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Knowledge, Attitudes, and Practices of Primary Care Physicians in Makkah Al Mukarramah Regarding the Diagnosis and Treatment of Depression: A Cross-Sectional Study

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Abstract

Background

In the global community, depression comes among the top 10 disorders in causing disability, and PCPs are in close contact with patients most of the time. However, existing knowledge, attitudes, and practices remain inadequate, particularly when assuming work in resource-limited and culturally diverse context including Makkah Al Mukarramah.

Objective

Knowledge, attitudes, and practices of PCPs regarding diagnosis and management of depressive disorders, Their perceived barriers and facilitators to care, And to gain insights into achievable improvement interventions to mental health services in primary care.

Methods

A questionnaire-survey study was carried out on a sample of one hundred and two PCPs which includes family physicians, and general internists attending the PHÇ in Makkah City. Assigned demographic questions as well as questions related to cues, diagnosis, and treatment of depression, and barriers to their practice were addressed through a structured self-completed questionnaire. Both descriptive and inferential analyses were conducted using the program SPSS version 21.

Results

Therefore, 63.7% patients had moderate knowledge of malignancies with the mean knowledge being 16.5 ± 2.4." Mean attitude score was 30.9 ± 3.2 out of a maximum of 45; 64.7% students had a neutral attitude. Their practice mean score was 4.4 ± 0.97 and the majority of the candidates, 84.3% described their practice level as high. It was also established that the practice scores were highly related to age at prácticcé, = 0.018 while the attitude scores were also indicated to have a relaciónship with years of expéeriénce, = 0.033 . Major perceived constraints involved patient fears regarding adverse effects of the medication (87.3%) and the time constraint (86.3%) for a doctor's appointment.

Conclusion

There was moderate knowledge and neutral attitude among the PCPs toward depression, but their clinical skills were remarkable. Knowledge gaps, attitudes, and barriers related to mentoring and mental health resources in targeted training and systemic interventions need further development and better implementation.

Keywords: Depression, Primary care physicians knowledge attitude and practice, Makkah Al Mukarramah, Barriers to Care

Introduction

Depression is a **common mental health disorder** and a significant public health issue, affecting over **300 million people globally** and contributing to substantial morbidity, disability, and economic burden (1). The World Health Organization (WHO) identifies depression as the leading cause of disability worldwide, with its prevalence steadily increasing, particularly in primary healthcare settings (2).

Primary care physicians (PCPs), including **family physicians** and **general internists**, play a critical role as frontline providers in diagnosing, managing, and treating depression (3). However, despite the importance of PCPs in addressing mental health disorders, studies have consistently highlighted gaps in knowledge, attitudes, and practices concerning the recognition and treatment of depression (4, 5).

Previous research has shown that **early diagnosis** and effective management of depression in primary care settings can significantly improve patient outcomes and reduce associated health complications (6). Nevertheless, several barriers hinder PCPs' ability to manage depression effectively. These include limited consultation time, insufficient training, patient reluctance, and inadequate access to mental health resources (7, 8).

In Saudi Arabia, mental health issues, including depression, have become increasingly prevalent, yet remain underdiagnosed and undertreated due to social stigma, cultural factors, and healthcare system limitations (9, 10). While some studies have investigated the prevalence and treatment of depression in Saudi Arabia, there is limited data on PCPs' knowledge, attitudes, and practices in managing depressive disorders, particularly in cities like **Makkah Al Mukarramah**, a major religious and cultural hub (11).

This study aims to **evaluate the knowledge, attitudes, and practices** of primary care physicians in Makkah regarding the diagnosis and treatment of depressive patients. It also seeks to identify the key barriers faced by PCPs in providing care for patients with depression. By addressing these factors, the study will provide valuable insights to improve primary healthcare delivery and mental health outcomes.

2. Methodology (Materials and Methods)

2.1 Study Design

- Cross-sectional study.

