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Original Article

Health Management and Policy Section

Designing a Pharmacy Accreditation Programme to Improve the Quality of Service Delivery in Pharmacies

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ABSTRACT

Introduction: Improving service delivery has become a major goal in all healthcare settings. Accreditation can play an important role in improving service delivery, but few studies have been done on the development of pharmacy accreditation models.

Aim: To design a pharmacy accreditation programme, develop accreditation models and provide a suitable tool for improving the quality of service delivery in the pharmacy.

Materials and Methods: This study was a mixed-method study conducted from March 2019 to December 2020. A scoping review was undertaken for this study. PubMed, Google Scholar, World Health Organisation (WHO) and other related databases (like Web of Pharmacy Accreditation Organisations) were used as sources of databases, used following keywords to search documents according to MeSH terms i.e, health services administration, delivery of healthcare, accreditation and pharmacy. A structural equation modelling method was used. Based on the data extracted from the databases, a questionnaire was designed and was administered on stakeholders. The collected data was analysed using confirmatory factor analysis. Model parameters were estimated using the Full Information Maximum Likelihood (FIML) method. The model was revised on inspection of modification indices and fit statistics and experimented for construct validity, construct reliability and measurement invariance.

Results: The findings of this study were the design of a pharmacy accreditation programme that includes five dimensions of quality and safety, management and performance, training and development of human resources, procedures and environmental and equipment factors. The quality and safety dimension with a correlation coefficient of 0.92 had the greatest impact on the accreditation programme, the environmental and equipment factors had the least effect with a correlation coefficient of 0.73.

Conclusion: Simultaneous use of valid global models, the views of experts and stakeholders in this model, has provided a powerful and novel tool to improve the performance of pharmacies.

Keywords: Environmental and equipment factors, Healthcare, Health services administration, Management

INTRODUCTION

Within an incorporated healthcare system, pharmacies have a central role in the improvement of public health and the reduction of health inequalities [1]. Pharmacy at the end of the pharmaceutical supply chain as a retailer and a Small Business Unit (SBU) is responsible for dispensing medicines to the patients [2]. As such, pharmacies operate with a dual role, acting as both a healthcare provider and retail business [3]. However, pharmacy practice has changed over the decades, evolving and developing towards a role in healthcare beyond medicines supply [4]. Currently, the pharmaceutical system is suffering from many dysfunctions including regular shortages of some medicines in the market, selling medicines by pharmacies without a prescription and counterfeit medicines. The existing challenges in the pharmaceutical system make it necessary to conduct several studies on the enforcement system to solve the potential problems [5].

The delivery of safe and quality healthcare services is a demanding issue [6]. Improving patient satisfaction has become the main objective in all healthcare settings. Accreditation can play a significant role in improving patient satisfaction [7]. There is significant evidence displays accreditation programmes improve the process of care delivering healthcare services and clinical outcomes. Accreditation programmes should be supported as a tool to improve the quality of healthcare services [8].

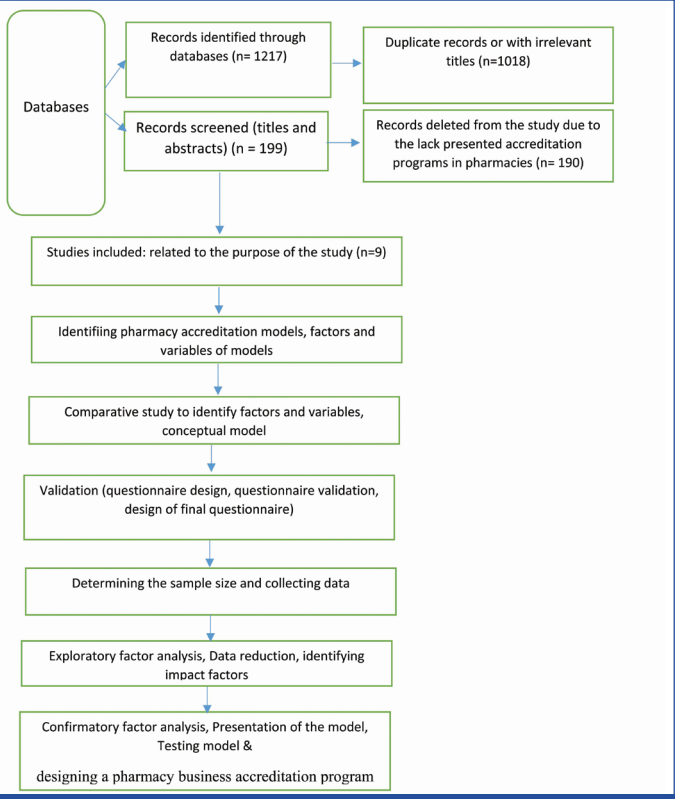
Most managers and politicians in health, accreditation and evaluation of health service providers consider it imperative to improve quality [9]. Frey M et al., showed that accreditation has a positive effect on pharmacists perceptions of patient safety, quality of patient care, patient satisfaction, and patient relationships in pharmacies [10]. A pharmacy accreditation program can enhance pharmacy performance to improve patient care and drug safety, and the importance of accreditation is dependent on the stringent application of fitting directions and regulations [11]. Implementing accreditation leads to improvements in patient care [12]. Many studies indicate that factors such as quality, safety, environment, service delivery and performance are effective in the accreditation programme [12-15], therefore, the mentioned factors were considered as hypotheses by the researchers of this study.

