables individualized, evidence-based care by merging patient data to ensure timely, efficient, and effective healthcare delivery [13].

Despite these advancements, challenges persist. The segmentation of healthcare documentation systems—with public and private facilities often operating independently—leads to gaps in patient data within the I-SEHA system. Addressing this fragmentation is crucial for achieving a fully integrated healthcare framework

that supports the Kingdom's broader vision of enhanced public health outcomes.

3. HEALTH AND PHARMACEUTICAL EXPENDITURES

The Kingdom of Bahrain is demonstrating a growing interest in pharmaceutical manufacturing, although it is new to this sector. An article written by BMI Company stated that within five years, Bahrain's pharmaceutical exports may grow faster than imports, and this shift will be a result of the Kingdom's steps in expanding the local generic drug market and improving trade links [14]. These steps can be noticed in real life. Before 2010, pharmaceutical manufacturing was non-existent in Bahrain. Today, two manufacturers—Bahrain Pharma and Gulf Biotech—have established operations, marking a significant shift in the industry.

Bahrain Pharma was founded in 2010 and is considered the first manufacturer in Bahrain. It specializes in soft gelatins, capsules, and oral liquid dosage forms. Gulf Biotech was established in 2015, focusing on sterile products and secondary packaging [15].

Medication pricing in Bahrain is regulated by the NHRA, which oversees all health-related regulations [16]. According to the World Health Organization's global health expenditure database, 2021 health expenditure accounted for 4% of Gross Domestic Product (GDP), corresponding to 1,146 US\$ per capita (a 41 US\$ per capita increase from the previous year). Since 2009, healthcare expenditure has fluctuated between 4% and 5% of GDP (Figure 1) [17].

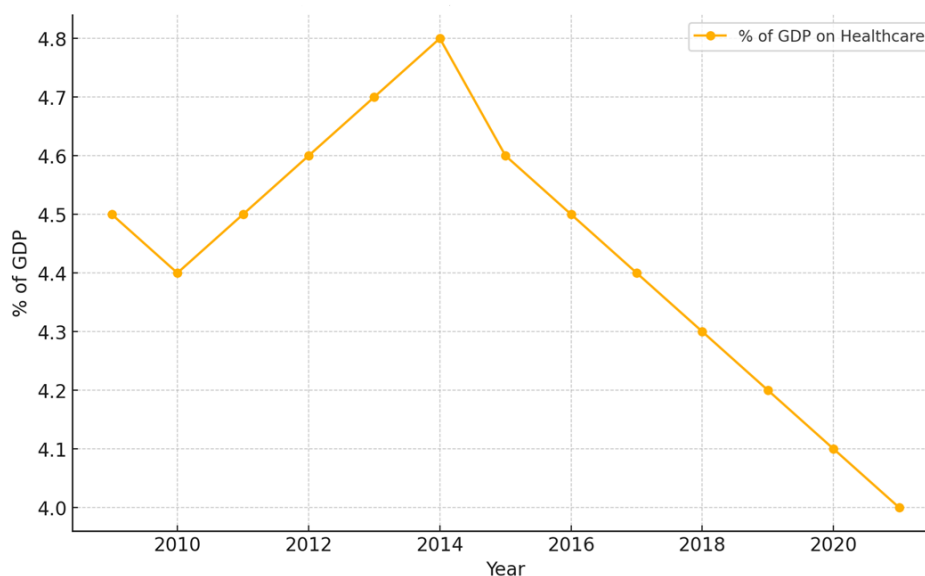


Figure 1. Healthcare Expenditure Trends (2009-2021)17

The three primary financial sources of health expenditure in the Kingdom of Bahrain are government transfers (66%), out-of-pocket spending (23%), and voluntary prepayments (11%). It must be highlighted that, since 2017, government transfers have been increasing at the expense of out-of-pocket spending. In addition, the share of voluntary prepayments has shown a steady increase since 2005, as shown in Figure 2 [17].

