

EVALUATING THE ATTITUDE OF PHARMACISTS TO THE ELEMENTS OF QUALITY MANAGEMENT STRUCTURE IN COMMUNITY PHARMACY PRACTICE

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Abstract

Background: Quality management structure (QMS) in community pharmacies is essential as a prerequisite for quality pharmaceutical services and quality outcomes of pharmaceutical services.

Objective: The study aimed to evaluate community pharmacists' attitudes to elements of QMS in community pharmacy practice in Osun State.

Methods: The study involved a descriptive survey of 108 and 93 community pharmacists, pre-and post-training. A pre-tested semi-structured questionnaire was employed to obtain primary data. The questionnaire was designed to elicit information about the attitude of the community pharmacists to some elements of QMS using the Likert-type scales of agreement. A training programme was conducted for the community pharmacists, and the questionnaire was administered to them pre-and post-training. Data obtained were analysed using Statistical Package for Social Sciences (SPSS) software (version 21). Descriptive statistics employed include weighted averages (WAs), medians, and means of weighted averages (MWAs), while the t-test was employed as inferential statistics in determining significant relations between variables at a 5% level of significance.

Results: The results showed that the mean weighted average (MWA) was 3.6 and 3.8 with pre-training experience and post-training experience, respectively. There was a statistically significant difference ($t=-2.18$, $p=0.031$) between MWA with pre-training experience and post-training experience.

Conclusion: Community pharmacists had a positive attitude to the studied elements of QMS in community pharmacy practice in Osun State, both pre-and post-training.

Keywords: Attitude, Community Pharmacists, Quality Management Structure

Introduction

Quality management structure in community pharmacy practice includes physical settings of the community pharmacy, executive management, culture, organisational design, financial incentives, and information management and technology. All these elements are necessary to ensure the community pharmacy renders quality services. The literature review revealed there had been little focus on executive management, culture, organisational design, and financial incentives but more on physical settings and, information management and technology. There is a need to assess and contribute to the knowledge of these other elements that have not been well studied.

Donabedian developed a framework for an organisation's quality improvement: the structure-process-outcome framework^[1]. Donabedian believed strongly in the necessity of structure^[2]. He explained it by focusing on facilities and provider qualifications. However, the structure was later expanded by looking at it from the management perspective of organisation attributes^[1]. Key elements, including the organisation's culture, executive management, organisational design, incentive structures, and information management and technology, were highlighted. These fundamental elements form the basis of the Quality Management Structure (QMS).

Organisational culture refers to how employees perceive, think, and feel about their work and organisation, guiding their behaviours^[3]. The way community pharmacists perceive their work and organisational outcomes, such as job satisfaction and commitment, turnover and performance, may be influenced by organisational culture^[3]. Understanding the culture of community pharmacies can help identify areas of strength and those that require improvement^[4]. Improvement efforts focusing on staffing, work pressure, and pace in community pharmacies may lead to better safety culture^[4]. Characteristics relating to patient safety have been noted to be the most important of the characteristics that enhance good pharmaceutical service provision^[5]. Also, pharmacists have reported the impact of their workload, motivation to work at the pharmacy, and job satisfaction on their service provision^[6].

Community pharmacy organisations and organisational characteristics, such as ownership, staffing, and skill mix, influence pharmaceutical service provision^[7]. Providing high-quality pharmacy services is associated with pharmacy ownership type, organisational culture, staffing and skill mix, and pharmacy–general practice relationships^[7]. The perceived importance of appropriate staffing and skill mix for promoting service quantity and quality in community pharmacies has been found^[8]. Organisational cultures which support team development were viewed as facilitatory, whereas those prioritising business targets over service quality are inhibitive^[8]. Safety climate in community pharmacies has been noticed to be associated with pharmacy ownership, organisational culture, pharmacists' working hours, and employment of accuracy checkers^[9].

