RESEARCH ARTICLE

Assessing the Application of Pharmacoeconomic Evaluations in Medicines Management by Hospital Pharmacists: A Cross-Sectional Survey

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ABSTRACT
Application of pharmacoeconomic data to medicine management decisions remains in its infancy in many developing countries. In recent times, as the cost of drugs increases and budgets shrink further, the application of economic evidence now becomes imperative in helping to optimize healthcare resources. This was a descriptive cross-sectional study carried out among randomly selected hospital pharmacists from secondary and tertiary healthcare institutions . Data collection was done with the use of a semi-structured questionnaire, while data analysis was done using suitable descriptive and inferential statistics, with the level of significance taken as $p < 0.05$. The knowledge of the pharmacoeconomic concepts among pharmacists was still evolving, as shown in this study (MWA 2.07). There were also significant associations between the age and rank of the respondents and their knowledge and attitudes, $p < 0.05$. The overall mean weight attitude to pharmacoeconomic evaluation was found to be moderately positive, at 2.997, while pharmacoeconomic evaluations practices were inadequate, with a mean weight attitude of 2.36. This study strongly recommends the adoption of appropriate policy measures and targeted training to improve the assimilation of pharmacoeconomic practices.
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INTRODUCTION

Pharmacoeconomic evaluations are becoming increasingly vital in optimizing medication management within hospital pharmacy practice. As concerns over the quality of care and budgetary limitations grow, hospital formulary decisions must increasingly rely on comparative cost-effectiveness evidence of alternative drug therapies (Bootman, Townsend, and McGhan 2005). Current trends indicate that hospital pharmacists will need to systematically assess, quantify, value, and compare both the costs (resources used) and the outcomes (benefits) of different medication therapies to patients, healthcare systems, and society at large (Zaidi and Baber 2015). Pharmacoeconomic evaluations have demonstrated their usefulness in analyzing medication costs before inclusion in hospital formularies, evaluating pharmacy practices, estimating consumers' willingness to pay for pharmacy services, and assessing the cost consequences of different pharmacy practice models. These evaluations are also applicable in determining the pricing of new drugs, adjusting existing drug prices, and generating data for promotional materials. They hold further value in drug development, clinical trials, and decisions regarding drug inclusion in insurance reimbursement schemes (Zaidi and Baber 2015; Drummond et al. 2015). Common methodologies for economic evaluations include cost-minimization analysis (CMA), cost-benefit analysis (CBA), cost-effectiveness analysis (CEA), and cost-utility analysis (CUA) (Udezi 2020), each with its distinct strengths and limitations.However, current literature reveals insufficient evidence about the level of knowledge and application of these pharmacoeconomic tools among hospital pharmacists. Medicine selection and pricing decisions must account for the fact that pharmaceutical costs are borne by patients, their families, the healthcare system, or society at large (Kobelt 2013). The cost-bearer's perspective must be considered when determining which costs and outcomes to include in pharmacoeconomic evaluations. If patients and families bear the costs, the evaluation should include all cost elements: direct medication costs, direct non-medication costs (such as transportation to healthcare facilities), indirect costs (such as lost productivity due to illness), and intangible costs (like pain and suffering). If the healthcare system or a third-party payer bears the cost, only direct costs are typically considered. For society, both direct and indirect costs must be included (Luyten, Naci, and Knapp 2016).The lack of an integrated electronic health record system and the reliance on open tender systems for public health facilities pose significant challenges to medicine supply chains. It remains unclear to what extent

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Table 1: Association of Demographic Characteristics with Knowledge and Attitudes of Hospital Pharmacists (N = 148)