2.2 Study Population

- **Target**: 215 primary care physicians (family physicians and general internists) in Makkah City.
- **Inclusion**: All PHC doctors (male/female, all nationalities, all qualifications).
- **Exclusion**: Dentists, physicians on vacation, and non-PHC residents.

2.3 Study Area

- Conducted in primary healthcare centers (PHCs) across Makkah City, divided into three sectors.

2.4 Sample Size

- Calculated using Raosoft software:
  - Prevalence: 78%, Confidence: 95%, Margin of Error: 5%.
  - Required sample: **119 physicians**.

2.5 Sampling Technique

- Makkah City divided into 3 sectors:
  - **Al Zaher** (42.3%), **Al Kaakyah** (23%), **Al Adel** (34.6%).
- Proportional sampling applied.
- Simple random sampling used to select PHCs; all doctors at chosen centers were surveyed.

2.6 Data Collection Tool

- **Instrument**: A structured, self-administered questionnaire developed based on national and international literature to evaluate primary care physicians' attitudes and practices regarding diagnosing and treating depression.
- **Sections**:
  1. **Physician Characteristics**: Demographics (age, gender, experience, work hours, specialty).
  2. **Cues to Suspect Depression**: Indicators used in diagnosing depression (8 cues).
  3. **Treatment Approaches**: Therapy modalities (e.g., observation, pharmacological, referrals).
  4. **Barriers to Care**: 16 obstacles related to patients, organizations, and physicians.

2.7 Data Collection Technique

- Conducted over **3 weeks**, covering each sector for one week.
- Questionnaires were distributed to doctors before their clinic hours.
- The researcher/assistant introduced the study, obtained verbal consent, and clarified queries.
- Completed questionnaires were submitted to sector directors and collected at week's end.
- Data was manually entered for analysis.

2.8 Study Variables

- **Dependent Variable**: Attitude and practice of PHC physicians.
- **Independent Variables**: Age, gender, nationality, specialization, experience, work hours, and clinic load.

2.9 Data Entry and Analysis

- Descriptive statistics: Numbers and percentages for categorical variables; means ± SD for continuous variables.
- Tests: **Mann-Whitney U** and **Kruskal-Wallis** (non-parametric).
- Normality tests: **Shapiro-Wilk** and **Kolmogorov-Smirnov** ($p \leq 0.05$).
- Software: **SPSS version 21**.

Scoring:

- **Knowledge**: 8–24 points (Low: 8–14, Moderate: 15–18, High: 19–24).
- **Attitude**: 13–39 points (Negative: 13–23, Neutral: 24–32, Positive: 33–39).
- **Practice**: 1–5 points (Low: 1–2, Moderate: 3, High: 4–5). Higher scores signify better outcomes.

2.10 Ethical Considerations

- Research committee approval.

- Permissions obtained from health directorates, sector supervisors, and PHC directors.
- Physicians were informed of the study's purpose, ensuring confidentiality, anonymity, privacy, and the right to withdraw.

2.12 Limitations

- None.

2.13 Budget

- Self-funded research.

3.Results

A total of 102 participants were enrolled in this study. Table 1 presented the socio demographic characteristics of participants. Age range was from 25 to 60 years of old. More than a half of them were females (52%) with 46.1% were having less than 5 years of work experience and mostly were working full time (80.4%). With regards to specialty, majority of them were family medicine specialist (35.3%), followed by family medicine resident (28.4%) and the rest were either family medicine consultant or general Physician.