The remuneration of pharmacists is critical to ensuring the sustainability of pharmacist services^[10]. When commissioning services from private sector providers such as community pharmacies, healthcare administrations should ensure that the quality of service provision is incentivised in addition to service quantity^[8]. Investigated pharmacist remuneration system in Indonesia revealed that more than half of the respondents did not receive any particular fees designated to compensate provision of cognitive services^[10]. A fixed monthly salary predominantly formed the structure of the remuneration system, with less than half of the respondents receiving additional incentives to top up this monthly salary. The current remuneration system, which mainly relies on a monthly salary basis, may not be sustainable to support pharmacist-led services^[10]. Pharmacists counselling patients less frequently may be attributable to financial incentives^[11]. An evaluation of the impact of a financial incentive versus the incentive plus a package of individualised implementation strategies on the success rate of medication therapy management (MTM) services made a discovery. This is that a financial incentive plus a package of individualised implementation strategies increases the success rates of MTM services when compared with a financial incentive alone^[12].

The significant impact of managerial skills on pharmacy performance is undeniable; therefore, promoting these skills seems essential to achieving excellence in pharmacy performance^[13]. Community pharmacy managers link pharmacy organisations and employees^[14]. The connection between community pharmacists' dual role as professionals and business people is most profound for community pharmacy managers^[14]. Humanistic characteristics of professionalism, empathy, trust, and integrity are needed in community pharmacy managers^[15]. Other critical technical aspects include clinical expertise, business acumen, and leadership skills^[15]. Human (communication skills to manage and motivate) and technical skills (knowledge of pharmaceuticals) seem to be well recognised and articulated, with conceptual skills (executive and strategic skills) less so^[15].

This study intends to assess community pharmacists' attitudes to other elements of QMS in CPP (aside from physical settings and information management and technology), conduct training on community pharmacists on QMS in CPP, and assess their attitude to these other elements after the training. It will provide insight for future interventions to improve the quality management structure in community pharmacy practice.

Methods

Study Design

The study was a descriptive survey of Osun State, Nigeria, community pharmacists.

Sampling method

The sampling method employed was stratified random sampling of the community pharmacists. A primary data source was employed, and responses were obtained with a semi-structured questionnaire. Items in the questionnaire used to evaluate the attitude of community pharmacists to quality management structure (QMS) in community pharmacy practice (CPP) were obtained from relevant literature^[1;2;17;18]. The internal validity of the instrument was addressed through consultation with an expert in the field. The instrument was pre-tested on a few samples for its reliability using a test-retest method by administering a questionnaire to the pre-test samples

within a two-week interval. Identified errors in the pre-test were employed in making necessary adjustments in the questionnaire for the final version for data collection. Prior preparation for the training was made by informing the chairman of the Association of Community Pharmacists of Nigeria (ACPN) of the State two months before the training. In addition, a message was sent to the Whatsapp group ACPN notifying members of the training before the day of the training. The training involved use of PowerPoint projection. During the training, a poster bill was employed to reinforce the message to the participants. The training was conducted on community pharmacists during one of their monthly meetings at Osun State Pharmacy House at Osogbo. Community pharmacists were from towns in the State where community pharmacies exist - Ede, Ejigbo, Ikirun, Ile-Ife, Ilesha, Iragbiji, Iwo, Okuku, and Osogbo.

Study Population

The study population comprises one hundred and thirty-five (135) community pharmacists licensed for the year on the Pharmacists' Council of Nigeria (PCN), Osun State branch register. All community pharmacists licensed to practice were included in the survey. The sample size of community pharmacists was computed based on Yamane's formula for sample size determination of known population size^[19]. One hundred and one (101) community pharmacists were obtained.

Data Collection

Data were collected by administering one set of pre-tested questionnaires twice. One hundred and eleven (111) questionnaires were administered twice. The first administration of one hundred and eleven questionnaires was before training community pharmacists on quality management structure to assess their attitude to QMS in CPP. The second administration was after the training to determine the impact of training.

