



THE ROLE OF PHARMACIST AND PHARMACY TECHNICIAN TEAMS IN PATIENT COUNSELING AND EDUCATION

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Abstract

The value of collaborative work in delivering patient education and counseling within hospitals is starting to be appreciated as more and more pharmacists work with pharmacy technicians. In this study we set out to determine at which level the pharmacy-technicians teams could enhance the overall pharmacy services and improve quality of the patients inhaler in a tertiary hospital. We reconducted both quantitative and qualitative data approaches, using survey data together with interviews. The results were encouraging: 65% of patients expressed being very satisfied with the counseling, while 70.8% said they quite understood their instructions on the medications. Most importantly, the duration of the counseling sessions was decreased by 40% because of the cooperation. Qualitative interviews describe greater patient comfort and increased effectiveness of workflows, as well as relative deficiencies concerning role definition and more training for the technicians who were novices. increase both the effectiveness and the quality of the patient who seeks this type of care, although there are some increases that need to be addressed, such as the definition of tasks and further training.

Keywords: Collaboration between pharmacist and technician, patient advice, counseling, adherence, tertiary hospital, efficiency of workflow, mixed-methods study

Introduction

Patient education as a form of pharmaceutical care has proved to be one of the most important aspects in the improvement of adherence to recommended therapy, increase patient safety and ensure that patients receive optimal treatment outcomes (Smithson et al., 2015). Giving medication information and well instruction to patients is integral part of responsibilities for any pharmacists, especially in the given hospital setting where many patients have a complex medication regimen (Robles, 2021). Nevertheless, growing expectations for nurses and pharmacists have made it necessary to use a more collaborative model. More and more pharmacy technicians are getting involved and assisting pharmacists with patient education as directed by them (Desselle et al., 2019). This collaborative approach incorporates the best practices of both categories of employees that ultimately results in enhanced quality of teaching patients about medications as well as the safety of drug use.

Primarily, pharmacy technicians were involved in the preparation, dispensing and supply of medication. However, over the past few years their roles have started to include some elements of patient interaction, whereby they worked alongside pharmacists during patient education sessions (Desselle et al., 2024). It has been reported that the inclusion of pharmacy technicians in patient education activities will enhance the operational efficiency of pharmacy departments and reduce the burden of work for pharmacists. In this way, they are in a better position to make complicated decisions regarding clinical management and other relevant issues (DeMarco et al., 2022).

The integration of pharmacists and pharmacy technicians in counseling patients has increased the likelihood of patients comprehending medications including administering, side effects, and compliance (Robles, 2021). Such an approach is particularly applicable in secondary care facilities especially where patients are encountering complex medication therapy managements and are at an increased risk of medication errors especially when moving between care settings (Bonetti et al., 2020). Furthermore, by extending the patient counseling role to technicians, not only is the quality of information provided improved but patients feel more at ease asking questions and understanding what their treatment entails.

The purpose of the present research is to redefine the interactions of pharmacist and pharmacy technician teams and how it deals with the issue of patient education and counseling within a third level hospital setting. In particular, we focus on how pharmacist's intervention coupled with pharmacy technicians' interventions can improve treatment outcomes and quality of pharmacy services.

Literature Review

Several researchers, including Smithson et al. (2015), point out that there is a collaborative relationship between pharmacists and pharmacy technicians in counseling. These relationships lead to better pharmacotherapy management and less patient safety problems. This interaction, however, argues Smithson et al. (2015) is dependant on effective counseling which is important for compliance and safety. It was common to see pharmacists being the primary active providers, however due to changes in the healthcare arena, a coverage extension to pharmacy technicians allows enhancement of patient care delivery models.

Desselle et al. (2024) traced the changing face of pharmacy statues including the increased responsibilities undertaken by the pharmacy technicians in patient care including education. They reported better patient communication among those with trained pharmacy technicians, which in turn enabled pharmacists to deliver better counseling services, and hence interaction satisfaction and compliance increased. This suggests that enhancing the phone twelve times may be an effective means of improving pharmaceutical care.

Desselle et al. (2019) highlighted the frustrations accompanying the busy days of hospital pharmacies that most times rendered pharmacists insufficient time for counseling patients. By involving technicians, pharmacists can assign some manual routines to them, giving them more time for clinical responsibilities. This formatted model of collaboration improves efficiency and helps ensure patients receive appropriate and timely advisement regarding their medications.