Alkhateeb FM et al., concluded that in the absence of national accreditation programmes, international programmes are increasingly being used [16]. Fortes MT et al., acknowledges that each model can have its own benefits for that country and the decision to choose models depends on the policies of countries [17]. It is important that a theoretically valid measurement tool be available for researchers. Furthermore, pharmacy managers could use such a tool to obtain reliable feedback with a view to improving performance [18]. Few studies in the world have been conducted in the field of pharmacy accreditation programme design, on the other hand, there are different pharmacy accreditation models in the international class, and each of them has specific advantages, so this study using internationally validated models can provide a comprehensive and novelty pharmacy accreditation programme. The aim of this study was to design a pharmacy accreditation programme, develop accreditation models and provide a suitable tool for improving the quality of service delivery in the pharmacy.

MATERIALS AND METHODS

This study was a mixed-method study conducted from March 2019 to December 2020. Scoping review, qualitative analysis, Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) methods were used. The study received Ethical Clearance

(IR.IAU.SRB.REC.1398.070) from the National Ethics Committee in Biomedical Research in Iran. This study was conducted in Iran between 2019 and 2020. The steps of the study were according to [Table/Fig-1].



[Table/Fig-1]: Steps of the present study (designing a model for a pharmacy accreditation programme).

Inclusion criteria: The inclusion criteria for scoping review were as follows: a) articles published between 1 January 2000 and 31 December 2020, b) documents and articles written in English or Persian, providing information about the pharmacy accreditation program or model, conducted in retail, business, and community pharmacy settings, c) quantitative and qualitative articles, theses and dissertations, and review articles.

Exclusion criteria: Exclusion criteria were records that did not report information about the pharmacy accreditation program or model.

a. A scoping review was undertaken for this study. PubMed, Google Scholar, World Health Organisation (WHO) and other related databases (like Web of Pharmacy Accreditation Organisations) were used as sources of databases. The authors used following keywords to search documents according to MeSH terms: health services administration, delivery of healthcare, accreditation and pharmacy.

b. A comparative study [Appendix-1] of the remaining models in the study was done in order to compare the factors and items of the model.

c. A conceptual model was designed [Appendix-2] and based on it, a self-administered questionnaire was prepared. The validity and reliability of the questionnaire were examined as follows:

The face validity of the questionnaire was confirmed by a qualitative method. The content validity examined by Lawshe and Waltz and Bausell techniques [19,20]. Accordingly, the Content Validity Index (CVI) and Content Validity Ratio (CVR) indices were examined by 15 experts [Appendix-3]. Cronbach's alpha method was used for reliability analysis of the questionnaire. Cronbach's alpha coefficient was 0.853.Therefore, the reliability was confirmed. At this stage, the questions that were repeated or could not obtain acceptable values based on the criteria Lawshe and Waltz and Bausell techniques [19,20] were excluded from the study.

