

RESEARCH ARTICLE

# Pharmacy students' perceptions of collaborations, barriers, and attitude towards patient-centred care in persons with mental disorder in south-west Nigeria

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## Keywords

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## Abstract

**Introduction:** Patient-centred care is critical for enhanced management of mental disorders, this proves the need for an adequate understanding of students' attitudes and view about it. **Aim:** The study assessed pharmacy students' perceptions of collaborations, barriers, and attitudes towards patient-centred care in persons with mental disorders. **Methods:** Cross-sectional study was conducted among 87 final year pharmacy students. Descriptive analysis was performed using SPSS version 15.0. Average scores of more than 3.50 were considered positive. **Results:** Eighty students participated in the study, indicating 94.1% response rate. Lack of access to patients, 47 (58.8%) was mostly perceived to affect patient-centred care to mentally ill patients. Few, 14 (17.5%) experienced full cooperation from other health professionals. Average mean scores of  $3.82 \pm 0.89$  and  $4.44 \pm 0.731$  were observed for students' attitudes and perceptions of the pharmacist-patient relationship respectively during consultations. **Conclusion:** Lack of access to patients, low collaborations from other healthcare personnel, positive attitude towards mental illness, and positive perception of pharmacist-patient relationship were observed.

## Introduction

Pharmaceutical care, which is patient-centred, has been the recent trend of pharmacy practice. However, it is yet to be developed in some practice settings, and this may influence students' perception of the model (Siracuse *et al.*, 2008). Pharmaceutical care involves collaboration of pharmacists and other healthcare professionals towards ensuring safe and effective drug therapy to patients (El Hajj *et al.*, 2014). Collaboration in mental health care is essential following the chronic burden of the disease and the expansion of therapeutic modalities. Pharmacists' collaboration with other healthcare professionals has been demonstrated in previous studies to be associated with improved health outcomes (Neto *et al.*, 2011), but its practice appears to be limited (Albassam *et al.*, 2020). Several factors that influence collaborations between pharmacists and other healthcare professionals may be related to

communication, time, financial compensation and trust (Albassam *et al.*, 2020).

Similarly, several barriers appear to be associated with the implementation of pharmaceutical care in mentally ill patients (El Hajj *et al.*, 2014). Poor communication, lack of access to patients, and negative attitude towards mentally ill patients in terms of stigmatisation and social distance are among the recognised barriers to the provision of pharmaceutical care services to patients with mental illness (Bell *et al.*, 2006; El Hajj *et al.*, 2014). The pharmaceutical care model is an approach that enables pharmacists to provide medication education, medication counselling and medication therapy management. Therefore, adequate attention is required to reduce or prevent potential barriers to this care approach in mentally ill persons.

Mental health is highly neglected in Nigeria, and this cuts across several aspects, including policy

documents, funding and practice of mental healthcare (Ministry of Health and WHO, 2006). This has resulted in reports of several cases of suicide in some parts of the country (Suleiman, 2016). About 20 to 30 % of persons in Nigeria are estimated to suffer mental illness (Onyemelukwe, 2016); this is a significant number considering the over 200 million population of Nigeria (World Bank, 2020).

The improvement of mental healthcare in Nigeria requires adequate attention and requisite knowledge and skills by health professionals. The attitude of pharmacy students towards persons with mental illness is associated with attitude towards the provision of pharmaceutical care to the patients (Volmer *et al.*, 2008). Therefore strategies which include enhanced educational curriculum on mental healthcare and promotion of contact with patients may be essential in improving attitude towards the care of mentally ill persons (Bell *et al.*, 2006). Improving students' attitudes towards mentally ill patients and mental healthcare is critical to the healthcare system, as this may be mirrored in their eventual practice.