Demographic Variable	Frequency (%)	Knowledge Score (mean ± SD)	P-value (Knowledge)	Attitude Score (mean ± SD)	P-value (Attitude)
Gender					
Male	61 (41.0)	2.12 ± 0.980	0.245	2.88 ± 0.780	0.245
Female	87 (59.0)	2.01 ± 0.112		3.15 ± 0.811	
Age (Years)					
30 and below	31 (20.9)	1.98 ± 0.960		2.48 ± 0.981	
31–40	57 (38.5)	2.45 ± 0.752	0.0303*	3.59 ± 0.883	0.0304*
41–50	43 (29.1)	2.25 ± 0.802		3.45 ± 0.821	
51 and above	17 (11.5)	1.60 ± 0.841		2.39 ± 0.901	
Highest Educational Qualification					
Bachelors (B.Pharm., Pharm.D)	88 (59.5)	1.85 ± 0.981		3.47 ± 0.971	
Masters (M.Sc., M.Pharm., M.Phil)	45 (30.4)	2.47 ± 0.872	0.312	3.38 ± 0.892	0.312
Postgraduate Fellowship (FPCPharm.)	14 (9.5)	2.09 ± 0.903		2.42 ± 0.886	
Ph.D.	1 (0.7)	1.87 ± 0.894		2.69 ± 0.973	
Years of Practice Experience					
10 and below	76 (51.4)	2.44 ± 0.765		3.49 ± 0.845	
11–20	51 (34.5)	2.09 ± 0.966	0.112	3.57 ± 0.912	0.312
21–30	18 (12.2)	1.99 ± 0.901		2.53 ± 0.929	
31 and above	3 (2.0)	1.77 ± 0.842		2.36 ± 0.856	
Rank					
Associate (Intern/Youth Corps Pharmacist)	55 (37.2)	1.61 ± 0.981		3.58 ± 0.821	
Junior Cadre (Below Senior Pharmacist)	54 (36.5)	1.98 ± 0.786	0.0304*	3.50 ± 0.856	0.0304*
Middle Cadre (Below Chief Pharmacist)	29 (19.6)	2.57 ± 0.809		2.40 ± 0.934	
Top Cadre (Chief Pharmacist and Above)	10 (6.8)	2.10 ± 0.811		l 0.901	

P-values calculated using Mann-Whitney U Test.

drug selection and pricing decisions are influenced by cost considerations, particularly in managing chronic non-communicable diseases (Oamen and Osemene 2021). Furthermore, with national health insurance coverage below 7% and limited primarily to public sector employees, social insurance plays a minimal role in drug selection and pricing decisions. While some pharmaceutical suppliers negotiate directly with healthcare facilities, the overall impact on costs is unclear.Pharmacoeconomic evaluations assess therapeutic outcomes, including clinical (e.g., reduction in blood pressure), economic (e.g., reduced healthcare expenditure), and humanistic outcomes (e.g., improved quality of life) (Brazier et al. 2017). Although all economic evaluation methods measure costs in monetary terms, they differ in how outcomes are measured: CMA assumes comparable outcomes, CBA measures outcomes in monetary units, CEA uses natural units (e.g., changes in health metrics), and CUA assesses utilities such as quality-adjusted life years (Ahmad et al. 2013). There is limited reporting on how hospital pharmacists measure and compare therapeutic outcomes when making formulary decisions (Udezi 2020).In many low- and middle-income countries (LMICs), health systems are characterized by inequities, financial constraints, and reliance on donor funding for critical services like immunizations (Sibeudu, Uzochukwu, and Onwujekwe 2017). The use of pharmacoeconomic evaluations in medicines management is still in its infancy. In healthcare financing for public health facilities largely depends on government budget allocations and donor contributions (Mohammed 2020). Significant disparities exist between federal and state healthcare systems due to varying financial capacities and management efficiencies, which affect medicine supply chains and formulary decisions.The recent revision of undergraduate pharmacy curriculum to adopt the Doctor of Pharmacy (Pharm.D.) degree as the entry requirement for practice introduces a stronger focus on pharmacoeconomics. However, the transition faces several challenges, and there is little documentation on the knowledge gaps and behavioral changes needed among hospital pharmacists to ensure widespread adoption of pharmacoeconomic evaluations in practice. The primary