Study Procedure

A self-administered questionnaire in the Persian language containing 33 questions and a 5-point Likert scale was prepared as a data collection tool. The questionnaire translated into the English language is provided in [Appendix 4]. The statistical population to participate in the survey included managers and experts of the Food and Drug Administration, accreditation experts and pharmacists. The structural equation modelling requires a large sample size [21,22], which affects sampling error [23]. In a survey, the sample size can be determined according to the number of participants per item, five to ten participants per item are common [24]. Assuming nine participants for each item, the sample size was estimated to be 297. Therefore, 300 samples were surveyed. Samples participated in the survey on the impact of variables in pharmacy accreditation. The inclusion criteria were people who had atleast one of two conditions as follows:

(a) Accreditation expert, and

(b) Pharmacist. In the field study, five different locations of Iran were selected to collect data, including: the centre of the country (Tehran province), the west (Kermanshah province), and the northwest (Guilan province), and the northeast (Khorasan Razavi province), and the south (Fars province). Sixty samples were selected for each location randomly. Regarding the informed consent of the participants, the researcher explained the objectives of the research to the participants, and participation in the research was optional.

(c) The Exploratory Factor Analysis (EFA) was conducted to identify the factors in the pharmacy accreditation program, Confirmatory Factor analysis (CFA) was used to ascertain the model. Exploratory factor analysis is a data-driven approach, used to determine the underlying factors of multiple observed variables [25]. Confirmatory factor analysis is a type of Structural Equation Modelling (SEM) that deal specifically with measurement models. It's almost always used during the process of scale development to examine the latent structure of a test instrument (like a questionnaire) [26].

(d) Finally, the pharmacy accreditation programme was designed.

(e) Evaluation of reliability and construct validity.

To estimate the convergent and discriminant validity, some parameters were computed. If they fulfilled the provisions of [Table/Fig-2] [27], the construct validity was confirmed.

Reliability	Construct reliability >0.7
Convergence validity	Factor loads must be meaningful
	Standard factor loads>0.5
	Construct reliability>Average variance extracted
	Average variance extracted>0.5
	Maximum shared squared variance<Average variance extracted
Discriminant validity	Average shared squared variance<Average variance extracted

[Table/Fig-2]: Conditions for establishing reliability and construct validity [27].

There are numerous fit indices. A fit index delivers a global assessment of how well the collected data fit the hypothesised model. Common fit indices for a single analysis include Comparative Fit Index (CFI), Tucker-Lewis Index (TLI, or non normed fit index), and Root Mean Square Error of Approximation (RMSEA) [24].

STATISTICAL ANALYSIS

Statistical Analysis was done using the Statistical Package for the Social Sciences (SPSS, IBM) version 22.0, to determine the factors and variables that are under the set of each factor. Descriptive statistics were used to analyse the characteristics of the study population. The Analysis of Moment Structures (AMOS, IBM), version 23.0 used to confirm the model and evaluate the fit indices. For all statistical test p-value was set at <0.05.

RESULTS

According to the inclusion criteria in the scoping review stage, 1,217 documents were included in to study. Out of total, 1,018 documents were excluded, as they were irrelevant or had duplicate titles. The abstracts and full texts of 199 remaining investigations were studied. Total 190 studies were excluded due to the lack of presenting a programme for pharmacy accreditation. Finally, nine relevant records were identified as the basis for the present study [Table/Fig-1].

The pharmacy accreditation models reviewed were as follows:

- **Board of Certification/Accreditation (BOC):** This is a credentialing organisation that provides accreditation for facilities supplying patients with durable medical equipment and orthotic and prosthetic products, as well as professional certification for specialists. It was founded in 1984 and operates in the field of accreditation of medical institutions, including pharmacy accreditation [28].
- **Utilisation Review Accreditation Commission (URAC):** It is a validated, non profit accrediting body based in Washington, DC. Its mission is to improve the quality of healthcare through leadership, innovation, measurement and accreditation [29].
- **The Wolters Kluwer Clinical Drug Information (WKCI) in the United States:** This model believes that accreditation standards are generally organised in four aspects [30].
- **Centre for Pharmacy Practice Accreditation (CPPA):** This is in the United States. Establishes and manages a process that leads to the use of standards for pharmacy accreditation and implements comprehensive programs such as pharmacy site accreditation, promotion, development and maintenance of principles, policies and standards. Its mission is to serve public health by raising the level of patient care services through pharmacy accreditation [31].
- **Pharmaceutical Society of Ireland (PSI):** It is a public body established by law to protect the health, safety and welfare of patients and the public by regulating pharmacists and pharmacies in Ireland [32].
- **Ontario College of Pharmacists:** This incorporated in 1871, is the registering and regulating body for the profession of pharmacy in Ontario. The College's mandate is to serve and protect the public interest and hold Ontario's registered pharmacists and pharmacy technicians accountable to the established legislation, standards of practice, Code of Ethics and policies and guidelines relevant to pharmacy practice [33].
- **Indian Pharmaceutical Association (IPA):** This is in India, has a governmental structure constituted as the Central Council under the Pharmaceutical Act. Its main goal is to promote pharmacists as one of the most important providers of healthcare services and is committed to promoting the highest professional and ethical standards of pharmacy [34].
- **Accredited Drug Dispensing Outlet (ADDO):** This is a donor-supported initiative led by the Tanzanian Food and Drug Authority to train and license small, privately operated retail outlets in rural and poor areas to sell a set list of essential medicines, including selected prescription drugs [35].
- **Malaysian Pharmaceutical Society (MPS) in Malaysia:** It is a national association of pharmacists that was established in 1967 to promote and protect the dignity and interests of the pharmaceutical profession in this country. It also aims to support and promote professional standards and ethics [36].