The design of the undergraduate Bachelor of Pharmacy (B. Pharm) curriculum in Nigeria enables the development of the students' professional abilities for rational and evidence-based clinical decisions. During the five-year programme, students are offered basic science courses and general knowledge courses in their first year. The second year focuses on the core pharmacy courses and some courses in the basic medical sciences, while the third, fourth and fifth years comprise solely pharmacy courses, including externship and clerkship programmes (Pharmacists Council of Nigeria, 2021). In the course of the study, clerkships are undertaken in various clinical sections and wards of selected hospitals, where students participate in clinical activities, including in mental health. This hospital-based experiential learning is a critical component of pharmacy education but is consistently faced with several challenges that influence its goal actualisation (Okoro *et al.*, 2021). Also, a period of industrial attachment is included to enable the students to gain hands-on experience in other settings of pharmacy practice. However, a previous study in Nigeria has suggested a lack of translation of classroom theory into actual practice (Abdu-aguye *et al.*, 2019).

The study objectives were to investigate the attitude of final year pharmacy students towards pharmaceutical care, to identify perceived barriers of the students to the provision of pharmaceutical care to mentally ill patients, to find out the students' desired collaborators for effective pharmaceutical care services to mentally ill patients, and to assess the students' perception of pharmacists' therapeutic relationship with patients.

## Methods

### Study setting

The study was conducted in a tertiary education institution, Olabisi Onabanjo University in Ogun State, located in the Southwestern region of Nigeria. Among the Colleges, Faculties and Schools in the Institution is the Faculty of Pharmacy, which has existed for about 22 years. The Faculty offers a Bachelor of Pharmacy degree, which is obtained after a minimum of 5-year completion of the course. The institution is located in the suburban part of the state and consists of a teaching hospital that serves the host community and neighbouring towns.

### Study design and study population

A cross-sectional study was carried out among 87 final year pharmacy students who attended Olabisi Onabanjo University, Nigeria, using the following criteria:

- The inclusion criteria are all final year pharmacy students who had practice experience in clinical or community pharmacy settings and who gave informed consent to participate in the study.
- The exclusion criteria are pharmacy students who did not consent to participate in the study.

The study investigated the attitude of final year pharmacy students towards pharmaceutical care, perceived barriers of the students to the provision of pharmaceutical care to mentally ill patients, and the students' desired collaborators for effective patient-centred care services to mentally ill patients. The study also assessed the students' perception of pharmacists' therapeutic relationship with patients.

### Survey instrument

The questionnaire was designed to measure the students' perception of the pharmacist-patient relationship, collaborations with other healthcare professionals, barriers and attitudes towards the provision of pharmaceutical care to mentally ill patients. The theoretical framework in the questionnaire design was based on the relevance of pharmacy students' opinions in pharmacy practice, as this could have a major influence on their practise after graduation.

The self-completed questionnaire was made up of three sections which obtained relevant data for the study. Section A collected socio-demographic data of the respondents, while section B buttressed respondents' perceived barriers to the provision of pharmaceutical care to mentally ill patients. The section also obtained relevant data on the students'

desired partners for collaboration and the extent of collaboration with these partners for the effective provision of pharmaceutical care to the patients. The frequency of encounters with mentally ill patients during practice was also elicited in this section. The section had a 'yes' or 'no' response scale and multi-choice questions, from where respondents were asked to select responses as applicable to them. Section C of the questionnaire was made up of five-point Likert scale survey questions that assessed the students' perception of the pharmacist-patient relationship during consultations and their attitude towards the provision of pharmaceutical care to mentally ill patients. In the scale, 1 = strongly disagree; 2 = disagree; 3 = undecided; 4 = agree, and 5 = strongly agree. These were made up of positively worded 11 statements on pharmacists' therapeutic relationship with mentally ill patients and 12 statements on respondents' attitude towards pharmaceutical care. This section measured the extent to which study participants agreed to the statements.

The study tool was validated by face validity and a pilot study. It was assessed by two clinical pharmacists for comprehensibility and content accuracy and was further pre-tested among ten final year pharmacy students, after which modifications were made to suit their understanding. The reliability of the questionnaire was also tested using Cronbach's alpha.

#### **Data collection and outcome measures**

The questionnaire was consecutively distributed to all the study participants. The study outcome measured the attitude of respondents towards pharmaceutical care in mentally ill patients and the perception of respondents on the pharmacist-patient relationship during consultations.

#### **Data analysis**

Responses from the study were inputted into Microsoft Excel Software for easy sorting, and it was double-checked to ensure accurate data entry. Descriptive analysis of the data was performed using Statistical Package of Social Sciences (SPSS) version 15.0. Frequencies, percentages, means, standard deviations and Cronbach's alpha were determined.