Table 2. Knowledge of Pharmacoeconomic Tools/Concepts of Hospital Pharmacists (N = 148)

s/N.	Concept	Responses (Freq. (%))	Mean Score	t	P Value
		Poor	Fair	Good	Excellent
1	Cost benefit analysis	37 (25.0)	99 (66.9)	9 (6.1)	3 (2.0)
2	Cost effectiveness analysis	25 (16.9)	109 (73.6)	11 (7.4)	3 (2.0)
3	Cost minimization analysis	22 (14.9)	101 (68.2)	20 (13.5)	5 (3.4)
4	Cost utility analysis	41 (27.7)	85 (57.4)	18 (12.2)	4 (2.7)
5	Economic modeling in medicines selection	78 (52.7)	56 (37.8)	7 (4.7)	7 (4.7)
6	Economic evaluation alongside clinical trials	56 (37.8)	79 (53.4)	2 (1.4)	11 (7.4)
7	Naturalistic economic evaluation of pharmaceuticals	60 (40.5)	67 (45.3)	16 (10.8)	5 (3.4)
8	Health-related Quality of Life	17 (11.5)	90 (60.8)	21 (14.2)	20 (13.5)
9	Quality adjusted life years	34 (23.0)	81 (54.7)	31 (20.9)	2 (1.4)
10	Strategic pricing for pharmaceuticals	9 (6.1)	56 (37.8)	76 (51.4)	7 (4.7)
11	Direct and indirect costs	7 (4.7)	49 (33.1)	77 (52.0)	15 (10.1)
12	Fixed and variable costs	6 (4.1)	56 (37.8)	79 (53.4)	7 (4.7)
13	Net present value	77 (52.0)	43 (29.1)	14 (9.5)	14 (9.5)
14	Monetizing depreciations	15 (10.1)	99 (66.9)	24 (16.2)	10 (6.8)
15	Monetizing impacts	74 (50.0)	58 (39.2)	10 (6.8)	6 (4.1)
16	Return on investments	11 (7.4)	82 (55.4)	28 (18.9)	27 (18.2)
	Mean of means		2.07		

aim of this study is to assess the knowledge, attitudes, and practices related to pharmacoeconomics among hospital pharmacists in Nigeria, as well as to identify the challenges hindering the routine use of economic evaluations in their daily practice. The study's findings will provide evidence-based guidance for the cost-effective use of limited healthcare resources in the pursuit of universal health coverage.

METHODS

This study utilized a cross-sectional survey to gather data from randomly selected hospital pharmacists working in secondary and tertiary healthcare facilities

Study Participants

A total population of 216 hospital pharmacists, employed for at least one year prior to the study, was identified through personnel records of the healthcare facilities. The sample size was calculated using Taro Yamane's formula (1967) at a 95% confidence interval. The formula yielded a sample size of 139, which was increased by 20% to account for potential non-responses, as done in a previous study (Sibeudu, Uzochukwu, and Onwujekwe, 2017). This adjustment brought the total sample size to 167 participants, who were then selected using simple random sampling based on a table of random numbers.

Development of Research Instruments

A semi-structured questionnaire, divided into five sections, was employed to collect data. The first section gathered demographic information, including gender, age, qualifications, experience, and rank. The second section comprised 16 items assessing the pharmacists' knowledge of pharmacoeconomic concepts. Participants rated their knowledge on a four-point scale, ranging from "Poor" to "Excellent," which was scored from 1 to 4.The third section evaluated attitudes toward pharmacoeconomic evaluations with seven items on a five-point Likert scale, from "Strongly Disagree" to "Strongly Agree." Items assessing positive attitudes were scored from 1 to 5, while negative attitude items were reverse-scored. The fourth section examined the frequency of performing pharmacoeconomic evaluation-related tasks in routine practice using a five-point scale, from "Never" (scored as 1) to "Always" (scored as 5). Finally, the fifth section contained 10 items addressing perceived challenges to the adoption of pharmacoeconomic evaluations, rated on the same five-point scale.