Table 1: Socio demographic characteristics of participants

Study variables	N (%) (n=102)
Age group in years	
• 25 – 34 years	52 (51.0%)
• ≥ 35 years	50 (49.0%)
Gender	
• Male	49 (48.0%)
• Female	53 (52.0%)
Years of experience	
• <5 years	47 (46.1%)
• 5 – 10 years	30 (29.4%)
• >10 years	25 (24.5%)
Work hours	
• Full time	82 (80.4%)
• Partial time	20 (19.6%)
Specialty	
• Family medicine consultant	20 (19.6%)
• Family medicine specialist	36 (35.3%)
• Family medicine resident	29 (28.4%)
• General Internist	17 (16.7%)

Figure 2: Distribution of working location of PHC Physicians

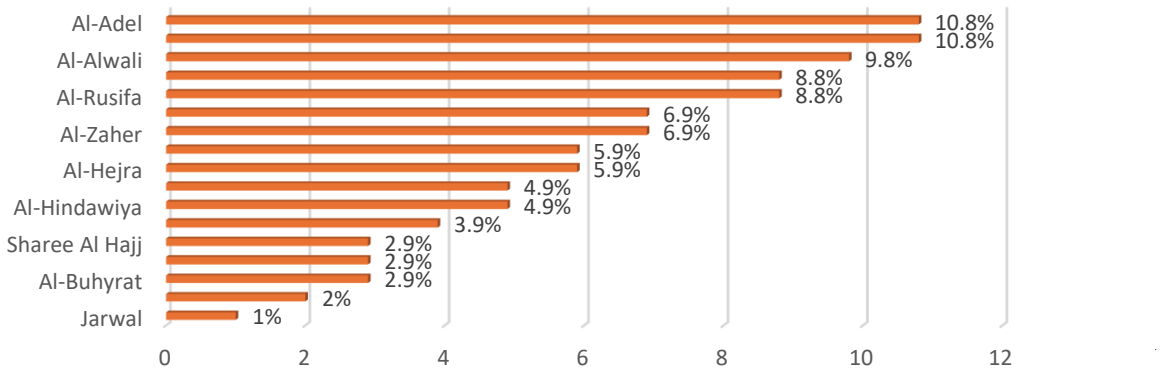

Table 2: Determinants of knowledge (n=102)

Statement	Disagree N (%)	Neutral N (%)	Agree N (%)
K1. Clinicians prescribe appropriate doses to less than a third of patients	15 (14.7%)	29 (28.4%)	58 (56.9%)
K2. Tricyclic antidepressants and SSRIs have equivalent side effect	67 (65.7%)	17 (16.7%)	18 (17.6%)
K3. Anxiolytics and sedatives have equivalent efficacy in major depression	57 (55.9%)	22 (21.6%)	23 (22.5%)
K4. Side effects occur only in small percentage of patients †	32 (31.4%)	25 (24.5%)	45 (44.1%)
K5. Trial of antidepressant medication for major depressive disorder requires use of therapeutic dosages daily for at least 4-6 weeks.	14 (13.7%)	08 (07.8%)	80 (78.4%)
K6. Antidepressants should be discontinued as soon as symptoms improve †	23 (22.5%)	17 (16.7%)	62 (60.8%)
K7. Medication and psychotherapy are efficacious for depression in elderly adults as well as for non–elderly.	25 (24.5%)	23 (22.5%)	54 (52.9%)
K8. If psychotherapy has no effect in 6 weeks, medication is recommended	18 (17.6%)	22 (21.6%)	62 (60.8%)

† Signifies reversed answer.

Table 2 described the determinants of knowledge of physician regarding patients with depression. “Side effects occur only in small percentage of patients” and “Antidepressants should be discontinued as soon as symptoms improve” where 44.1% and 60.8% of the physicians incorrectly agreed while 31.4% and 22.5% correctly disagreed.