An average mean score of above 3.50 was considered positive for respondents' perception of pharmacist-patient relationships during consultations. An average mean score of above 3.50 was also considered a positive attitude towards pharmaceutical care by the study participants.

#### **Ethical considerations**

Approval was granted by the Faculty of Pharmacy, Olabisi Onabanjo University. The authors obtained verbal informed consent from study participants to preserve their desired anonymity, and no incentives were offered to the participants. Participation was voluntary, and participants were assured of the anonymity of their identity and the confidentiality of their provided information. Ethical approval with the reference number HREC/04/03/2012 was obtained from the Scientific and Ethical Review Committee of the Federal Medical Centre Abeokuta.

#### **Results**

A total of 80 students participated in the study, indicating a response rate of 94.1 %. A Cronbach's Alpha of 0.8 was also observed.

Respondents' socio-demographic characteristics are summarised in Table I. Almost all the study participants, 76 (95.0 %), were below 30 years old; half, 40 (50.0 %) were males, and all 80 (100.0 %) had work experience in a clinical pharmacy setting. The majority, 48 (60.0 %), worked in a community pharmacy.

**Table I: Socio-demographic data of respondent (n: 80)**

Demographics	Frequency	Percentage
<b>Age</b>		
Below 30 years	76	95.0
30-39 years	4	5.0
Above 40 years	----	----
<b>Gender</b>		
Male	40	50.0
Female	40	50.0
<b>Experience in the clinical pharmacy setting</b>		
Yes	80	100.0
No	----	----
<b>Place of previous work</b>		
Hospital	32	40.0
Community pharmacy	48	60.0

The majority of respondents, 66 (82.5 %), had encountered mentally ill patients in the course of their practice (see Table II). Thirty-two (40.1 %) of respondents encountered on a monthly basis. More than half, 47 (58.8 %), perceived lack of access to patients as a barrier to the provision of pharmaceutical care to them. Inadequate expertise was the least reported barrier to the provision of pharmaceutical care to the patients, which were reported by 2 (2.5 %) respondents.

**Table II: Pharmacy students' perceived barriers in the discharge of pharmaceutical care (n: 80)**

Description	Frequency	Percentage
<b>In your pharmacy experience, did you ever encounter mentally ill patients?</b>		
Yes	66	82.5
No	14	17.5
<b>How often did you encounter patients with mental illness?</b>		
Daily	20	15.0
Weekly	28	35.0
Monthly	32	40.1
<b>Perceived barriers in the practice of pharmaceutical care to mentally ill patients</b>		
Lack of access to patients	47	58.8
Communication and understanding	18	22.5
Inadequate expertise	2	2.5
Lack of pharmacy specialisation, inadequate knowledge of treatment	8	10.9
Non-adherence to drugs	5	6.3

Half of the study participants, 40 (50.0 %), desired collaboration with general practitioners and psychiatrists in mental health care (see Table III). More than a quarter, 23 (28.8 %), desired collaboration with general practitioners, psychiatrists and psychologists. However, only a few, 14 (17.5 %), had full collaboration from the potential collaborators.

Table IV shows the students' perception of the pharmacist-patient relationship during consultations and had an average mean score of 3.82 ±0.89. The respondents did not quite agree that patients' decisions should be the most important during consultations with pharmacists, as this had the lowest mean score, 2.40 ±1.269. Respondents did not also

quite agree that attention should be given to affordable medicines and patients' preference 2.79 ±1.347. Meanwhile, the respondents mostly agreed that cooperation between the pharmacist and patients encourages improved health by 4.59 ± 0.589. Pharmacists' attentiveness to patients' needs, desires and abilities also received a high mean score 4.45 ± 0.692.