To ensure the questionnaire's validity, two pharmacoeconomics experts reviewed the items, providing corrections to enhance face and construct validity. The instrument's reliability was tested with 15 hospital pharmacists from outside Ogun State using the test-retest method. Cronbach's alpha was calculated for the knowledge ($\alpha = 0.792$), attitude ($\alpha = 0.885$), and practice ($\alpha = 0.891$) scales, with an overall average reliability of $\alpha = 0.86$.

Ethical Considerations

Table 3. Attitudes of Hospital Pharmacists Toward Application of Pharmacoeconomic Tools (N = 148)

s/N.	Statement	Responses (Freq. (%)) Strongly Disagree	Mean Score Disagree	Rank Cannot Say
1	I think pharmacoeconomic concepts are beneficial to hospital pharmacy practice	10 (6.8)	28 (18.9)	25 (16.9)
2	I believe identifying and valuing costs and benefits of alternative drug regimens will improve quality of decision-making for patients' drug therapy	10 (6.8)	28 (18.9)	37 (25.0)
3	I believe economic evaluation is necessary to optimize allocative efficiencies in drug selection	17 (11.5)	11 (7.4)	14 (9.5)
4	I am willing to undergo training to enhance my know-how in pharmacoeconomics	7 (4.7)	42 (28.4)	4 (2.7)
5	I think pharmacoeconomic evaluations are too complex for my practice environment	13 (8.8)	13 (8.8)	8 (5.4)
6	I doubt if we can correctly monetize most intangible costs/benefits in our practice	16 (10.8)	18 (12.2)	6 (4.1)
7	I believe pharmacoeconomic considerations should not affect the choice of individual drug therapies	15 (10.1)	17 (11.5)	61 (41.2)
	Mean of means		**2.997**	

The study received ethical approval from the Research Ethics Committee

Data Collection

Nine research assistants were recruited and trained over three days. Before data collection, participants were contacted via phone, email, and social media. A Google Form version of the questionnaire was distributed electronically, and follow-up reminders were sent. For those who did not respond online, hard copies were administered meeting of the Association of Hospital Pharmacists, and the Heads of Pharmacy Departments in the healthcare facilities assisted in distributing the questionnaires.

Data Analysis

The collected responses were coded and entered into an Excel spreadsheet, then transferred to SPSS version 21 for analysis. Descriptive statistics, including frequencies and percentages, were used to analyze demographic data. The Mann-Whitney U test was applied to examine the association between demographic variables and knowledge and attitude scores. Knowledge scores were analyzed using frequencies, percentages, and weighted mean scores, with Student's t-test used to assess their significance. For attitude and practice, frequencies, percentages, and weighted mean scores were calculated to rank the items. Challenges to the adoption of pharmacoeconomic evaluations were similarly analyzed using frequencies, percentages, weighted means, and ranks. A significance level of $p < 0.05$ was adopted for all statistical analyses.

RESULTS

Table 1 presents the demographic data of respondents and their correlation with knowledge and attitude. Out of 167

Table 4. Practice of Pharmacoeconomic Evaluations Among Respondents (N = 148)

