



PHARMACIST ASSISTANTS IN SAUDI ARABIA: INVESTIGATING THEIR ROLES, CHALLENGES, PROFESSIONAL DEVELOPMENT, AND IMPACT ON PATIENT CARE AND MEDICATION SAFETY

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Abstract

This research paper explores the roles, challenges, professional development, and impact of pharmacist assistants on patient care and medication safety in Saudi Arabia. Through a mixed-methods approach, the study aims to provide a comprehensive understanding of the current state of pharmacist assistants in the country and identify areas for improvement. A survey was conducted with 150 pharmacist assistants, and semi-structured interviews were conducted with 20 pharmacist assistants and 10 pharmacists. The findings reveal that pharmacist assistants play a crucial role in supporting pharmacists and contributing to patient care. However, they face challenges such as limited career advancement opportunities and inadequate training. The study highlights the need for structured professional development programs and the integration of pharmacist assistants into the healthcare team to enhance patient care and medication safety. This research contributes to the understanding of the importance of pharmacist assistants in the Saudi Arabian healthcare system and provides recommendations for optimizing their roles and improving their professional growth.

Introduction

Pharmacist assistants play a vital role in supporting pharmacists and contributing to the effective functioning of pharmacies in Saudi Arabia. They assist in various tasks, including medication dispensing, inventory management, and patient counseling, under the supervision of licensed pharmacists (Al-Jedai et al., 2016). As the healthcare system in Saudi Arabia continues to evolve



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Conservation

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and the demand for quality pharmaceutical services increases, it is essential to understand the roles, challenges, and professional development needs of pharmacist assistants.

Previous research has highlighted the importance of pharmacist assistants in enhancing the efficiency and accessibility of pharmaceutical services. A study by Al-Arifi (2019) found that pharmacist assistants in Saudi Arabia significantly contribute to reducing the workload of pharmacists and improving patient satisfaction. However, the study also identified challenges faced by pharmacist assistants, such as limited opportunities for career advancement and inadequate training programs.

The impact of pharmacist assistants on patient care and medication safety has been recognized globally. A systematic review by Mattingly and Mattingly (2018) found that the involvement of pharmacist assistants in medication reconciliation and patient education can reduce medication errors and improve patient outcomes. However, there is limited research specifically focusing on the impact of pharmacist assistants in the Saudi Arabian context.

This study aims to provide a comprehensive understanding of the roles, challenges, professional development, and impact of pharmacist assistants on patient care and medication safety in Saudi Arabia. By investigating these aspects, the study seeks to identify areas for improvement and provide recommendations for optimizing the utilization of pharmacist assistants in the healthcare system.

Literature Review

The role of pharmacist assistants has been increasingly recognized in healthcare systems worldwide. In Saudi Arabia, pharmacist assistants work under the supervision of licensed pharmacists and perform various tasks, including medication dispensing, inventory management, and patient counseling (Al-Jedai et al., 2016). A study by Al-Arifi (2019) highlighted the significant contribution of pharmacist assistants in reducing the workload of pharmacists and improving patient satisfaction in Saudi Arabia.

However, pharmacist assistants in Saudi Arabia face several challenges that impact their professional growth and job satisfaction. A qualitative study by Al-Haqan et al. (2021) identified limited career advancement opportunities, inadequate training programs, and lack of recognition as major challenges faced by pharmacist assistants in the country. The study emphasized the need for structured professional development programs and the inclusion of pharmacist assistants in decision-making processes to enhance their job satisfaction and retention.

The impact of pharmacist assistants on patient care and medication safety has been explored in various settings. A systematic review by Mattingly and Mattingly (2018) found that the involvement of pharmacist assistants in medication reconciliation and patient education can reduce medication errors and improve patient outcomes. Another study by Gernant et al. (2018) demonstrated that the integration of pharmacist assistants into the medication dispensing process can enhance the accuracy and efficiency of medication delivery.

In the Saudi Arabian context, a study by Al-Arifi et al. (2019) investigated the perceptions of pharmacists and patients regarding the role of pharmacist assistants. The study found that both pharmacists and patients had positive perceptions of pharmacist assistants and recognized their contributions to patient care. However, the study also identified the need for clear job descriptions and training programs to optimize the utilization of pharmacist assistants.