According to the study conducted by DeMarco et al. (2022), the implementation of a broader role of technicians within hospital pharmacy environments was assessed. It was revealed to the researchers that having technicians participate in counseling activities was more efficient as it allowed pharmacists to do less work that was not clinical in nature and more work that was about patient management. Their findings are conclusive as they indicate that the broadening of technician roles facilitates the improvement of pharmacy services and therefore improves patient care.

Robles (2021) stressed the particular importance of the ‘counseling’ section in the pharmacy service being operated by the pharmacist without undermining the role of the pharmacists and the technicians together in providing ‘counseling’ in complex situations such as a tertiary hospital. It is a common practice in most hospitals for patients to be discharged directly from the clinic and for the tablets required to be popped, doses of the medication required to be intaken, side effects that could arise, and cases of misinformation wherein patients fail to grasp adequate information and all these have a significant impact on health outcomes.

A transition that is important for patients is described by Bonetti et al. (2020) in their study concerning the pharmacy team’s function throughout hospital discharge. With the assistance of technicians in the discharge counseling, the researchers identified lower medication errors and a deeper understanding from the patients on their treatment plans. This particular study demonstrates the need for effective teamwork to lessen risks during the shift in care, especially for patients with multifaceted medication requirements.

As supported by the evidence available in the literature, pharmacist-technician teams can enhance the counseling and education of patients. It should be emphasized that the same professionals’ work is of great benefit in hospitals as the quality of care provided increases, medication errors decrease, and patient satisfaction improves. In the tertiary literature, it has been observed that coordination of work improves pharmaceutical care, which is quite important in highly specialized hospitals where patients require holistic management and education.

Methodology

In this study, we focused on patients in a tertiary hospital in order to evaluate the effects of pharmacist-technician collaboration on patient counseling and education. A mixed method approach was used in this study in which both quantitative and qualitative data were integrated to provide more depth to the effects of this collaboration on patients.

Study Design

Researchers employed a cross-sectional design to collect data on the counseling activities carried out by pharmacist-technician pairs for six months. Evaluation of the effectiveness of counseling was complemented by the use of observations and surveys followed by semi-structured interviews of the pharmacists, technicians, and patients.

Participants

Participants included pharmacists, pharmacy technicians, and patients who sampled from the tertiary hospital. The sample comprised ten pharmacists and fifteen technicians, and 120 patients who were ten discharged after being prescribed not less than one drug. The patients were selected with the aid of convenience sampling techniques.

Data Collection

Quantitative data were captured from patient surveys that were performed immediately after the counseling sessions. The questions in respect to the survey related to the patients’ knowledge of their medications, the quality of counseling that was provided to them, and their satisfaction. Moreover, we studied pharmacy workflow data in order to evaluate the changes in collaboration and their impact on efficiency of counseling.

For qualitative data, the semi-structured interviews were employed with pharmacists, technicians and patients. The interviews were recorded, transcribed verbatim and pertained primarily to participants’ comprehension of the collaborative practices as well as the responses to problems encountered while collaborating, and their recommendations on how to enhance the interplay.

Data Analysis

The quantitative data from the questionnaires was examined using descriptive statistics to determine patient satisfaction and knowledge comprehension level. We also sought to compare the lengths of time used when providing the counseling services before and after the use of the team approach as a measure of effectiveness of the adopted workflow.

Thematic analysis was used to analyze the qualitative interview transcripts. The data was coded into major themes relating to advantages and disadvantage around collaboration. Triangulation was used to ensure that the findings were validated by different data sources enhancing the credibility of the results.

Ethical Considerations

The study commenced after obtaining ethical approval from the ethics committee. Moreover, informed consent was granted by all the participants, and anonymity was observed during the study. Patients were conversed that the study was voluntary, meaning that they could back out any time without having a negative influence on their medical care.

Findings

Quantitative Findings

Quantitative survey data provided a number of facts about patient satisfaction, medication use instruction comprehension as well as counseling effectiveness of the pharmacy staff. Below are some highlights:

Table 1: Patient Satisfaction with Counseling Sessions

Satisfaction Level	Number of Patients (n=120)	Percentage (%)
Very Satisfied	78	65.0
Satisfied	32	26.7
Neutral	8	6.7
Dissatisfied	2	1.7
Very Dissatisfied	0	0.0

Table 2: Patient Understanding of Medication Instructions

Level of Understanding	Number of Patients (n=120)	Percentage (%)
Complete Understanding	85	70.8
Partial Understanding	28	23.3
Little Understanding	5	4.2
No Understanding	2	1.7

Table 3: Counseling Efficiency (Average Time per Session)

Counseling Approach	Average Time (minutes)
Pharmacist Only	25
Pharmacist-Technician Team	15

From the data, it has been observed that 65% of patients were very satisfied with the counseling while 70.8% said they fully comprehended the instructions on how to take the drug.