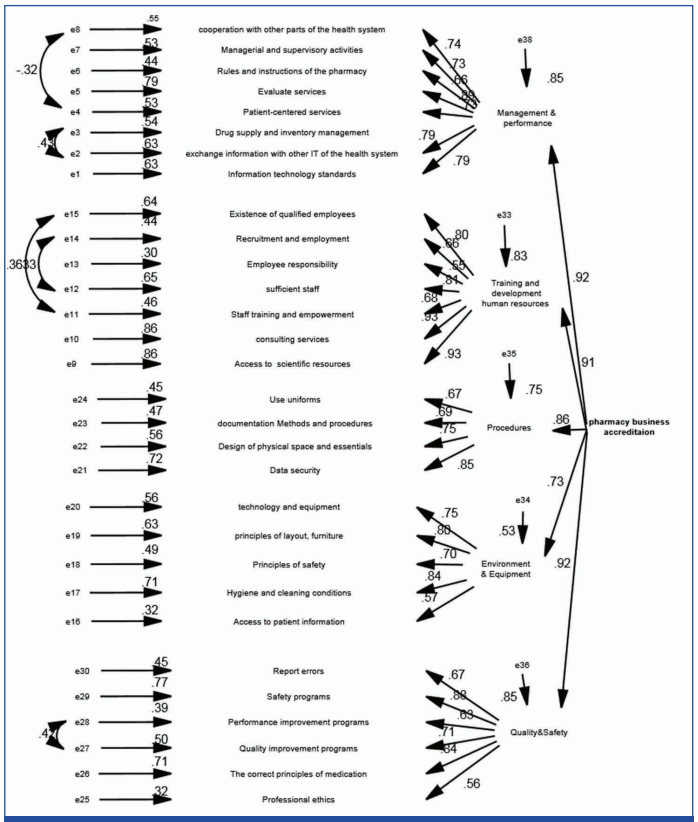
Demographic information of participants in the survey

Of the 300 participants approached to complete the survey, 233 participated and returned their completed survey.The majority of respondents were female, 71% and 29% were male. In terms of education, 45 (19%) had a bachelor's degree, 39 (17%) had a master's degree, 97 (42%) had a professional degree, and 52 (22%) had a doctoral degree. Also, the expert panel consisted of 15 experts, 60% were male and 40% female, 66% had professional doctoral degrees and 34% had doctoral degrees. Demographics of participants in both the expert panel and survey are displayed in [Table/Fig-3].

Component		Population survey	Expert
Total samples	Total	300	15
	Correct response	233	15
Sex	Male	67	9
	Female	166	6
Degree of education	Bachelor's degree	45	0
	Master's degree	39	0
	Professional doctoral degree	97	5
	Doctoral degree	52	10

[Table/Fig-3]: Demographics of participants in both the expert panel and survey. The number of participants in the table does not add up to the total number of participants due to missing data

Model design: The main finding of this study was the design of a pharmacy accreditation programme. [Table/Fig-4] shows the general structure of the confirmatory factor analysis of the modified pharmacy accreditation model estimates standard coefficients. As can be seen, the models included five factors (quality and safety; management and performance; training and development of human resources; procedures and environment and equipment) and 30 variables. The variables or items are shown in [Table/Fig-4].



[Table/Fig-4]: The general structure of the confirmatory factor analysis of the modified pharmacy accreditation model in the case of estimating standard coefficients.