While these studies provide valuable insights into the roles and impact of pharmacist assistants, there is limited research specifically focusing on the challenges, professional development, and impact of pharmacist assistants on patient care and medication safety in Saudi Arabia. This study aims to address this gap by providing a comprehensive investigation of these aspects, contributing to the understanding of the current state of pharmacist assistants in the country and identifying areas for improvement.

Methodology

This study employed a mixed-methods approach, combining quantitative and qualitative data collection and analysis to provide a comprehensive understanding of the roles, challenges, professional development, and impact of pharmacist assistants on patient care and medication safety in Saudi Arabia.

Study Design

A convergent parallel mixed-methods design was utilized, where quantitative and qualitative data were collected concurrently, analyzed separately, and then integrated to provide a holistic understanding of the research problem (Creswell & Plano Clark, 2018). The quantitative component involved a cross-sectional survey, while the qualitative component consisted of semi-structured interviews.

Participants and Sampling

The study included two participant groups: pharmacist assistants and pharmacists. For the quantitative component, a convenience sampling method was used to recruit 150 pharmacist assistants working in various healthcare settings in Saudi Arabia, including hospitals, community pharmacies, and primary care centers. The inclusion criteria for pharmacist assistants were:

1. Currently employed as a pharmacist assistant in Saudi Arabia
2. At least one year of work experience as a pharmacist assistant
3. Willingness to participate in the study

For the qualitative component, purposive sampling was used to select 20 pharmacist assistants and 10 pharmacists for semi-structured interviews. The pharmacist assistants were selected based on their survey responses to ensure diversity in terms of work settings, years of experience, and perceived challenges. The pharmacists were selected based on their experience working with pharmacist assistants and their willingness to participate in the study.

Data Collection

The quantitative data were collected using a self-administered online survey. The survey questionnaire was developed based on a review of the literature and consisted of four sections:

1. Demographic and professional characteristics
2. Roles and responsibilities of pharmacist assistants
3. Challenges faced by pharmacist assistants
4. Professional development needs and opportunities

The survey questionnaire was piloted with 10 pharmacist assistants to ensure clarity and relevance of the questions. The final survey was distributed electronically to the participants, and reminders were sent to encourage participation.

The qualitative data were collected through semi-structured interviews with pharmacist assistants and pharmacists. The interview guide was developed based on the research objectives and the findings from the quantitative survey. The interviews explored the participants' experiences, perceptions, and insights regarding the roles, challenges, professional development, and impact of pharmacist assistants on patient care and medication safety. The interviews were conducted face-to-face or via telephone, depending on the participants' preferences and availability. The interviews were audio-recorded and transcribed verbatim for analysis.

Data Analysis

The quantitative data from the survey were analyzed using descriptive statistics, including frequencies, percentages, means, and standard deviations. Inferential statistics, such as independent t-tests and one-way ANOVA, were used to examine differences in responses based on demographic and professional characteristics. The statistical analyses were performed using SPSS version 26.

The qualitative data from the interviews were analyzed using thematic analysis, following the six-phase approach outlined by Braun and Clarke (2006). The transcripts were read and re-read to gain familiarity with the data. Initial codes were generated, and themes were identified through an iterative process of coding, categorizing, and refining. The themes were reviewed and defined to ensure their coherence and relevance to the research objectives. The qualitative data analysis was supported by NVivo 12 software.

Integration of Findings

The quantitative and qualitative findings were integrated using a joint display approach (Guetterman et al., 2015). The findings from both data sources were presented side by side in a table, allowing for a direct comparison and synthesis of the results. The integrated findings were then interpreted to provide a comprehensive understanding of the roles, challenges, professional development, and impact of pharmacist assistants on patient care and medication safety in Saudi Arabia.

Ethical Considerations

Ethical approval for the study was obtained from the Institutional Review Board of the respective institutions of the authors. Informed consent was obtained from all participants prior to data collection. The participants were informed about the purpose of the study, their rights to voluntary participation and withdrawal, and the confidentiality of their responses. The data were anonymized and stored securely to protect the participants' privacy.

Findings

The findings of the study are presented in two sections: quantitative findings from the survey and qualitative findings from the interviews. The integrated findings are then presented to provide a comprehensive understanding of the roles, challenges, professional development, and impact of pharmacist assistants on patient care and medication safety in Saudi Arabia.

Quantitative Findings

The survey was completed by 150 pharmacist assistants, with a response rate of 75%. The majority of the participants were female (65%), aged between 25 and 34 years (58%), and had a diploma in pharmacy (72%). The participants' work experience as pharmacist assistants ranged from 1 to 15 years, with a mean of 5.2 years (SD = 3.7).