s/N.	In managing medication therapies, how often do you practice the following	Responses (Freq. (%)) Never	Mean Score Rarely	Rank Sometimes
1	Brainstorm to identify costs and benefits of each medication therapy	28 (18.9)	62 (41.9)	31 (20.9)
2	Decide which costs and benefits are significant	53 (35.8)	43 (29.1)	30 (20.3)
3	Assign monetary value to costs and benefits	44 (29.7)	38 (25.7)	29 (19.6)
4	Specify a set of options for each medication therapy	47 (31.8)	56 (37.8)	24 (16.2)
5	Compare costs and benefits of alternative medication therapies	51 (34.5)	29 (19.6)	27 (18.2)
6	Adopt strategic pricing of pharmaceuticals	33 (22.3)	49 (33.1)	37 (25)
7	Adopt appropriate time horizon to measure impacts of medication therapy	47 (31.8)	51 (34.5)	23 (15.5)
8	Adopt appropriate pharmacoeconomic assumptions	51 (34.5)	42 (28.4)	22 (14.7)
9	Make recommendations for Hospital Formulary based on pharmacoeconomic indices	30 (20.3)	51 (34.5)	37 (25.0)
10	Measure health gains by Quality adjusted life years	55 (37.2)	59 (39.9)	13 (8.8)
Mean of means			**2.36**	

Table 5. Challenges to the Use of Pharmacoeconomic Evaluations Among Respondents (N = 148)

s/N.	To what extent do you agree that these are challenges to economic evaluations	Responses (Freq. (%))	Mean Score	SD	Rank
		Strongly Disagree	Disagree	Can't Say	Agree
1	Poor knowledge of pharmacoeconomics	11 (7.43)	19 (12.84)	23 (15.54)	56 (37.84)
2	Lack of supportive policy environment	23 (15.54)	14 (9.46)	10 (6.76)	61 (41.22)
3	Complexity of concepts	9 (6.08)	34 (22.97)	28 (18.92)	44 (29.73)
4	Limited data on local references/comparators	14 (9.46)	14 (9.46)	5 (3.38)	61 (41.22)
5	Lack of competence to evaluate available evidence	24 (16.22)	16 (10.81)	29 (19.59)	51 (34.46)
6	Fixation on traditional focus on clinical efficacy, safety, and acquisition cost alone	34 (22.97)	43 (29.05)	18 (12.16)	30 (20.27)
7	Poor administrative support	37 (25)	43 (29.05)	22 (14.86)	29 (19.59)
8	Inadequate skills in pharmacoeconomic modeling	15 (10.14)	23 (15.54)	18 (12.16)	45 (30.41)
9	Inadequate curriculum content in pharmacy schools	24 (16.22)	13 (8.78)	18 (12.16)	55 (37.16)
10	Inadequate skilled hands to train pharmacists in pharmacoeconomics	12 (8.11)	44 (29.73)	12 (8.11)	51 (34.46)
Mean of means			**3.35**		