Data Analysis

The questionnaire and information retrieved from the respondents were sorted out and given identification numbers, coded, and loaded into a computer using Statistical Package for the Social Sciences (SPSS) software (version 21). The data were screened and cleaned before statistical analysis was carried out. Data obtained were analysed using both descriptive and inferential statistics. Descriptive statistics used include means (weighted averages), median, and mean of weighted averages. In addition, a T-test was used to determine if there is a significant difference between the mean of weighted averages (MWA) before and after training on knowledge of community pharmacists about quality management structure (QMS) in community pharmacy practice (CPP).

Ethical Approval

Ethical approval was obtained from the Institute of Public Health (IPH), Obafemi Awolowo University, Ile-Ife, Osun State, with ethical approval number IPH/OAU/12/1357. Participants provided both written and oral consent before participating. Confidentiality was maintained.

Results

Table 1 presents the occupational characteristics of respondents. The distributions of respondents before the training show that the majority had graduated 2 - 5 years 35.2(%), followed by above 30 years ago, which is around a quarter (25.9%) of respondents. All respondents were resident pharmacists, with the majority being superintendent pharmacists 92.6 (%). The result also shows that the majority, 61.1 (%), were not community pharmacy owners. Most community pharmacies 64.0 (%) had only one pharmacist present in the pharmacy, followed by those having two pharmacists present in the pharmacy 34.0 (%). Most of the respondents 57.7 (%) had less than 5years of experience in community pharmacy practice, followed by above 21years of experience, which is one-fifth (19.2%) of the respondents. The distribution of respondents after the training follows the same pattern.

Table 2 presents the attitude of community pharmacists to other elements of QMS in CPP before and after training. The summary rating of the respondents' attitude shows that they did 'strongly agree' (MWA=3.6) with the items employed in measuring their attitude. The summary ratings of the respondents' attitude show that they did 'strongly agree' (MWA=3.8) with the items employed in measuring their attitude.

A t-test analysis to compare the pre-training and post-training results of the respondents' attitude show a significant difference in the obtained results ($t=-2.18$, $p=0.031$), as shown in Table 3.

Table 1: Occupational characteristics of respondents

| Variables | Categories | Before training | | After training | |
|--|---------------------|-----------------|------------|----------------|------------|
| | | Freq. | % | Freq. | % |
| Years since graduation as a pharmacist | Intern | 0 | .00 | 0 | .00 |
| | 2-5years | 38 | 35.18 | 37 | 39.78 |
| | 6-10years | 18 | 16.67 | 13 | 13.98 |
| | 11-20years | 13 | 12.04 | 11 | 11.83 |
| | 21-30years | 11 | 10.18 | 9 | 9.68 |
| | above 30 years | 28 | 25.93 | 23 | 24.73 |
| Total | | 108 | 100 | 93 | 100 |
| Job Status | Locum pharmacist | 0 | .00 | 0 | .00 |
| | Resident pharmacist | 103 | 100.00 | 93 | 100.00 |
| Total | | 103 | 100 | 93 | 100 |
| Are you the superintendent pharmacist? | Yes | 100 | 92.59 | 88 | 94.62 |
| | No | 8 | 7.41 | 5 | 5.38 |
| Total | | 108 | 100 | 93 | 100 |
| Are you the owner of the pharmacy? | Yes | 42 | 38.89 | 38 | 40.86 |
| | No | 66 | 61.11 | 55 | 59.14 |
| Total | | 108 | 100 | 93 | 100 |
| Number of pharmacists in the community pharmacy | One | 64 | 64.00 | 56 | 60.22 |
| | Two | 34 | 34.00 | 27 | 29.03 |
| | Three and above | 2 | 2.00 | 10 | 10.75 |
| Total | | 100 | 100 | 93 | 100 |
| Number of years you have been in community pharmacy practice | <= 5 | 60 | 57.70 | 58 | 63.73 |
| | 6 – 10 | 8 | 7.69 | 7 | 7.70 |
| | 11 – 15 | 8 | 7.69 | 2 | 2.20 |
| | 16 – 20 | 8 | 7.69 | 5 | 5.49 |
| | 21+ | 20 | 19.23 | 19 | 20.88 |
| Total | | 104 | 100 | 91 | 100 |