**Table III: Pharmacy students' desired partners for collaboration in mental health care (n: 80)**

Description	Frequency	Percentage
<b>Who are your desired partners for collaboration in mental health care?</b>		
General practitioner + psychiatrist	40	50.0
General practitioner + psychiatrists + psychologists	23	28.8
General practitioners + psychiatrists + psychologists + community healthcare service	3	3.8
General practitioners + psychiatrists + psychologists + pharmacist colleagues	3	3.8
General practitioners + psychiatrists + psychologists + community healthcare services + pharmacist colleagues + health insurance companies	11	13.9
<b>What is the current level of cooperation with these partners?</b>		
No cooperation	6	7.5
Little cooperation	19	23.8
Undecided	25	31.3
Average cooperation	16	20.0
Full cooperation	14	17.5

Table V presented the attitude and extent of providing pharmaceutical care to mentally ill patients by pharmacy students. An average mean score of 4.44 ± 0.731 was observed, and respondents would mostly refer patients to their physician if symptoms persist, 4.69 ± 0.608. Other items with high mean scores are, know patients' medication history 4.63 ± 0.682 and providing support and listening to the patients 4.63 ± 0.537.

**Table IV: Students' perception of the pharmacist-patient relationship in provision of pharmaceutical care**

Survey items	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Mean $\pm$ SD
1. Pharmacists' consultation with the patient should be viewed as negotiation.	12 (15.0%)	9 (11.3%)	17 (21.3%)	33 (41.3%)	9 (11.3%)	3.23 $\pm$ 1.242
2. Patients' personal beliefs should be respected.	1 (1.3%)	6 (7.5%)	5 (6.3%)	45 (56.3%)	23 (28.8%)	4.04 $\pm$ 0.878
3. Attention should be given to affordable medicines and patients' preference.	15 (18.8%)	25 (31.3%)	14 (17.5%)	14 (17.5%)	12 (15.0%)	2.79 $\pm$ 1.347
4. Opportunities to express thoughts about an illness and negotiate how it is treated should be given to patients.	-----	8 (10.0%)	9 (11.3%)	28 (35.0%)	35 (43.8%)	4.13 $\pm$ 0.973
5. Better health would follow from co-operation between pharmacists and patients	-----	-----	4 (5.0%)	25 (31.3%)	51 (63.8%)	4.59 $\pm$ 0.589
6. High priority in the consultation between pharmacists and patients is to establish agreement about the need for medicine.	-----	-----	22 (27.5%)	42 (52.5%)	16 (20.0%)	3.93 $\pm$ 0.689
7. Pharmacists should be sensitive to patient's desires, needs, and abilities.	-----	2 (2.5%)	3 (3.8%)	32 (40.0%)	43 (53.8%)	4.45 $\pm$ 0.692
8. Pharmacists should try to help patients to make as informed as a choice as possible about benefits and the risks of alternative treatments.	-----	1 (1.3%)	8 (10.0%)	49 (61.3%)	22 (27.5%)	4.15 $\pm$ 0.638
9. During the pharmacist- patient consultation, it is the patient's decision that is most important.	21 (26.3%)	32 (40.0%)	8 (10.0%)	12 (15.0%)	7 (8.8%)	2.40 $\pm$ 1.269
10. Pharmacists should be more sensitive to how patients react to the information they give.	-----	-----	5 (6.3%)	46 (57.5%)	29 (36.3%)	4.30 $\pm$ 0.582
11. Pharmacists should learn about patients beliefs about their medicines.	1 (1.3%)	7 (8.8%)	4 (5.0%)	45 (56.3%)	23 (28.8%)	4.03 $\pm$ 0.900
<b>Mean <math>\pm</math> SD</b>						<b>3.82 <math>\pm</math>0.891</b>