distributed questionnaires, 148 were completed and returned, yielding an 87% response rate. A majority of the respondents were female, with 87 women (59%) compared to 61 men (41%). Most pharmacists, 88 (59.4%), were under the age of 40 and held only basic qualifications such as a Bachelor of Pharmacy or Doctor of Pharmacy degree. Age was significantly associated with both knowledge ($p = 0.03$) and attitude ($p = 0.03$) scores, although educational qualifications were not. Around half of the participants, 70 (51.4%), were in their first decade of practice, and this group demonstrated the highest mean knowledge score (2.44 ± 0.765) and a positive attitude (3.49 ± 0.845), though these differences were not statistically significant in terms of influencing practice.Furthermore, 109 (74%) of the respondents were junior pharmacists (recent graduates, those in internship training, or those completing mandatory national service), and they exhibited the most positive attitudes. However, the middle-rank pharmacists (Senior and Principal Pharmacists) scored highest in knowledge (2.57 ± 0.809). Rank was significantly associated with both knowledge ($p = 0.03$) and attitude ($p = 0.03$) scores.Table 2 reveals that the overall mean knowledge score was low at 2.07 on a scale of 1 to 4. Regarding specific knowledge areas, only 27 (18%) and 20 (14%) of respondents had excellent knowledge of "return on investments" and "health-related quality of life" concepts, respectively. Approximately half of the pharmacists were familiar enough to practice "strategic pricing of pharmaceuticals" (76, 51.4%), "direct and indirect costs" (77, 52%), and "fixed and variable costs" (79, 53.4%). However, around half had no prior knowledge of "economic modeling" (78, 52.7%), "monetizing impacts" (74, 50%), or "net present value" (77, 52%).In Table 3, the overall mean attitude score was positive, at 2.997 out of a possible 5. Respondents largely agreed that economic evaluations could enhance allocative efficiencies (mean score 3.59) and improve the quality of patient medication therapy decisions (mean score 3.47). They also expressed a willingness to undergo training in pharmacoeconomic evaluations (mean score 3.42). However, 114 (77%) respondents agreed or strongly agreed that pharmacoeconomic concepts were too complex to be applied in their practice settings, making this the lowest-ranked attitude item.Table 4 provides data on the respondents' practice of pharmacoeconomic evaluations. The overall mean score was 2.36 on a 1–5 Likert scale. The most commonly practiced activities were "monetizing costs and benefits" (mean score 2.55), "basing formulary decisions on pharmacoeconomic indices" (mean score 2.53), and "comparing costs and benefits of alternative drug therapies" (mean score 2.49). Despite this, 82 (55.4%) of respondents reported never or rarely practicing the highest-ranked item (assigning monetary values to costs and benefits), and only 12 (8%) stated that they "always" participated in discussions to identify costs and benefits of medication therapies.Lastly, Table 5 highlights challenges to the use of pharmacoeconomic evaluations in hospital pharmacy practice, with a mean score of 3.35 on a 1–5 Likert scale. The most significant barriers were limited data on local comparators (mean score 3.86), poor knowledge of pharmacoeconomics (mean score 3.63), and insufficient skills in economic modeling (mean score 3.58). Additionally, 101 (68%) respondents agreed or strongly agreed that the absence of supportive policies was a key challenge, and 93 (63%) believed that inadequate

pharmacoeconomics content in pharmacy education contributed to the low adoption of economic evaluations in hospital pharmacy practice.