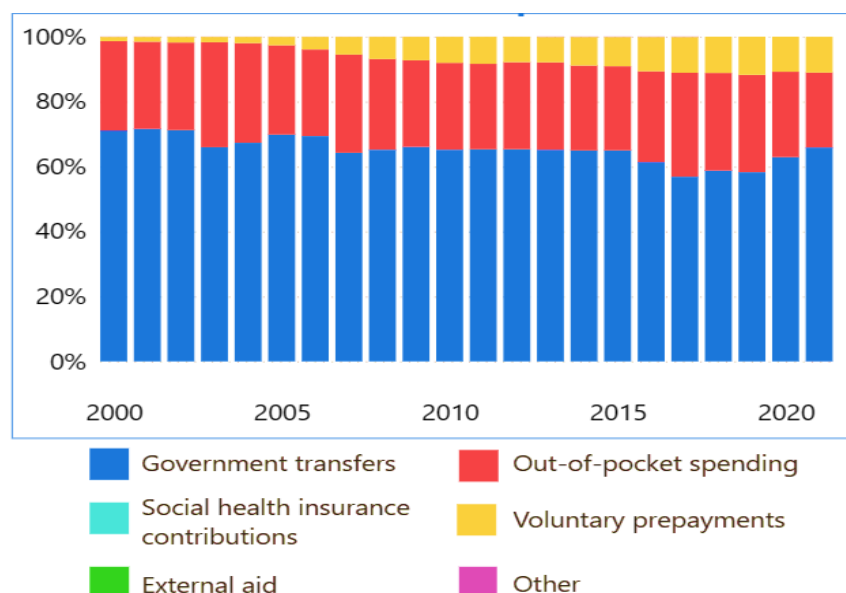


Figure 2. Source of Health Expenditures in Bahrain

In Bahrain, medications are dispensed free of charge to citizens within the governmental healthcare sector, while foreigners are charged nominal fees. Patients seeking care in the private sector are responsible for covering the costs of medications and services, regardless of citizenship. Several health insurance companies in Bahrain offer multiple packages providing free or discounted services and medications. Some of these companies include Medgulf Takaful and Solidarity Insurance [18].

The Kingdom of Bahrain is taking a steady step toward improving in health sector and increasing population involvement in health-related decisions. According to the Supreme Council of Health in Bahrain, primary healthcare systems are implementing self-management services, allowing individuals to be part of medical-related decisions [19]. Despite these promising effects, the Kingdom of Bahrain has no clear strategies for improving self-care services. So far, there are no established national programs focusing on community pharmacists and self-care settings. These two points are essential issues that must be addressed to initiate more policies and programs to improve this practice.

Systematic and planned distribution of self-care concepts between pharmacists and the community will reduce the burden on hospitals and health centers. The MOH has stated several challenges that are faced within the community. The main challenge that concerns us is the demographic changes where the population of Bahrain is showing a dramatic increase, which emphasizes the need for a higher capability to manage all these cases, which can lead to more challenges, such as the shortage of specialized health workers [20]. These challenges can be assessed by involving community pharmacists in more advanced healthcare practices since they are equipped with appropriate knowledge and skills, and they are well-positioned to bridge this gap by providing education and support for self-care practices, ultimately sustaining the quality of healthcare services [21].

4. PHARMACY PRACTICE LAW AND STAFF

The Kingdom of Bahrain prioritizes pharmacy practice's ethical and legal aspects to ensure professional standards and patient safety. Therefore, the Bahraini pharmacy law is updated to align with advancements in the field. This is reflected in its last amendment to the Bahraini pharmacy law [22], where all pharmacies in the Kingdom of Bahrain are authorized (article 14), proposed to provide licensed services (article 21),

authorized products (article 57), and predetermined maximum profit (article 86). Additionally, pharmacy ownership is restricted to licensed professionals, with a limit of five pharmacies per owner, and a minimum distance of 250 meters between pharmacies is mandated (Articles 17 and 28) [23]. Pharmacy chains are treated as a single entity under Bahraini law (Article 29). The pharmacy profession law is abundant, with legislation that controls the workstream, and all pharmacies have to update the NHRA with their practices. These regulations include but are not limited to records of controlled and semi-controlled drug prescriptions that must be preserved for five years post-dispensing (Article 81, 2022) [24]. While these regulations provide a strong framework, challenges persist, particularly in community pharmacy. Insufficient auditing of prescription-only medications has led to issues such as the inappropriate dispensing of antibiotics and error-prone prescriptions. Addressing these gaps requires consistent enforcement of regulations. Developing audit mechanisms and encouraging a culture of compliance among pharmacists will ensure adherence to established standards. By doing so, Bahrain can uphold the integrity of its pharmacy sector while mitigating risks associated with improper dispensing practices.