Table 3: Determinants of Attitude (n=102)

Statement	Disagree N (%)	Neutral N (%)	Agree N (%)
A1. It is difficult to know if patients are unhappy or have a clinical depressive disorder needing treatment †	67 (65.7%)	19 (18.6%)	16 (15.7%)
A2. I feel comfortable dealing with a depressed patient’s needs	16 (15.7%)	29 (28.4%)	57 (55.9%)
A3. Depression is a patient's response, which cannot be changed †	70 (68.6%)	19 (18.6%)	13 (12.7%)
A4. Working with depressed patients is heavy going	20 (19.6%)	32 (31.4%)	50 (49.0%)
A5. It is rewarding to look after depressed patients	12 (11.8%)	26 (25.5%)	64 (62.7%)
A6. Biochemical abnormality is the basis of severe depression	17 (16.7%)	40 (39.2%)	45 (44.1%)
A7. Becoming depressed is a part of being old †	62 (60.8%)	19 (18.6%)	21 (20.6%)
A8. There is little to offer to depressed patients who do not respond to what GP’s do †	40 (39.2%)	37 (36.3%)	25 (24.5%)
A9. Depressed patients needing antidepressants are better off with a psychiatrist than a GP	32 (31.4%)	23 (22.5%)	47 (46.1%)
A10. Antidepressant treatment in general practice usually produces a satisfactory result	09 (08.8%)	32 (31.4%)	61 (59.8%)
A11. If psychotherapy were freely available, it would be more beneficial than antidepressants for most patients	22 (21.6%)	29 (28.4%)	51 (50.0%)
A12. Psychotherapy tends to be unsuccessful with depressed patients †	76 (74.5%)	11 (10.8%)	15 (14.7%)
A13. People with poor stamina deal with life problems by becoming depressed	19 (18.6%)	35 (34.3%)	48 (47.1%)

† Signifies reversed answer.

There were 13 statements about determinants of attitude presented at **table 3**. The study found that working with depressed patients is rewarding, but it is challenging to determine if they need treatment. Some participants

agreed that psychotherapy could be more beneficial than antidepressants, and that depression is a patient's response and can be a part of old age. Most participants agreed to prescribe medications and manage patients through counseling." (**Table 4**).

Table 4: Determinants of Practice (n=102)

Statement	Rarely to Always N (%)	Never N (%)
P1. I prescribe antidepressants medications for patients with depressive disorder	80 (78.4%)	22 (21.6%)
P2. I prescribe other medications for patients with depressive disorder	75 (73.5%)	27 (26.5%)
P3. I manage patients with depressive disorder by counseling	95 (93.1%)	07 (06.9%)
P4. I suggest life style changes to patients with depressive disorder	99 (97.1%)	03 (02.9%)
P5. I refer patients with depressive disorder to a mental health specialist	96 (94.1%)	06 (05.9%)

With regards to responsibility in managing depression, where we asked the participants about their responsibility on "Recognizing depression" and "Treating depression." All of them (100%) implied rarely to always on the context about "recognizing depression" as their responsibility whereas nearly all of them (94.1%) indicated rarely to always for "treating depression" as their responsibility. Moreover, in lieu of their confidence, 99% ofpn them were somewhat to very confident that they can diagnose depression whereas 75.5% and 59.8% of them were somewhat to a great deal that they can treat depression with medication or with counseling whereas 66.7% of them were somewhat to a great deal that they confidently manage depression. On the other hand, the most common barrier in managing depression was the statement about "Patient's concern about medication side effects" (87.3%), followed by "Appointment is too short" (86.3%) (**Table 5**).

Table 5: Physicians' confidence in managing depression and perceived barriers to care (n=102)