**Table V: Pharmacy students' attitude and extent of providing pharmaceutical care to mentally ill patients. N= 80**

Survey items	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Mean $\pm$ SD
1. Maintain a trusting relationship.	2 (2.5%)	1 (1.3%)	1 (1.3%)	33 (41.3%)	43 (53.8%)	4.43 $\pm$ 0.808
2. Know the patient's medication history.	1 (1.3%)	1 (1.3%)	-----	23 (28.8%)	55 (68.8%)	4.63 $\pm$ 0.682
3. Provide information on disease.	-----	4 (5.0%)	1 (1.3%)	48 (60.0%)	27 (33.8%)	4.23 $\pm$ 0.711
4. Provide medication-related information.	1 (1.3%)	1 (1.3%)	-----	34 (42.5%)	44 (55.0%)	4.49 $\pm$ 0.693
5. Pharmaceutical care is relevant to pharmacist in treating patients.	-----	3 (3.8%)	-----	32 (40.0%)	45 (56.3%)	4.49 $\pm$ 0.693
6. Follow up symptoms and side effects.	1 (1.3%)	-----	7 (8.8%)	38 (47.5%)	34 (42.5%)	4.30 $\pm$ 0.736
7. Follow up medication adherence.	1 (1.3%)	4 (5.0%)	7 (8.8%)	40 (50.0%)	28 (35.0%)	4.13 $\pm$ 0.862
8. Provide support and listen to the patients as well as counselling.	-----	6 (7.5%)	3 (3.8%)	23 (28.8%)	48 (60.0%)	4.41 $\pm$ 0.882
9. Advise patient to consult a physician when necessary.	-----	7 (8.8%)	5 (6.3%)	27 (33.8%)	41 (51.3%)	4.28 $\pm$ 0.927
10. Advise patient to consult a physician when symptoms worsen.	-----	1 (1.3%)	3 (3.8%)	27 (33.8%)	49 (61.3%)	4.55 $\pm$ 0.634
11. Provide support and listen to the patient.	-----	-----	2 (2.5%)	26 (32.5%)	52 (65.0%)	4.63 $\pm$ 0.537
12. Advise patient to consult a doctor when improvement is not noticed and symptom worsens.	-----	2 (2.5%)	-----	19 (23.8%)	59 (73.8%)	4.69 $\pm$ 0.608
<b>Mean <math>\pm</math> SD</b>						<b>4.44 <math>\pm</math>0.731</b>

## Discussion

Patient-centred care provides improved healthcare outcomes and should be a focus in undergraduate pharmacy education. The majority of study participants had work experience in a clinical pharmacy setting, especially in community pharmacies. This experience may have been from the mandatory industrial attachments or rotational clinic clerkships in the pharmacy curriculum in Nigeria. This allows the pharmacy students to gain experience in various areas of pharmacy practice and appreciate the pharmaceutical care model. This finding is consistent with a previous study where the majority of the third year and final year students had pharmacy practice experience, and the majority worked in community pharmacies (Siracuse *et al.*, 2008). Emphasis on pharmaceutical care in mental illness by the preceptors or supervisors during this period of training may improve students' perception and attitude towards mental illness. This underscores the relevance of clinic settings for pharmaceutical care education, as noted in a previous study (Lawrence *et al.*, 2004).

In the course of the students' practice, the majority had encountered mentally ill patients, and this was mostly on a monthly basis, although other frequencies were also noted. This may not provide enough time for the students to practice skills for effective pharmaceutical care in mental illness. In a previous study, pharmacy students reported exposures to persons with suicidal thoughts (Wiltry & Clayden, 2020), emphasising the relevance of enhanced mental healthcare skills through their training. Increased exposure of students to mentally ill persons may enhance accommodation and improve the attitude of the students towards them. Therefore, measures should be put in place to increase the contact of the students with mentally ill persons during their clinic postings. Attention towards the improvement of mental health in the pharmacy curriculum in Nigeria should also be given priority, as the curriculum was perceived to be inadequate by pharmacy students in Nigeria (Ajibola *et al.*, 2020).

Lack of access to patients was a highly perceived barrier to the provision of pharmaceutical care to patients. These barriers may likely be system-related; therefore, measures to improve access is necessary for improved mental healthcare services by pharmacists. This finding is consistent with reports from a previous study in Qatar, where lack of access to patient's information was a major perceived barrier to the provision of pharmaceutical care by pharmacy students (El Hajj *et al.*, 2014). Benefits from pharmaceutical care may not readily be achieved without appropriate and relevant information from the patients, their caregivers or medication and disease history notes. More awareness

of the pharmacists' role in mental healthcare is necessary to minimise this barrier. Meanwhile, inadequate expertise was the least reported barrier to the provision of pharmaceutical care to the patients. Similarly, inadequate training on pharmaceutical care and lack of therapeutic knowledge were identified as students perceived barriers that impede the provision of pharmaceutical care (El Hajj *et al.*, 2014). Classified as a pharmacist-related barrier, this was also a prevalent perception among pharmacy students in a previous study (Aaltonen *et al.*, 2010). Knowledge is critical for effective and efficient service delivery in mental healthcare.