5. BAHRAINI PHARMACISTS' EDUCATION AND TRAINING FOR SELF-CARE

Historically, pharmacist education in the Kingdom of Bahrain has primarily focused on pharmaceutical sciences, with limited emphasis on clinical and social sciences. Development in pharmacy education has been noticed during these years; however, further advancements are necessary to provide pharmacists with advancing roles in healthcare. Previously, pharmacy programs included a 3-year Diploma of Pharmaceutical Sciences, which graduates pharmacy technicians. In 2015, the program was replaced with a 4-year Bachelor of Science in Pharmacy for graduate pharmacists, which is currently offered exclusively by the University of Bahrain (UoB). The updated program contains around 900 training hours distributed across four courses, completed under the supervision of NHRA-approved training sites in coordination with the university's council [25]. Currently, the university offers only a bachelor's degree. Previously, both diploma and bachelor holders shared the same duties and responsibilities in different pharmacy practice settings; however, a bachelor's degree is currently considered a major requirement in pharmacy settings for specific positions. To practice pharmacy in Bahrain, graduates must pass the Bahrain Pharmacy License Examination (BPLe) conducted by the NHRA. Licenses require renewal every two years or 4 years, supported by the submission of 25 hours of Continuing Professional Development (CPD) annually [26]. Discussions about introducing a master's degree program in pharmacy are ongoing, though no formal plans have been confirmed.

6. BAHRAINI COMMUNITY PHARMACISTS' ROLE AND CONTRIBUTION TO SELF-CARE

In general, Bahraini pharmacists were primarily engaged in medication dispensing, with limited interaction or advisory roles, as community perceptions often refuse direct pharmacist-patient consultation. This lack of confidence resulted from poor communication, which restricts the pharmacist's ability to contribute significantly to patient care [27]. Poor communication has been associated with several challenges, including reduced trust and a narrowed pharmacy scope of practice. Over-the-counter (OTC) interventions have recently been introduced to the community, supported by guidelines distinguishing between prescription-only medications (POM) and non-prescription medications. In addition, all POM must be documented for NHRA [26]. Despite these regulations, inappropriate dispensing practices, such as dispensing antibiotics without prescriptions, persist and highlight the need for stronger regulatory enforcement.

Currently, pharmacists are building stronger relationships with patients, facilitated by increased patient awareness and self-care practices. Patients now frequently consult pharmacists to seek advice on symptoms and medications. Bahraini community pharmacists have expanded their roles to include counseling, education, and assessment of self-care needs. They provide tailored recommendations, address patient complaints, and, when necessary, refer patients to specialists for further evaluation.