Statement	Rarely to Always N (%)	Never N (%)
Responsibility		
B1. Recognizing depression is my responsibility	102 (100%)	0
B2. Treating depression is my responsibility	96 (94.1%)	06 (05.9%)
Confidence	**Somewhat to very Confident**	**Not confident**
B3. I can diagnose depression	101 (99.0%)	01 (01.0%)
	Somewhat to a great deal	**Did not limit**
B4. I can treat depression with medication	77 (75.5%)	25 (24.5%)
B5. I can treat depression with counseling	61 (59.8%)	41 (40.2%)
B6. Overall, I can manage depression	68 (66.7%)	34 (33.3%)
Barriers to physicians' management of depression		
B7. Incomplete knowledge of diagnostic criteria	56 (54.9%)	46 (45.1%)
B8. Incomplete knowledge of treatment for depression	63 (61.8%)	39 (38.2%)
B9. Lack of effective treatment	77 (75.5%)	25 (24.5%)
B10. Appointment time is too short	88 (86.3%)	14 (13.7%)
B11. Inadequate time for me to provide counseling /education	83 (81.4%)	19 (18.6%)
B12. Mental health professionals are not affordable	88 (86.3%)	14 (13.7%)
B13. Patient or family reluctance to accept diagnosis	83 (81.4%)	19 (18.6%)
B14. Medical problems are more pressing	87 (85.3%)	15 (14.7%)
B15. Patient reluctance to take antidepressant medication	84 (82.4%)	18 (17.6%)
B16. Patient's concern about medication side effects	89 (87.3%)	13 (12.7%)
B17. Patient reluctance to see mental health professionals	85 (83.3%)	17 (16.7%)
B18. Symptom may be explained by other medical illness	86 (84.3%)	16 (15.7%)

Table 6 shows the prevalence of knowledge, attitude, and practice towards patient's depression. The mean knowledge score was 16.5, with low knowledge at 16.7%, moderate at 63.7%, and high knowledge at 19.6%. Attitude scores ranged from negative to positive, with high practice at 84.3%.

Table 6: Prevalence of knowledge, attitude and practice

Parameters	**N (%)** (n=102)
Knowledge total score (mean ± SD)	16.5 ± 02.4
Level of knowledge	
• Low	17 (16.7%)
• Moderate	65 (63.7%)
• High	20 (19.6%)
Attitude total score (mean ± SD)	30.9± 03.2
Level of attitude	
• Negative	04 (03.9%)
• Neutral	66 (64.7%)
• Positive	32 (31.4%)
Practice total score (mean ± SD)	04.4 ± 0.97
Level of practice	
• Low	07 (06.9%)
• Moderate	09 (08.8%)
• High	86 (84.3%)

The study found significant associations between age group, years of experience, attitude, and practice among socio demographic characteristics, but no significant association was found between knowledge score and socio demographic variables. (**Table 7**).

Table 7: Comparison between knowledge, attitude and practice score among socio demographic characteristics of participants (n=102)

Factor	**Knowledge Total score (24) Mean ± SD**	**Attitude Total score (39) Mean ± SD**	**Practice Score Total Score (5) Mean ± SD**
Age group in years [a]			
• 25 – 34 years	16.8 ± 02.2	26.1 ± 04.3	04.2 ± 01.0
• ≥ 35 years	16.1 ± 02.5	26.9 ± 04.8	04.6 ± 0.90
T-test	***1.426***	***-0.867***	***-2.039***
P-value	***0.165***	***0.447***	***0.018 *****
Gender [a]			
• Male	16.2 ± 02.4	26.1 ± 3.9	04.3 ± 0.98
• Female	16.7 ± 02.3	26.9 ± 05.1	04.4 ± 0.97
T-test	***-1.139***	***-0.846***	***-0.767***
P-value	***0.309***	***0.652***	***0.286***
Years of experience [b]			
• <5 years	16.8 ± 01.9	26.7 ± 04.7	04.2 ± 01.1
• 5 – 10 years	16.0 ± 02.7	24.7 ± 03.6	04.6 ± 0.67
• >10 years	16.4 ± 02.7	28.2 ± 04.8	04.4 ± 01.0
F-test	***1.090***	***4.415***	***1.926***
P-value	***0.286***	***0.033 *****	***0.190***
Work hours [a]			
• Full time	16.5 ± 02.3	26.5 ± 04.6	04.3 ± 01.0
• Partial time	16.1 ± 02.6	26.3 ± 04.7	04.6 ± 0.68
T-test	***0.755***	***0.163***	***-1.219***
P-value	***0.723***	***0.493***	***0.292***