Half of the study participants desired collaborations for the effective delivery of pharmaceutical care to mentally ill patients. More so, collaborations with general practitioners and psychiatrists were most desired. Pharmacists' collaborations with other relevant mental healthcare experts are associated with improved healthcare outcomes (Neto *et al.*, 2011). Similarly, unmet expectations regarding inter-professional relationships between pharmacists and other members of the health team were reported in a previous study in Nigeria (Okoro *et al.*, 2021).

This study explored collaborative practice between pharmacists and other healthcare professionals. More so, medicines are essentially required in many mental illnesses, necessitating the need for collaborations with pharmacists to ensure quality use of medicines, improve medication adherence and safety. In a previous report, pharmacists worked collaboratively with psychiatrists to achieve patient outcomes in the United States (Tallian *et al.*, 2012). Meanwhile, only very few of the authors' study participants had a full collaboration with the desired collaborators. Several factors, including trust, financial reward (Albassam *et al.*, 2020), and lack of self-confidence, may be responsible for the low collaboration rate. Other recognised barriers to the collaborative service in a previous review include perceived relevance of collaboration, mutual knowledge, the definition of roles and physician's territoriality and hierarchy (Rubio-Valera *et al.*, 2014).

Findings from this study portrayed a positive perception of pharmacy students on the pharmacist-patient relationship during consultations. Trusting therapeutic relationships is relevant for obtaining patients' medication history and involves listening to the patients and providing support. A trusting therapeutic relationship between patients and pharmacists could improve patients' adherence to medications. This would be most beneficial if the pharmacist had the requisite knowledge for this service. It was previously reported that pharmacists'

lack of knowledge and skills for medication counselling to mentally ill persons was a major barrier to the service as perceived by pharmacy students (Aaltonen *et al.*, 2010). Development of skills for building confidence in patients during counselling and interactions with the patients should be given priority in study design for pharmacy students (Mospan and Gillette, 2020).

In this study, respondents did not quite agree that patients' decisions should be most important during consultations with pharmacists. Pharmaceutical care involves shared decision-making between the pharmacist and the patient, where the patients' informed preferences are upheld (Barry and Edgman-Levitan, 2012; Stiggelbout *et al.*, 2012). This will encourage acceptance of the offered care and treatment but may involve building skills for clear communications of risks and benefits. It may also involve training on decision-making for pharmacy students (Oliveira *et al.*, 2020). Meanwhile, the respondents mostly agreed that cooperation between the pharmacist and patients encourages improved health. Attitude towards mental illness may be associated with perceptions of the relevance of patients' participation in medication decisions among the students (Volmer *et al.*, 2008). This may reduce the willingness of pharmacy students to deliberate, counsel and make shared decisions on the medication-related needs of patients.

A positive attitude towards pharmaceutical care in mental illness was observed among the study participants. A previous study also reported a positive attitude towards the practice of pharmaceutical care among pharmacy students in Qatar (El Hajj *et al.*, 2014) and Pakistan (Hussaine *et al.*, 2020). A positive attitude towards pharmaceutical care services may likely result in the enhanced practice of the model, resulting in improved patient outcomes and reduced cost of treatment. Meanwhile, a high rate of stigmatisation and social distance from mentally ill patients was noted among pharmacy students in another study (Bell *et al.*, 2006). This is associated with attitude towards provision of pharmaceutical care to this population (Volmer *et al.*, 2008), and maybe suggestive of the relevance of advanced training in psychiatry and increased exposure of pharmacy students to mental health care, for efficient un-discriminatory patient-centred care to mentally ill patients. It is also essential for pharmacy schools to design interventions aimed at addressing students' perceptions and beliefs that may influence their attitude towards providing pharmaceutical care to persons with mental disorders (Mospan and Gillette, 2020).

Some limitations associated with the study include the risk of potential self-reporting bias and a single-

institution survey which may limit the generalisation of findings.