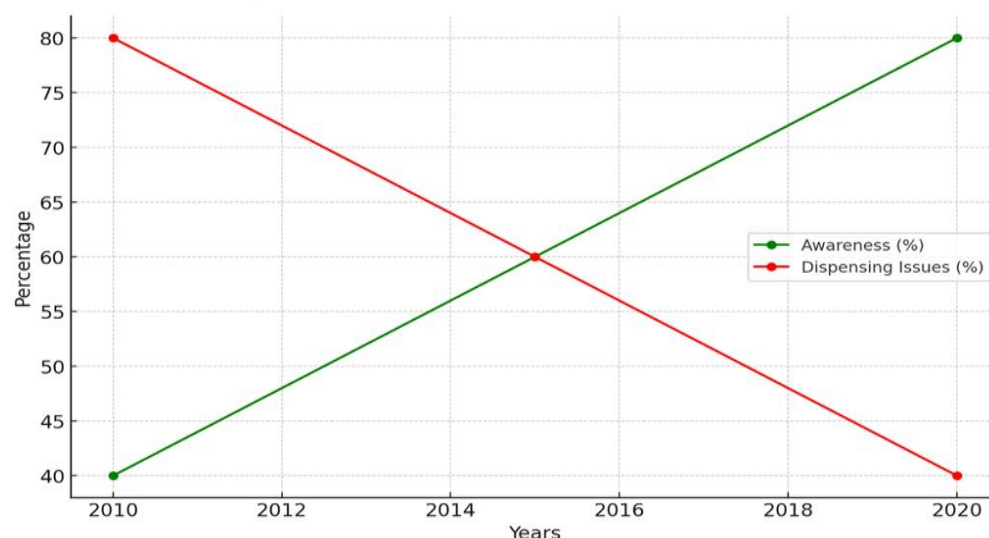


Figure 3. Public Awareness of Antibiotic Usage and Resistance in Bahrain²⁸

Antibiotics awareness has increased with the efforts of Bahraini community pharmacists. A 2015 study found that while most Bahrainis were aware of antibiotic resistance, gaps remained in understanding specific usage instructions [28]. Pharmacists have played a critical role in addressing these gaps through patient education initiatives, emphasizing the importance of responsible antibiotic use. (Figure 3) [28]. In addition, in 2019, the Kingdom of Bahrain submitted a national plan addressing antimicrobial resistance to monitor antibiotic prescribing and dispensing patterns and to educate healthcare workers on proper usage [29]. Despite antibiotics being classified as POM, some pharmacists dispense them without a prescription. This highlights the urgent need for stronger regulatory policies and enhanced pharmacist education.

Analgesics are among the most used OTC medications in Bahrain, and community pharmacists are responsible for educating patients about their proper use. A 2016 study found that 38.5% of analgesic users in Bahrain obtained these medications from community pharmacists [30]. Given that pain management is a common concern, pharmacists must assess factors such as pain location, severity, and duration to recommend appropriate analgesics and provide clear instructions. This approach has significantly improved public awareness of analgesic use.

In Bahrain, Community pharmacists also contribute to managing chronic diseases like diabetes and hypertension, which are prevalent in Bahrain. An example of how pharmacists could participate effectively in managing chronic conditions is through selling medical devices, where the pharmacists are required to educate patients on their proper use and interpretation of the results. To ensure effective education, this process should include signing a document confirming that the patient understands the instructions provided. Additionally, pharmacists offer detailed guidance on insulin pen usage to prevent complications. During Ramadan, pharmacists receive specialized training to assist patients in adjusting medications to accommodate fasting practices. This ensures continuity of care while respecting cultural and religious needs, further enhancing the role of pharmacists in supporting patient self-care.

7. RECOMMENDATIONS FOR ENHANCING SELF-CARE IN COMMUNITY PHARMACIES

Several key factors must be considered to ensure successful self-care interventions. The WHO has highlighted several system issues critical to implementing self-care services effectively. These include agency, availability, quality, cost, information, accessibility, utilization, social support, acceptability, and efficiency [31].

Agency and Social Support: One of the societies that supports pharmacy practice in the Kingdom of Bahrain is the Bahrain Pharmacists Society. It is recommended that this society highlights the need for expanding community pharmacists' roles in self-care and the positive impact that will be reflected on the community. Therefore, it is necessary to increase community pharmacists' knowledge and expand their roles to provide as much as possible to enhance self-care. Therefore, strategies should be formulated for pharmacists to recommend suitable medical products and guide patients effectively. It must be highlighted that current graduate pharmacists are educated to implement their knowledge in appropriate areas and have proven their active participation in society. Many expectations are placed upon the new generation of Bahraini pharmacists, who have shown a high interest in applying self-care knowledge and concepts in the community, which will assist in applying self-care concepts in future pharmacies.