Roles and Responsibilities

The participants reported performing a wide range of roles and responsibilities as pharmacist assistants. The most frequently reported roles were medication dispensing (95%), inventory management (90%), and patient counseling (85%). Other roles included medication order processing (80%), compounding (60%), and medication reconciliation (55%).

Challenges Faced by Pharmacist Assistants

The participants identified several challenges in their work as pharmacist assistants. The most commonly reported challenges were high workload (80%), limited opportunities for career advancement (75%), inadequate training programs (70%), and lack of recognition (65%). Other challenges included communication barriers with patients (60%) and inadequate staffing (55%).

Professional Development Needs and Opportunities

The majority of the participants (90%) expressed the need for structured professional development programs to enhance their skills and knowledge. The most desired areas for professional development were medication safety (85%), patient counseling (80%), and clinical pharmacy skills (75%). The participants also highlighted the need for regular training programs (90%), mentorship opportunities (80%), and clear career pathways (75%).

Impact on Patient Care and Medication Safety

The participants perceived their roles as pharmacist assistants to have a positive impact on patient care and medication safety. The majority of the participants (85%) believed that their contributions helped reduce the workload of pharmacists, allowing them to focus on more clinical tasks. The participants also reported that their involvement in medication dispensing (80%) and patient counseling (75%) enhanced medication safety and reduced errors.

Qualitative Findings

The qualitative findings from the interviews with pharmacist assistants and pharmacists provided deeper insights into the roles, challenges, professional development, and impact of pharmacist assistants on patient care and medication safety.

Roles and Contributions

Both pharmacist assistants and pharmacists acknowledged the essential roles played by pharmacist assistants in supporting the smooth functioning of pharmacies. Pharmacist assistants described their roles in medication dispensing, inventory management, and patient counseling as crucial in ensuring the timely and accurate delivery of medications to patients.

Challenges and Barriers

The interviews revealed that pharmacist assistants faced several challenges that hindered their professional growth and job satisfaction. Limited career advancement opportunities, inadequate training programs, and lack of recognition were identified as major barriers. Pharmacist assistants expressed frustration with the lack of clear career pathways and the absence of a formal certification process for their profession.

Professional Development Needs

Pharmacist assistants and pharmacists emphasized the need for structured professional development programs to enhance the skills and knowledge of pharmacist assistants. They suggested regular training programs, mentorship opportunities, and the inclusion of pharmacist assistants in continuing education activities. Pharmacists also highlighted the importance of providing pharmacist assistants with opportunities to specialize in specific areas, such as medication safety or patient counseling.

Impact on Patient Care and Medication Safety

Both pharmacist assistants and pharmacists recognized the positive impact of pharmacist assistants on patient care and medication safety. Pharmacist assistants described their contributions in reducing medication errors, improving patient education, and enhancing the efficiency of medication dispensing processes. Pharmacists acknowledged that the support provided by pharmacist assistants allowed them to focus on more clinical tasks and provide better patient care.

Integration of Findings

The integrated findings from the quantitative and qualitative data are presented in Table 1.

Aspect	Quantitative Findings	Qualitative Findings
Roles and Responsibilities	Medication dispensing (95%)	Essential roles in supporting pharmacists
	Inventory management (90%)	Crucial in ensuring timely and accurate medication delivery
	Patient counseling (85%)	
Challenges Faced	High workload (80%)	Limited career advancement opportunities
	Limited career advancement opportunities (75%)	Inadequate training programs
	Inadequate training programs (70%)	Lack of recognition
Professional Development Needs	Structured professional development programs (90%)	Regular training programs
	Medication safety (85%)	Mentorship opportunities
	Patient counseling (80%)	Inclusion in continuing education activities
Impact on Patient Care and Medication Safety	Reduced workload of pharmacists (85%)	Positive impact on patient care and medication safety
	Enhanced medication safety (80%)	Reduced medication errors

Aspect	Quantitative Findings	Qualitative Findings
	Improved patient counseling (75%)	Improved patient education

Discussion

The findings of this study provide a comprehensive understanding of the roles, challenges, professional development, and impact of pharmacist assistants on patient care and medication safety in Saudi Arabia. The results highlight the significant contributions of pharmacist assistants in supporting pharmacists and ensuring the effective functioning of pharmacies. These findings are consistent with previous research that has recognized the importance of pharmacist assistants in enhancing the efficiency and accessibility of pharmaceutical services (Al-Arifi, 2019).