## Conclusion

There was low access to mentally ill patients by study participants, and only very few had full collaborations from other healthcare personnel. A positive attitude towards mental illness and a positive perception of the pharmacist-patient relationship was found in the study participants. Findings encourage the implementation of measures for improved collaboration of pharmacists and other healthcare personnel in mental healthcare to enhance patient outcomes.

Other recommendations for improved practice include raising awareness of the pharmacists' role in mental healthcare to minimise the barrier of lack of access to patients. Collaborative clinical meetings and effective ward rounds are also recommended to foster collaborative practice between pharmacists and physicians for improved medication therapy outcomes in mentally ill patients. Development of required skills for building confidence in pharmacists during counselling and interactions with the patients should be given priority in the study design for pharmacy students. Training pharmacy students on decision-making should also be encouraged in pharmacy schools to encourage efficient therapeutic relationships with patients. It is also essential for pharmacy schools to design interventions aimed at addressing students' perceptions and beliefs that may influence their attitude towards providing pharmaceutical care to persons with mental disorders.

## References

- Aaltonen, S. E., Laine, N. P., Volmer, D., Gharat, M.S., Muceniece, R., Vitola, A., Foulon, V., Desplenter, F. A., Airaksinen, M. S., Chen, T. F., & Bell, J. S. (2010). Barriers to medication counselling for people with mental health disorders: a six country study. *Pharmacy Practice (Granda)*, *8*(2):121-131. <https://doi.org/10.4321/s1886-36552010000200007>
- Abdu-Aguye, S. N., Yusuf, H., Agbale, E. O., Auwal, F. I., & Ma'aji, H. U. (2019). Connections between classroom theory and real world practice: Exploring the perspectives of undergraduate students at a Nigerian faculty of pharmacy. *Pharmacy Education*, *19*(1), 185-189
- Ajibola, S. S., Akanbi, O. S., & Eze, U. IH. (2020). Perception of Nigerian final year undergraduate students of the adequacy of the pharmacy curriculum for mental health care. *Journal of Pharmacy Practice and Research*. *50*(1):48-54. <https://doi.org/10.1002/jppr.1607>