- **Availability, Quality, Cost, and Accessibility:** Recommendations for this category are divided into two main areas: products and pharmacists. Regarding products, consumers should have access to required medical products or suitable alternatives at affordable prices. One of the main challenges faced within community practice is the continuous change or shortage of medications, which results in either delays or less effective alternatives. Several recommendations can be made in this area: reducing customs taxes on medications to lower their cost, establishing a specialized committee to monitor medication inventories, and implementing a policy prohibiting discontinuation of medical products without reasonable cause. Encouraging pharmaceutical manufacturers to establish facilities in Bahrain can also reduce transportation and storage challenges, provide investment opportunities, and strengthen the economy. Ensuring medication quality is another critical step. While pharmacovigilance (PV) systems are essential for monitoring drug safety and quality, Bahrain lacks a recent, active PV program³². Establishing a specialized PV center is recommended to address drug-related issues and ensure medication quality. Community pharmacists play a crucial role in self-care. Well-educated and trained pharmacists can provide high-quality services, but the current shortage of adequately trained pharmacists remains a concern. Although pharmacists in Bahrain are required to complete 25 Continuing Professional Development (CPD) hours annually, challenges persist in maintaining consistent service quality. To address this, evaluative services should be introduced, allowing patients to rate pharmacist performance during their interactions. These evaluations can provide organizations with valuable feedback to guide training programs and workshops. Additionally, educational institutions must update their curricula to focus on self-care practices and the use of pharmaceutical products, including medications, supplements, and devices. This ensures that future pharmacists are well-prepared to meet the community's evolving needs and provide accessible, high-quality self-care services.
- **Information, Utilization, and Efficiency:** Community pharmacists must be educated in up-to-date manners and have recent, reliable, evidence-based knowledge. Moreover, they must be able to consider patient-related factors like age, gender, and ethnicity. While medication leaflets can serve as an information resource for patients, they are often complex and not user-friendly for individuals, especially those with limited education. Considering these factors, there might be a high possibility of information delivery failure and misunderstanding of critical information related to the medication. To address these issues, pharmacists should receive training emphasizing patient education and communication skills. Workshops aimed to improve pharmacists' ability to deliver critical medication information effectively. Additionally, an online, user-friendly platform containing comprehensive medication information should be developed. Such a platform is supported with QR codes on products, enabling easy access to product-related data. Time-specific educational initiatives are also essential. For example, during Ramadan, pharmacists should be trained on medication adjustments for fasting patients, while during flu seasons, they should receive guidance on symptom management and appropriate treatments. These targeted education efforts will enhance pharmacists' ability to

provide timely and efficient self-care support.

- **Acceptability, Efficiency, and Cost:** Bahraini community pharmacists are readily available to address inquiries about self-care products and patient concerns at no cost. However, consumer acceptance of pharmacists' medical advice without physician confirmation remains a challenge. Additionally, the cost of self-care products can be a significant concern for patients. To improve patient-pharmacist relationships, pharmacists should focus on demonstrating compassion and effective communication. By assisting patients in selecting affordable yet effective products, pharmacists can enhance trust and satisfaction. The NHRA's efforts to unify medication prices across Bahrain have been commendable, which is crucial to prevent price manipulation. Strengthening these efforts, combined with personalized support from pharmacists, will ensure cost-effectiveness and high-quality care.

8. CONCLUSION

Self-care is a relatively new concept within the Bahraini community, and it is gradually becoming an integral part of pharmacy practice. However, the current landscape in Bahrain imposes improvements in various areas, including public awareness, pharmacy regulations, educational programs, and expanding community pharmacists' roles. Community pharmacists have the potential to play a central role in supporting self-care by utilizing their knowledge and skills to educate and empower patients. As self-care gains traction, patient education emerges as a critical component to ensure its successful implementation. Public awareness campaigns and pharmacist-driven education initiatives can bridge the knowledge gap and promote acceptance of self-care practices.

The Kingdom of Bahrain has taken significant steps to enhance the pharmacy sector through improvements in education and regulatory frameworks. To further support the integration of self-care, national programs must be developed to introduce and monitor self-care-related policies. Expanding the scope of pharmacy practice and encouraging collaboration between pharmacists and patients will contribute to a sustainable healthcare model that empowers individuals to take charge of their health while lightening the burden on the broader healthcare system.

AUTHOR'S CONTRIBUTION

All authors contributed equally to the conception, mapping, drafting, and revision of the manuscript. Each author approved the final version and agreed to be accountable for all aspects of the work.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest that could influence the objective and integrity of this review article.

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