Quality, safety and management and performance factors significantly impacted pharmacy accreditation (correlation values=0.92). Other factors also had significant effects, including training and development of human resources (correlation values=0.91), procedures (correlation values=0.86), environment and equipment (correlation values=0.73).

Model fit: The results of general fit indices of the confirmatory factor analysis reported in [Table/Fig-5]. In one column of the table, general rule for acceptable fit if data is continuous was shown and in the other column, the results of fitting the current model were displayed.

Fit index	General rule for acceptable fit if data is continuous	Modified model
Root Mean Square Error of Approximation (RMSEA)	<0.05 to with confidence interval	0.065
Goodness of fit index	≥0.95	0.878
Adjusted goodness of fit index	≥0.95	0.840
Normed fit index	≥0.95	0.919
Incremental fit index	≥0.95	0.943
Tucker-lewis index	≥0.95 can be 0> TLI >1 for acceptance	0.842
Comparative fit index	≥0.95	0.872

[Table/Fig-5]: Model test results based on fit indices.

The results of model fit showed that the model has a relatively good fit. Comparative Fit Index (CFI)=0.87, Tucker-Lewis Index (TLI)=0.84 and the Root Mean Square Error of Approximation (RMSEA)=0.065) also did not reach the target fit.

Construct reliability: Construct reliability is a measure of reliability in the structural equation modelling analysis.The values related to the Construct reliability and validity are given in [Table/Fig-6].

Variables	CR	AVE	MSV	ASV	Management and performance	Training and development of human resources	Environmental and equipment	Quality and safety
Management and performance	0.945	0.716	0.381	0.128				
Training and development of human resources	0.902	0.760	0.107	0.058	0.862			
Environmental and equipment	0.859	0.671	0.074	0.026	0.840	0.816		
Quality and safety	0.847	0.540	0.381	0.112	0.931	0.888	0.821	
Procedures	0.725	0.514	0.025	0.017	0.884	0.882	0.856	0.872

[Table/Fig-6]: Values related to reliability and construct validity.
CR: Adjusted construct reliability; AVE: Average variance extracted; MSV: Maximum shared squared variance; ASV: Average shared squared variance

According to [Table/Fig-6], the construct reliability of all factors was more than 0.7. Therefore, reliability was established. Also, the construct reliability was larger than the average variance extracted [3], and the average variance extracted was more than 0.5. Therefore, the condition of convergence validity was met for all factors. Finally, given that the Average Variance Extracted was larger than the Maximum Shared Squared Variance (MSV), there was a discriminant validity for all factors affecting pharmacy accreditation.

DISCUSSION

This study used a systematic approach towards accreditation model designing with stakeholder involvement, with an emphasis on aspects that are relevant to the international audience. The findings showed the accreditation of pharmacies in the framework of five factors.

The Root Mean Square Error of Approximation (RMSEA) and Comparative Fit Index (CFI) statistics provide evidence of the model's suitability in providing a comprehensive view of accreditation programmes in pharmacies. It should be mentioned that the Tucker-Lewis Index value only just reached the desired cut-off of 0.95. A review of the literature identifies that the difficulty in attaining fit standards for complex models with high inter-correlation is well proved [37-39]. This highlighted that cross-loading (When any item correlates more strongly with the other dimensions than with its own dimension, the instrument has cross-loading [40]), which is typical of highly correlated data, contributes to model misspecification and presents difficulty with adherence to Hu LT and Bentler PM strict cut-off values for model fit [41]. An instrument's acceptability should not be refused on failing to meet fit normal, but should rather be judged by an overall validity assessment using a broad analysis of multiple fit statistics, construct validity and criterion validity tests [38,39]. Future works should look to test this model in settings that would minimise inter-correlation, such as a non Service Focused Marketing Strategy (SFMS) pharmacies hypothesised to produce a more varied response set. It is predicted that data collected from such settings would thus improve model fit [38].

Many studies have emphasised the desirable role of accreditation in health service organisations [42-46]. Alkhateeb FM et al., studied national and international accreditation programmes for pharmacies in the Gulf Cooperation Council countries, concluded that in the absence of national accreditation programmes, international programmes are increasingly being used as tools to know the power of quality [16]. Fortes MT et al., compares accreditation models in several European countries and acknowledges that each method can have its own benefits for that country and the decision to choose models depends on the policies of countries [17].