DISCUSSION

There is compelling evidence that pharmacoeconomic evaluations are becoming more prevalent as decision-making tools aimed at enhancing the efficiency of medication management across various health systems (Ahmad et al., 2013; Mohammed, 2020; Ben-Ajepe et al., 2021). Knowledge of pharmacoeconomics is increasingly recognized as a vital competency for pharmacists, particularly those working in hospital environments (Carapinha, 2017). However, this study indicates that hospital pharmacists possess insufficient knowledge regarding many pharmacoeconomic concepts, a situation some researchers attribute to deficiencies in the undergraduate pharmacy curriculum that fail to adequately prepare pharmacists for conducting pharmacoeconomic evaluations (Mohammed, 2020). This finding is crucial, given the heightened focus on cost considerations within the health system amid rising overall healthcare expenditures.In contrast, a comparative review highlights that stakeholders, including hospital pharmacists, have developed a set of pharmacoeconomic guidelines tailored to their specific perspectives, modeling capabilities, and cost factors, despite notable gaps in health equity considerations and budget impact analysis (Carapinha, 2017).There is considerable potential for improvement, as most respondents were under 40 years old and had less than ten years of professional experience, displaying higher levels of knowledge and a positive attitude toward incorporating pharmacoeconomic evaluations into medication management. This optimism is bolstered by the recent transition to a Doctor of Pharmacy (Pharm.D.) curriculum that includes robust pharmacoeconomics training, potentially producing graduates who are well-prepared for routine economic evaluations, similar to the experiences (Ahmad et al., 2013; Mohammed, 2020; Surji, 2015).Evidence suggests that attitudes significantly influence behavior (Marcinkowski and Reid, 2019). This study found a weakly positive attitude towards pharmacoeconomic evaluations among participants, with a mean score of 2.997 on a Likert scale from 1 to 5, which is insufficient to instigate the behavioral changes necessary for mainstreaming these evaluations in medication management. Nevertheless, a substantial majority (72%) of respondents agreed or strongly agreed on the need for economic evaluations to optimize the efficiency of medicine selection. About half also felt these evaluations would enhance the quality of decisions regarding patient drug therapies. A recent scoping review emphasizes that such attitudes are critical for evolving practices aimed at minimizing the overall costs of medication therapies for budget holders (Davis et al., 2015), particularly as many individuals in developing countries live below the poverty line. Notably, 95 respondents (65%) expressed a willingness to participate in relevant training to enhance their pharmacoeconomic evaluation skills. Such training may help mitigate negative perceptions regarding the complexities of pharmacoeconomic concepts and their relevance in local practice.The findings indicate that the application of pharmacoeconomic evidence as decision-support tools among participants is still in its infancy, with a mean practice score of 2.36, which falls below the cutoff of 2.5 on a Likert scale from 1 to 5. This highlights a significant gap, as pharmacists' interventions are essential to the practice of hospital pharmacy. These interventions encompass any action taken by a clinical pharmacist that results in a change in patient management or therapy (Spinewine, Fialova, and Byrne, 2012), focusing mainly on cost-saving or cost-avoidance measures (Auta, Maz, and Strickland-Hodge, 2015). Cost-saving interventions may involve discontinuing unnecessary medications, switching to more affordable generic alternatives, or opting for an oral route of administration instead of parenteral, thus lowering overall treatment costs. In contrast, cost avoidance reduces future spending that would have occurred without the pharmacist's intervention. For example, switching to a medication with fewer drug-drug interactions or a lower risk of adverse drug reactions can help prevent both direct and indirect costs associated with future treatments, hospitalizations, and referrals arising from potential adverse events (Anderson and Schumock, 2009; Dalton and Byrne, 2017; Chisholm-Burns et al., 2010). While participants demonstrated average proficiency in assigning monetary values to costs and benefits, applying pharmacoeconomic data in formulary decisions, and comparing costs and benefits of alternative medication therapies, these efforts appeared somewhat disorganized. Nevertheless, pharmacists' interventions grounded in solid pharmacoeconomic evidence have been shown to significantly reduce overall medication therapy costs in both developed and developing countries (Chisholm-Burns et al., 2010; Touchette et al., 2014; Hughes, 2012).Respondents identified the primary challenges to employing pharmacoeconomic evaluations as a lack of local comparators, inadequate knowledge, and insufficient skills in pharmacoeconomic modeling. This is understandable, considering that numerous studies indicate that the concept remains relatively novel in many developing healthcare systems (Oamen and Osemene, 2021; Brazier et al., 2017; Surji, 2015). This situation presents both significant challenges and opportunities for pharmacy educators and practitioners. The challenges arise because, as indicated by respondents, pharmacoeconomic concepts can be complex and necessitate a new blend of competencies spanning pharmacy, medicine, and economics, which are not adequately addressed in the current undergraduate curriculum. However, there are opportunities for hospital pharmacists to illustrate to healthcare decision-makers, through robust economic evidence, how to maximize the benefits obtainable from available resources. The challenge of lacking a supportive policy environment was also emphasized by respondents, highlighting the need for the development of contextually relevant guidelines for pharmacoeconomic evaluations, akin to what health system managers (Carapinha, 2017).

CONCLUSION

Hospital pharmacists demonstrated a poor understanding of pharmacoeconomic concepts. While their attitudes towards this emerging subspecialty were predominantly positive, they were not strong enough to instigate meaningful behavioral changes essential for integrating these evaluations as decision-support tools in medication management. The implementation of pharmacoeconomic evaluations among respondents was minimal, and those who did engage with the concept did so without a systematic approach. Significant challenges related to capacity constraints among hospital pharmacists hindered the use of pharmacoeconomic evaluations. To promote widespread adoption of these evaluations and reduce healthcare costs in Nigeria, policy actions aimed at expanding health insurance coverage and reinforcing medicines and therapeutic committees are strongly advised.

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