It is evident that improved efficiency was achieved as the average time spent per session was reduced. The collaborative approach was able to cut down the average time per session from 25 minutes to 15 minutes.

Qualitative Findings

The qualitative interviews came up with a number of sub-themes that were based on the opportunities and difficulties that enhance collaboration between the pharmacist and the technician:

Theme 1: Enhanced Education of Patients

- Sub-theme 1.1: Improvement in the Understanding of Information Concerning Medication Usage

- This is supplementation in the perspective of a pharmacist. 'Involving the technician in the presentation allows me not to be concerned with instructing the patient as the technician does this and gives courtesy that the patient understands everything as he leaves the room. '

- A patient, for instance, recalled: "The technician put everything in layman's terms, so I could get the information."

- Sub-theme 1.2: Enhanced Patient Understanding of the Much Required Information

- A technician added, "But some patients, after the pharmacist explains how the medication is, they come back asking me some questions, and I explain what the pharmacist instructed."

- The same adds another patient: "It was good to have both the pharmacist and the technician that I guess it knows a lot of things there as I knew I am well taken care of."

Theme 2: Greater Improvement in the Performance of Daily Activities

- Sub-theme 2.1: Lessen Operational Pressure on the Pharmacists

- As at times when I am busy, working with a technician has practically helped me control my workload by a very large margin, explained a pharmacist.

- A technician remarked, "I help out with the mundane activities which I suppose gives the pharmacist more time on the consultancy."

- Sub-theme 2.2: The Length of the Counseling Sessions was Decreased

- In the words of the technician, We can conduct counseling sessions much faster when we interact, thus not being compromised on the understanding of the information provided to the patients and their care.'

Theme 3: Problems In Collaboration

- Sub –theme 3.1: Consideration of Explicit Role Taskings A pharmacist lamented, There are times when I find it necessary to explain to patients examples of their questions which are a bit in-depth, but then I am not aware as to where the technician's duties start and the boundaries of mine end.'

- Sub-Theme 3.2 Training Needs A technician stated, Most technicians do not need training in how to deal with patients per say however education regarding complex medication requirements would suffice.'

Speaking about the interviews, they showed very clearly how working harmoniously together made and provides better and clearer instruction, and assistance in medication counseling and better caring

for the patients. However, also touched on some challenges, such as a lack of ambiguity regarding role boundaries and lack of adequate training among technicians.

Discussion

This paper illustrates that working together with the pharmacist and the technician can change the way patients are counseled and educated throughout the hospital. Both qualitative and quantitative studies show that adding pharmacy technicians to the working roster results in a great deal of improvement in the medication comprehension rate by the patients.

A high satisfaction level of 65% with the collaborative counseling approach was reported by patients. It is confirmed by earlier studies (Smithson et al., 2015) that emphasized the efficacy of counselling for improved compliance. With the aid of technicians, pharmacists could offload some of the more routine tasks and focus more on the care aspects that were more complex. This made the counseling experience better hence greater patient satisfaction.

The other major advantage is the average counseling time which has gone down from 25 minutes to 15 minutes. This gain in efficiency is congruent to DeMarco et al. (2022) who noted the improvement of pharmacy services as a result of shifting some of the duties to technicians. Reduced and yet high quality counseling sessions are essential in busy hospital environments where pharmacists are constantly pressed on time.

The qualitative data also provided more information and context to these benefits. Patients were able to better understand medications due to the presence of both the pharmacists and the technicians. This concurs with the studies by Robles (2021) advocating for pharmacist-technician collaboration in patient care.

On the other hand, the research provided insights on specific concepts, in this case, the necessity for precise role definitions. There were times when pharmacists and technicians were not certain about where their authority ended especially with questions posed by a patient who was rather complex. It is worth noting that the resolution of all roles and even the designation of responsibilities would assist in making the cooperation more efficient and the process less confusing. In addition, additional training for technicians, particularly about communication and education would enhance their self-esteem as well as the quality of the overall counselling service.

In conclusion, the role of pharmacist-technician collaboration cannot be underestimated as it enables the provision of health education and counselling to hospital inpatients. It is however emphasised that by combining both professionals the quality of care in hospitals could improve, medication errors are less likely to occur, and the level of satisfaction of the patients is heightened. The challenges such as role confusion and training are in specific terms the challenges that need to be solved to ensure this type of collaboration is effective.

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