A number of studies have shown that accreditation is a driver for quality improvement [47-51]. Chapman RW, found that accreditation is a process that helps improve performance management system [15]. Frey M et al., showed that the frequency of reports by pharmacists and the compatibility of quality-based methods and services after accreditation increased [10]. In addition, accreditation had a positive effect on pharmacists' perceptions of patient safety, quality of patient care, patient satisfaction, and patient relationships in reputable pharmacies. Also, a pharmacy accreditation programme using quality-based standardised best practices can create and reinforce behaviour change in the pharmacy environment [10].

Bruchet N et al., in their research on the quality of 24 hour pharmacy services in 2011, indicated that these factors included the cleanliness of the environment of pharmacies and staff, safety and reliability of services or the correct provision of services, service effectiveness, and creating trust in the minds of customers regarding the operation of pharmacies [52].

Reviewing the dimensions of the present model and its compatibility with other models studied indicates that the Malaysian Pharmaceutical Society (MPS) model is most similar to the present model. The Malaysian Pharmaceutical Society model covers most aspects of accreditation and is comprehensively appropriately offered in the present model [36]. The Pharmaceutical Society of Ireland (PSI) and the Indian Pharmaceutical Association (IPA) models have paid less attention to quality and safety aspects [32,34]. The utilisation Review Accreditation Commission (URAC) has led pharmacies to excellence in quality and safety by developing important and practical indicators [29]. Comparing the present model with the utilisation Review Accreditation Commission (URAC) model, attention has been paid to the issue of training and empowerment of human resources, which can be important in the current situation of Iran due to the severe shortage of health personnel. Another model is the Board of Certification model in the United States [28]. One of the weaknesses of the Board of Certification model is the lack of attention to the environment, particularly the health conditions of the pharmacy environment. In the proposed model, this component has been seen and considered correctly. The Ontario College of Pharmacists (OCP) model is similar to the proposed model [33]. However, in the proposed model, issues related to training and empowerment of human resources and policies and methods are also seen, which can be very effective. The Accredited Drug Dispensing Outlet (ADDO) accreditation model focuses on quality, training, and employee competency considered in the proposed model [35]. In addition, the proposed model pays attention to safety and policies. Comparing the Centre for Pharmacy Practice Accreditation (CPPA) model with the model proposed by the researcher, we find that in the

proposed model, we have considered health indicators and pharmacy environment and policies, which can be very effective in accreditation issues [31]. Comparing the Wolters Kluwer Clinical Drug Information (WKCI) model with the proposed model, we have considered the measurable components of this model in the proposed model, along with policy and education indicators [30].

Limitation(s)

There is a limitation in this study that could be addressed in future studies. The study focused on surveys of experts and pharmacists. Consumer perceptions were not included due to logistical constraints and time and resource limitations to the study. However, interviews with other stakeholder groups/consumers and the use of quantitative methods to help establish a consensus opinion may form the basis of future studies.

CONCLUSION(S)

The simultaneous use of valid global models and the opinions of national experts and stakeholders in this study has provided a powerful and novel tool to improve the performance of pharmacies. The pharmacy accreditation programme designed can improve quality and safety in pharmacy. Organisations in charge of monitoring the performance of pharmacies can use this tool to accredit pharmacies.