Table 2: Attitude of community pharmacists to the quality management structure in community pharmacy practice in Osun State before and after training

| S/N | Variables | Pre-training ratings | | Post-training ratings | |
|-----|--|----------------------|------|-----------------------|------|
| | | Mdn | WA | Mdn | WA |
| | Executive Management | | | | |
| | Good personal characteristics of a leader | | | | |
| 1 | Self-motivation / Motivating oneself | 4 | 3.73 | 4 | 3.76 |
| 2 | Good skills in dealing with people | 4 | 3.81 | 4 | 3.94 |
| 3 | Capacity to motivate others | 4 | 3.79 | 4 | 4.00 |
| | Effective board responsibility | | | | |
| 4 | Knowledge of pharmacy practice among trustees | 4 | 3.44 | 4 | 3.53 |
| 5 | Good communication among board members | 4 | 3.51 | 4 | 3.83 |
| 6 | Information exchange among board members | 4 | 3.73 | 4 | 3.78 |
| 7 | Adequate funding for the business | 4 | 3.81 | 4 | 3.85 |
| 8 | Effective committee structure | 4 | 3.36 | 4 | 3.80 |
| | Culture | | | | |
| 9 | Accountability for quality from topmost to least ranked staff | 4 | 3.55 | 4 | 3.91 |
| 10 | Good communication among staff members | 4 | 3.81 | 4 | 3.76 |
| 11 | Good communication between the board and staff members | 4 | 3.58 | 4 | 3.89 |
| 12 | Social networking between the board and staff members in order to break hierarchies that limit information sharing | 3 | 3.25 | 3 | 3.51 |
| 13 | Values geared towards ensuring quality service | 4 | 3.64 | 4 | 3.86 |
| 14 | Beliefs that are quality-oriented | 4 | 3.60 | 4 | 3.90 |
| 15 | Balancing both professional and business aspects of the practice | 4 | 3.66 | 4 | 3.89 |
| 16 | Workloads that prevent staff fatigue | 4 | 3.60 | 4 | 3.67 |
| 17 | A management style that motivates staff to perform better | 4 | 3.75 | 4 | 3.76 |
| 18 | Social support by engaging in health promotion | 3 | 3.40 | 4 | 3.42 |
| 19 | Good attitude to positive change | 4 | 3.58 | 4 | 3.72 |
| 20 | Positive attitude to innovation | 4 | 3.45 | 4 | 3.73 |

| S/N | Variables | Pre-training ratings | | Post-training ratings | |
|-----|--|----------------------|-------------|-----------------------|-------------|
| | | Mdn | WA | Mdn | WA |
| 21 | Training on entrepreneurship | 3 | 3.42 | 4 | 3.53 |
| 22 | Plan on the ground for engaging in health promotion activities | 3 | 3.18 | 4 | 3.60 |
| 23 | Strategies in place to make time for professional counselling | 4 | 3.69 | 4 | 3.82 |
| | Organisational design | | | | |
| 24 | Mechanisms put in place for accountability for quality | 4 | 3.77 | 4 | 3.69 |
| 25 | Staffs report to designated individuals who in turn report to Director | 3 | 3.45 | 4 | 3.76 |
| | Financial Incentive | | | | |
| 26 | An incentive to staff members to meet quality performance | 4 | 3.51 | 4 | 3.68 |
| | Mean of Weighted Averages (MWA) | | 3.58 | | 3.75 |

KEYS: Mdn = Median; WA = Weighted Average; MWA = Mean of Weighted Averages

Scale: CS = Can't Say (0); NI = Not Important (1); SI = Slightly Important(2); I = Important (3); Very important (4)

Table 3: T-test analysis for the difference in the attitude of community pharmacists in Osun State to QMS in CPP before and after training

| Session | N | Mean | Sd | t | Df | P |
|-----------------|----|-------|-------|-------|-----|--------|
| Before training | 85 | 90.73 | 13.06 | -2.18 | 163 | 0.031* |
| After training | 80 | 94.69 | 9.94 | | | |