Specialty [b]			
• Family medicine consultant	15.9 ± 02.7	26.6 ± 03.4	04.8 ± 0.52
• Family medicine specialist	16.5 ± 02.3	26.0 ± 05.5	04.2 ± 0.97
• Family medicine resident	16.7 ± 02.1	26.0 ± 03.5	04.7 ± 0.81
• General Internist	16.6 ± 02.6	28.2 ± 05.1	03.8 ± 0.97
F-test	***0.491***	***1.089***	***5.497***
P-value	***0.926***	***0.221***	***0.001 *****

[a] P-value value has been calculated using Mann Whitney U test.
[b] P-value value has been calculated using Kruskal Wallis test.
** Significant at p≤0.05 level.

2. DISCUSSION

Knowledge of FPs

The study investigates the knowledge, attitude, and practice of Family Physicians (FPs) towards depressive disorder, focusing on issues and barriers experienced. The overall knowledge was moderate (63.7%), with the highest agreement on the need for therapeutic dosages daily for 4-6 weeks. However, FPs disagreed with the statement that tricyclic antidepressants and SSRIs have equivalent side effects. In Cameroon, 85.8% of primary healthcare providers acknowledged that depression can be treated with pharmacological methods and psychotherapy.

Attitude of FPs

The attitude of FPs towards depression was found to be neutral (69.6%), with a mean score of 30.9 out of 39. This suggests a need for increased understanding. FPs were generally positive about the rewarding aspect of caring for depressed patients and feeling comfortable dealing with their needs. However, they were less receptive to the idea that therapy is unsuccessful with depressed patients and that depression is a patient's response that cannot be changed. This attitude is consistent with previous studies, which found that 77.8% of general practitioners found difficulty working with depressed patients and that depression is a characteristic response in patients.

Practice of FPs

Unlike knowledge and attitude, the overall practice of FPs toward patients with depression was relatively high with a mean score of 4.4 (out of 5 total score). With regards to the determinant of practice, the practice of FPs was generally high on the statements about “I suggest life style changes to patients with depressive disorder” and “I refer patients with depressive disorder to a mental health specialist.” The practice of health care providers varies with each region, for example; In Cameroon,(14) researchers reported that 78.4% of primary health care providers would send patients with depression for counseling or medical management while in Iran, (19)would refer patient to psychiatrist.

Discussion

A study of 100 primary care physicians (PCPs) revealed moderate attitudes towards depression management, with a mean total score of 16.5% out of 24. Despite reasonable understanding, there were areas of deficit. Most respondents agreed that a trial of antidepressant medication for major depressive disorder entails therapeutic doses daily for at least 4-6 weeks. However, low levels of agreement were observed in the statement that tricyclic antidepressants and SSRIs have similar side effects. The study also found that most PCPs support combined therapy across all age groups. Despite moderate knowledge levels, there are misperceptions regarding depressive disorder and its management, requiring educational targeting and intervention to increase the existing PCP knowledge base. On average, PCPs' practice in volunteers was high, with a high level of consensus on prescribing lifestyle alterations and recommending patients to a psychiatrist. However, issues like lack of time, patients' refusal to be treated, and drug side effects are still common and need to be addressed for improvement.

Barriers and Recommendations

The most common barriers identified were:

Patients’ perceptions of adverse effects of medication (87.3%).

Short appointment times (86,3%).

These results are in consonant with the international studies; stressing that mere enhancement of appointment times, adequate training of the PCPs, and patient concerns over their diseases by educating and counseling them are important systematic requirements.

Conclusion

The study found out that PCP are moderately knowledgeable and have a neutral attitude towards management depressive disorders, however, their practise in the management of depressive disorders is still robust. They include lack of or inadequate knowledge about the disorder, negative attitude towards the patient due to lack of adequate training, lack of or inadequate time to attend to the patient, and the attitudes of the patient towards the disease.