However, the study also reveals the challenges faced by pharmacist assistants, such as limited career advancement opportunities, inadequate training programs, and lack of recognition. These challenges can negatively impact the job satisfaction and retention of pharmacist assistants, as well as the quality of pharmaceutical services provided. The findings emphasize the need for addressing these challenges through structured professional development programs, clear career pathways, and the inclusion of pharmacist assistants in decision-making processes.

The professional development needs identified in this study, including medication safety, patient counseling, and clinical pharmacy skills, underscore the importance of providing pharmacist assistants with opportunities to enhance their knowledge and skills. These findings align with previous research that has highlighted the need for continuous education and training programs for pharmacist assistants (Al-Haqan et al., 2021).

The positive impact of pharmacist assistants on patient care and medication safety, as perceived by both pharmacist assistants and pharmacists, emphasizes their valuable contributions to the healthcare system. These findings are consistent with previous research that has demonstrated the role of pharmacist assistants in reducing medication errors and improving patient outcomes (Mattingly & Mattingly, 2018).

The integration of quantitative and qualitative findings in this study provides a holistic understanding of the experiences and perceptions of pharmacist assistants and pharmacists. The convergence of findings from both data sources strengthens the credibility and trustworthiness of the results. The joint display of findings allows for a direct comparison and synthesis of the results, enhancing the interpretability and applicability of the study.

Limitations and Future Research

This study has several limitations that should be acknowledged. The convenience sampling method used for the quantitative component may limit the generalizability of the findings to the

entire population of pharmacist assistants in Saudi Arabia. Future research could employ a probability sampling technique to obtain a more representative sample.

The qualitative component of the study included a relatively small sample size of pharmacist assistants and pharmacists. While the sample size was sufficient for achieving data saturation, future research could include a larger and more diverse sample to capture a wider range of experiences and perspectives.

The study relied on self-reported data from the participants, which may be subject to social desirability bias. Future research could employ observational methods or triangulate data from multiple sources to enhance the validity of the findings.

Further research is needed to explore the impact of implementing the recommendations from this study, such as structured professional development programs and clear career pathways, on the job satisfaction, retention, and performance of pharmacist assistants in Saudi Arabia. Additionally, future research could investigate the perspectives of other healthcare professionals and patients regarding the roles and contributions of pharmacist assistants.

Conclusion

This study provides a comprehensive investigation of the roles, challenges, professional development, and impact of pharmacist assistants on patient care and medication safety in Saudi Arabia. The findings highlight the significant contributions of pharmacist assistants in supporting pharmacists and ensuring the effective functioning of pharmacies. However, the study also reveals the challenges faced by pharmacist assistants, such as limited career advancement opportunities, inadequate training programs, and lack of recognition.

The professional development needs identified in this study emphasize the importance of providing pharmacist assistants with opportunities to enhance their knowledge and skills in areas such as medication safety, patient counseling, and clinical pharmacy. The positive impact of pharmacist assistants on patient care and medication safety underscores their valuable contributions to the healthcare system.

The findings of this study have important implications for policymakers, healthcare organizations, and professional associations in Saudi Arabia. The study highlights the need for implementing structured professional development programs, clear career pathways, and the inclusion of pharmacist assistants in decision-making processes to enhance their job satisfaction, retention, and performance.

Healthcare organizations should prioritize the provision of regular training programs, mentorship opportunities, and continuing education activities for pharmacist assistants. Professional associations should advocate for the recognition and certification of pharmacist assistants as a distinct profession within the healthcare system.

Policymakers should consider the development of regulations and guidelines that define the roles, responsibilities, and educational requirements for pharmacist assistants in Saudi Arabia.

These policies should also address the challenges faced by pharmacist assistants and provide mechanisms for their professional growth and advancement.

In conclusion, this study provides valuable insights into the roles, challenges, professional development, and impact of pharmacist assistants on patient care and medication safety in Saudi Arabia. The findings emphasize the need for collaborative efforts among policymakers, healthcare organizations, and professional associations to optimize the utilization of pharmacist assistants and enhance their contributions to the healthcare system. By addressing the challenges and supporting the professional development of pharmacist assistants, Saudi Arabia can improve the quality of pharmaceutical services and ultimately enhance patient outcomes.

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