* Difference in the mean is significant at a 0.05 level of significance

Discussion

The distributions of respondents showed that most had graduated 2 - 5 years ago, and most had less than five years of experience in community pharmacy practice. The majority not being the community pharmacy owner depicts young pharmacy graduates practising as community pharmacists immediately after graduation. All respondents, resident pharmacists and the majority, superintendent pharmacists, reveal it is rare to find pharmacists not present in their community pharmacies in Osun State. Most community pharmacies having only one pharmacist present in the pharmacy points to the fact that the pharmacy business in Osun State may not be thriving to the extent of employing more than one pharmacist. The community pharmacists rated all items of executive management as necessary, showing that the respondents had a good attitude toward knowing that executive management can influence the professional service of the community pharmacy.

The human skill (communication skills to manage and motivate) of a leader and technical skills (knowledge of pharmacy practice) were viewed to be essential, which align with an earlier report^[15]. Conceptual skills (executive and strategic skills) were not considered less critical, negating a report that conceptual skills are less recognised^[15]. Strategic skills to make time for professional counselling receive a high rating, especially after training. Good skill in dealing with people with the highest and second-highest ratings before and after the training reveals the importance of a manager being able to handle different people. The ability of a manager to motivate others by having the highest rating after the training reveals that the motivation of staff members is an essential tool required of a manager in a community pharmacy to ensure professional pharmacy services will be rendered. Agreement with these managerial skills makes profound the statement that the significant impact of managerial skills on pharmacy performance is undeniable^[13].

The culture of an organisation can determine its success. Community pharmacists in Osun State responded positively to what constitutes the culture for quality services of a community pharmacy. There was an agreement with the statement that the way community pharmacists perceive their work pressures, as well as organisational outcomes such as job satisfaction and commitment, turnover, and performance, may be influenced by organizational culture^[3]. The respondents saw workloads that prevent staff fatigue from being critical, which is in line with a report that pointed out pharmacists have reported the impact of their workload on their service provision^[6]. A typical workload will ensure pharmacists perform at their optimal. The respondents' responses validated the importance of organisational culture, staffing, and skill mix for maximising the delivery of high-quality pharmacy services^[7;8]. Quality pharmaceutical services can lead to the safety of patients as there will be proper counselling of patients on medication use which will ensure a minimal experience of medication side effects or adverse events. Response of respondents to values geared towards ensuring quality service to patients rated high. This depicts the high likelihood of patient safety consideration in community pharmacy practice in Osun State, which aligns with a study that saw community pharmacists' response to patient safety as important^[5].

Accountability for quality from all staff and having quality-oriented beliefs in the community pharmacy have high ratings after the training. This points to the fact that all staff has a role to play in ensuring quality pharmaceutical service in the community pharmacy. Balancing both professional and business aspects of the practice and having a good rating shows the belief of the respondents that the quality of pharmaceutical service should not be at the detriment of the quantity of pharmaceutical service. The respondents agreed that giving incentives to staff members (especially pharmacists) for meeting quality performance should be imbibed. This will motivate them to do more, as reported that pharmacists counselling patients less frequently may be attributable to incentives not being put aside from the salary^[11]. The positive response of community pharmacists to the importance of incentives to staff members for meeting quality performance agrees with an earlier report that the use of financial incentives to reward measured performance has gained recent enthusiastic support^[1]. This response from the community pharmacists further supports the claim that a monthly salary basis may not be sustainable to support the provision of pharmacists' services^[10].

The positive impact of the training revealed the necessity for continual training for pharmacists after graduation and being inducted as a pharmacist. The positive attitude to other elements of QMS implies a likelihood of rendering quality pharmaceutical services in community pharmacies in Osun State. The regulatory body of the pharmacy profession must also show concern for these other elements of QMS during the inspection of community pharmacy practice to improve the pharmacy profession continually.

Conclusion

The community pharmacists' positive attitude, before and after the training on quality management structure, to the neglected elements of quality management structure revealed the need to give attention to them to ensure improving the quality of pharmaceutical services and outcomes in community pharmacy practice.

Conflict of Interest

The authors do not have any conflict of interest.

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