- Albassam, A., Almohammed, H., Alhujaili, M., Koshy, S., & Awad, A. (2020). Perspectives of primary care physicians and pharmacists on interprofessional collaboration in Kuwait: A quantitative study. *PLOS ONE*, *15*(7): e0236114. <https://doi.org/10.1371/journal.pone.0236114>
- Barry, M. J., & Edgman-Levitan, S. (2012). Shared decision making-pinnacle of patient-centred care. *New England Journal of Medicine*, *366*(9):780-781. <https://doi.org/10.1056/NEJMp1109283>
- Bell, S. B., Johns, R. & Chen, T. F. (2006) Pharmacy students' and graduates' attitude towards people with schizophrenia and severe depression. *American Journal of Pharmacy Education*, *70*(4): 77. <https://doi.org/10.5688/aj700477>
- El Hajj, M. S., Hammad, A. S. & Afifi, H. M (2014). Pharmacy students' attitudes towards pharmaceutical care in Qatar. *Therapeutics and Clinical Risk Management*. <https://doi.org/10.2147/TCRM.S56982>
- Hussaine, I., Rasool, M. F., Imran, I., Saeed, H., Hashmi, F., Akbar, M., Abrar, M. A., Ramzan, B., Chaudhry, M. O., Islam, M., Usman, A., Nisar, N., Majeed, A. (2020). Assessment of undergraduate pharmacy students' attitude towards pharmaceutical care in Pakistan: Practice implications. *Journal of Multidisciplinary Healthcare*, *11*(13):1517-1525. <https://doi.org/10.2147/JMDH.S282776>
- Lawrence, L., Sherman, J. J., Adams, E., & Gandra, S. (2004) Pharmacy students' perceptions of pharmaceutical care in retail and clinic settings. *American Journal of Pharmacy Education*, *68*(1):4. <https://doi.org/10.5688/aj680104>
- Ministry of Health, World Health Organisation (2006). WHO-AIMS report on mental health system in Nigeria. Ibadan, Nigeria: Ministry of Health and WHO. Available at: [https://www.who.int/mental\\_health/evidence/nigeria\\_who\\_aims\\_report.pdf](https://www.who.int/mental_health/evidence/nigeria_who_aims_report.pdf)
- Mospan, C. M., & Gillette, C. (2020). Students pharmacists' attitudes toward suicide and the perceived role of community pharmacists in suicidal ideation assessment. *American Journal of Pharmacy Education*, *84*(5):7588. <https://doi.org/10.5688/ajpe7588>
- Neto, P. R., Marusic, S., de Lyra Junior, D. P., Pilger, D., Cruciol-Souza, J. M., Gaeti, W. P., & Cuman, R. K. N. (2011). Effects of a 36-month pharmaceutical care programme on the coronary heart disease risk in elderly diabetic and hypertensive patients. *Journal of Pharmacy and Pharmaceutical Sciences*, *14*(2): 249-263. <https://doi.org/10.18433/j3259q>
- Okoro, R. N., Ohieku, J. D., & Yakubu, S. I. (2021). Pharmaceutical care journey: Final-year pharmacy students' experiences of the hospital-based clinical pharmacy clerkship programme in north-east Nigeria. *Pharmacy Education*, *21* (1) 9 – 18. <https://doi.org/10.46542/pe.2021.211.918>
- Oliveira, I. V., Nascimento, Y. A., & Ramalho-de-Oliveira. (2020). Decision-making process in comprehensive medication management services: from the understanding to the development of a theoretical model. *Pharmacy*, *8*(4):180. <https://doi.org/10.3390/pharmacy8040180>
- Onyemelukwe, C. (2016). Stigma and mental health in Nigeria: Some suggestions for law uniform. *Journal of Law Policy Global*, *55*:63-68
- Pharmacists Council of Nigeria. Benchmark and minimum academic standard. Available at: <http://www.pcn.gov.ng/files/BMS.pdf>
- Rubio-Valera, M., Chen, T. F., & O'Reilly, C. L. (2014). New Roles for pharmacists in community mental care: a narrative review. *International Journal of Environmental Research and Public Health*, *11*(10):10967-10990. <https://doi.org/10.3390/ijerph111010967>
- Siracuse, M. V., Schondelmeyer, S. W., Hadsall, R. D., & Schommer, J. C. (2008). Third-year pharmacy students' work experience and attitudes and perceptions of the pharmacy profession. *American Journal of Pharmaceutical Education*, *15*: 72(3), Article 50. <https://doi.org/10.5688/aj720350>
- Stiggelbout, A. M., Van der Weijden, T., De Wit, M. P., Frosch, D., Légaré, F., Montori, V. M., Trevena, L., & Elwyn, G. (2012). Shared decision making: really putting patients at the centre of healthcare. *BMJ*, *344*:e256. <https://doi.org/10.1136/bmj.e256>
- Suleiman, D. E. (2016). Mental health disorders in Nigeria: A highly neglected disease. *Annals Nigeria Medicine*, *10*(2): 47-48. <https://doi.org/10.4103/0331-3131.206214>
- Tallian, K. B., Hirsch, J. D., Kuo, G. M., Chang, C. A., Gilmer, T., Messinger, M., Chan, P., Daniels, C. E., & Lee, K. C. (2012). Development of a pharmacist-psychiatrist collaborative medication therapy management clinic. *Journal of the American Pharmacists Association* (2003), *52*(6). <https://doi.org/10.1331/JAPHA.2012.11215>
- Volmer, D., Maesalu, M., & Bell, J. S. (2008). Pharmacy students' attitude toward professional interactions with people with mental disorders. *International Journal of Social Psychiatry*, *54* (5): 402-413. <https://doi.org/10.1177/0020764008090427>
- Wiltry, M., & Clayden, A. Student pharmacist personal work experiences with people displaying warning signs of suicidal ideation. *Mental Health Clinic*, *10*(4): 244-239. <https://doi.org/10.9740/mhc.2020.07.244>
- World Bank, Population total - Nigeria. Available at: <https://data.worldbank.org/indicator/SP.POP.TOTL?location=s=NG>. Accessed 13 March, 2021