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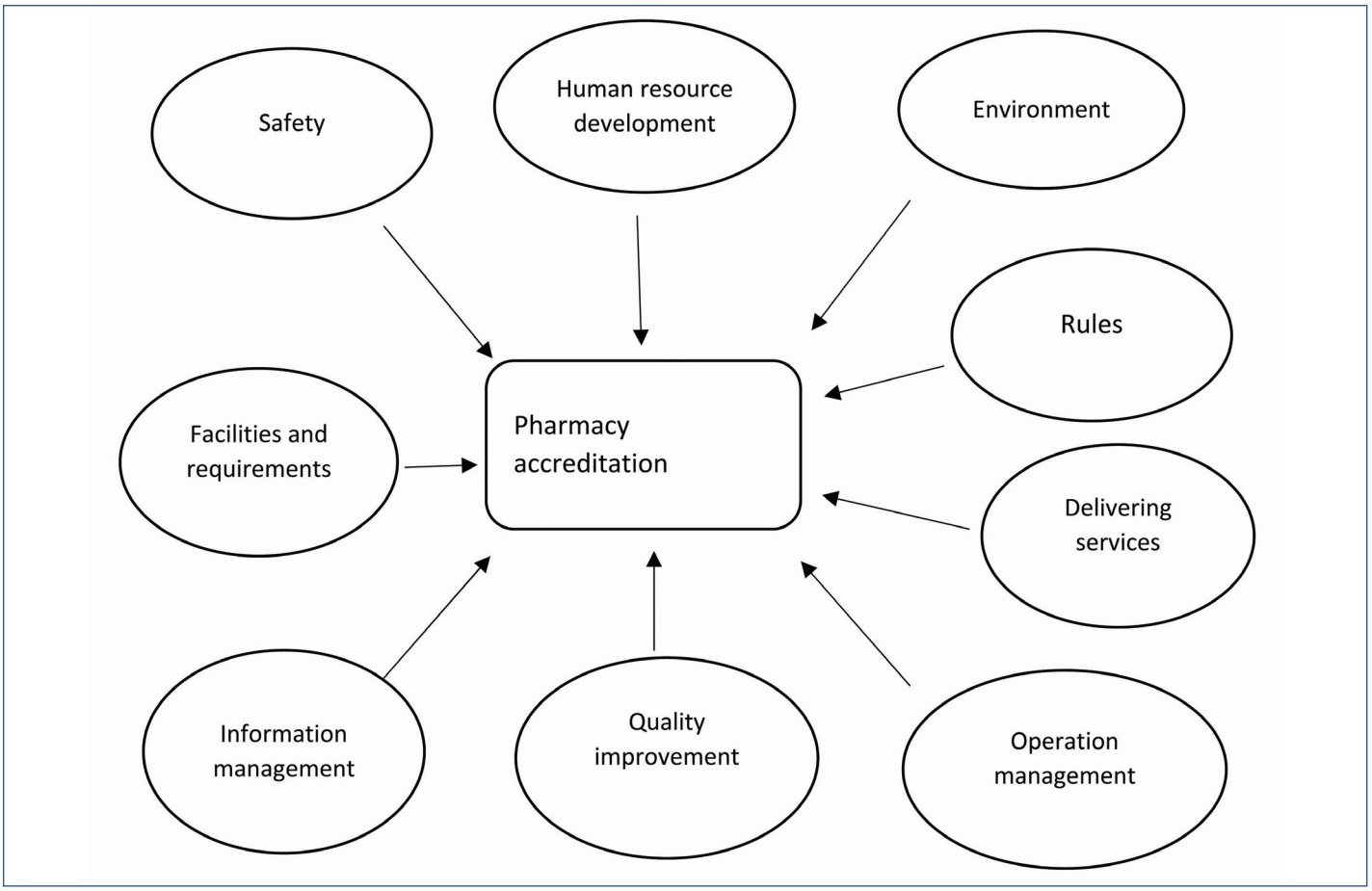
[APPENDIX-1]

Comparative matrix of pharmacy accreditation models

	MPS model	OCP model	CPPA model	URAC model	BOCmodel	Wolters Kluwer model	PSI model	IPA model	ADDO model	Total
Organisation and management	*					*				2
Operation management		*	*	*	*	*	*			6
Human resource development	*	*			*			*	*	5
Risk management				*						1
Policies and procedures	*							*		2
Infrastructure				*						1
Facilities and requirements	*	*			*			*		4
Performance improvement and monitoring				*						1
Quality improvement and safety	*	*	*		*	*		*	*	7
Medication management				*						1
Compliance with regulations		*			*				*	3
Initial report				*						1
Financial Management					*					1
Environment		*					*	*	*	4
Delivering Services		*	*	*		*	*	*		6
Information management		*		*	*		*	*	*	6
Pharmacist and physician communication					*					1

[APPENDIX-2]

Conceptual model of pharmacy accreditation



[APPENDIX-3]

Evaluation of CVR and CVI questionnaire

Variables	CVI			CVR	Status
	Relevant	Simplicity	Clarify		
Compatibility of the technology used with the standards of information technology of the health system.	93/0	86/0	93/0	6/0	Acceptable
Data security	93/0	8/0	86/0	6/0	Acceptable
Interoperability and exchange of information with other health system technologies	93/0	8/0	8/0	73/0	Acceptable
Access to patient information	93/0	8/0	86/0	73/0	Acceptable
Access to reliable scientific resources including the internet and reputable websites	93	86/0	86/0	87/0	Acceptable
Consulting services	100/0	86/0	93/0	100/0	Acceptable
Supply of medicine and inventory management	93/0	100/0	86/0	100/0	Acceptable
Observing the patient-centered principle of services	93/0	93/0	86/0	100/0	Acceptable
Professional ethics	86/0	93/0	86/0	87/0	Acceptable
The correct principles of medication	93/0	86/0	93/0	100/0	Acceptable
Immunisation services	73/0	93%	93/0	87/0	Unacceptable
Evaluation of services based on patient condition assessment and focus on improving drug use and service effectiveness	86/0	8/0	80/0	100/0	Acceptable
Design of environment and requirements	93/0	8/0	93/0	6/0	Acceptable
Hygienic and cleaning conditions	93/0	93/0	93/0	87/0	Acceptable
Safety principles	93/0	8/0	86/0	87/0	Acceptable
Observing the principles of layout, furniture and boards	93/0	86/0	86/0	6/0	Acceptable
Documentation of processes, methods and procedures for carrying out activities	86/0	8/0	86/0	73/0	Acceptable
Management and regulatory activities	93/0	86/0	86/0	100/0	Acceptable
Communication and cooperation with other subsystem of the health	88/0	8/0	80/0	6/0	Acceptable
Using appropriate technology and equipment	81/0	8/0	8/0	73/0	Acceptable
Respecting the patient's rights	73/0	86/0	86/0	100/0	Unacceptable
Quality improvement programmes (Programme and implement)	83/0	8/0	8/0	6/0	Acceptable
Monitoring programmes and improving results	86/0	8/0	80/0	6/0	Acceptable
Safety programmes (Programme and implementation)	85/0	8/0	93/0	6/0	Acceptable

Reporting errors and accidents, monitoring safety programmes	93/0	8/0	93/0	87/0	Acceptable
Training and empowering employees	93/0	8/0	93/0	87/0	Acceptable
Sufficient number of staff at all levels	8/0	8/0	93/0	87/0	Acceptable
Employee accountability	100/0	8/0	93/0	87/0	Acceptable
Employment and employment	93/0	8/0	86/0	73/0	Acceptable
Qualified staff	100/0	100/0	100/0	100/0	Acceptable
Use uniform	8/0	86/0	93/0	6/0	Acceptable
Registration and keeping records of laws and regulations	93/0	8/0	8/0	73/0	Acceptable
Employees' access to rules and regulations	100/0	93/0	100/0	87/0	Acceptable
Registering and keeping records of rules and regulations	93/0	93/0	100/0	87/0	Acceptable
Designing optimal working conditions	73/0	86/0	93/0	73/0	Unacceptable
Providing facilities and supplies	100/0	86/0	8/0	6/0	Acceptable
Documentation of requirements	86/0	100/0	86/0	6/0	Acceptable

[APPENDIX-4]

Questionnaire

S. No.	Questions	Very high	High	Middle	Low	Very low
1	Compatibility of the technology used with the standards of information technology of the health system.					
2	Data security					
3	Interoperability and exchange of information with other health system technologies					
4	Access to patient information					
5	Access to reliable scientific resources including the Internet and reputable websites					
6	Consulting services					
7	Supply of medicine and inventory management					
8	Observing the patient-centered principle of services					
9	Professional ethics					
10	The correct principles of medication					
11	Evaluation of services based on patient condition assessment and focus on improving drug use and service effectiveness					
12	Observing pharmacy rules and guidelines					
13	Design of environment and requirements					
14	Hygienic and cleaning conditions					
15	Safety principles					
16	Observing the principles of layout, furniture and boards					
17	Documentation of processes, methods and procedures for carrying out activities					
18	Management and regulatory activities					
19	Communication and cooperation with other subsystem of the health					
20	Using appropriate technology and equipment					
21	Quality improvement programmes (Programme and implement)					
22	Training and empowering employees					
23	Monitoring programmes and improving results					
24	Safety programmes (Programme and implementation)					
25	Reporting errors and accidents, monitoring safety programmes					
26	Sufficient number of staff at all levels					
27	Employee accountability					
28	Employment and employment					
29	Qualified staff					
30	Use uniform					
31	Registration and keeping records of laws and regulations					
32	Providing facilities and supplies					
33	Documentation of requirements					