NEAR EAST UNIVERSITY

INSTITUTE OF GRADUATE STUDIES

DEPARTMENT OF CLINICAL PHARMACY

KNOWLEDGE, ATTITUDE AND PRACTICE TOWARD DEPRESSION AMONG PHARMACY STUDENTS IN NEAR EAST UNIVERSITY'

M.Sc. THESIS

AIDA GORAFEY MAHJOUB GORAFEY

NICOSIA

SEPT, 2024

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Approval

We certify that we have read the thesis submitted by **Aida Gorafey Mahjoub Gorafey** , titled "**Knowledge, Attitude and Practice Toward Depression Among Pharmacy Students In Near East University**" and that in our combined opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Applied Sciences.

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DECLARATION

I hereby declare that all information, documents, analysis, and results in this thesis have been collected and presented according to the academic rules and ethical guidelines of the Institute of Graduate Studies, Near East University. I also declare that as required by these rules and conduct, I have fully cited and referenced information and data that are not original to this study.

AIDA GORAFEY MAHJOUB GORAFEY

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ASSESMENT OF POTENTIAL DRUG-DRUG INTERACTIONS IN THE CARDIOLOGY CLINICS

ABSTRACT

Purpose

The aim of the study is to evaluate the knowledge, attitude and practice of depression among pharmacy students in Near East University.

Methodology

a prospective cross-sectional study between may and September 2024 was conducted using structured questionnaire to collect data. Prior to study, verbal consent was obtained from all participants. Pretested, structured and self-administered; mostly close ended questions were used.

Results:

A total of 250 pharmacy students were enrolled in the study. The female participants showed significantly better attitude compared to males (65.63 ± 6.01) (63.50 ± 4.24) (p =0.002), respectively. Furthermore, fifth year students had better practice compared to third year (34.98 ± 3.38) (32.71 ± 3.82) (p =0.02), respectively.

Conclusion:

In summary, the study's participants had modest attitudes and behaviors related to depression; yet, their overall level of understanding was inadequate. In order to improve mental health education in pharmacy schools, efforts should be made to emphasize experiential learning as a means of developing practical skills and empathy in addition to theoretical information.

Keywords: depression, pharmacy practice, pharmacists, knowledge, attitude, practice, Cyprus.

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1.INTRODUCTION

Depression is recognized to have a major global impact on the burden of disease. Pharmacists are in a good position to assist patients with depression in receiving effective therapy because they are among the most approachable medical professionals.

Depression has a high mortality, recurrence, and prevalence rate, making it a major global public health concern. The World Health Organization (WHO) estimates that over 280 million people worldwide suffer from depression. (Shalash, A., & Zolezzi, M., 2024).

In the wake of the recent COVID-19 pandemic, the prevalence of depressive illnesses has significantly increased globally. Depression has a significant detrimental clinical and financial impact on society, according to numerous studies (e.g., direct expenses that include money spent on therapies and inpatient and outpatient care, costs connected with suicide, and lost productivity). For those suffering from depression, effective treatments—pharmacological and psychotherapeutic—offer hope. (Santomauro, D. F., et al., 2021).

However, the majority of depressed individuals do not obtain appropriate treatment, according to the findings of a study done in 21 different nations. One in five people in high-income countries and one in 27 people in low- or low-to-middle-income countries were affected by this outcome, underscoring the necessity of enacting significant changes pertaining to community outreach and education beyond what is presently provided in primary and secondary care. The scope of a pharmacist's work has grown throughout time to include patient-centered clinical care for almost all illnesses, including mental health conditions. Among the most accessible primary healthcare providers are pharmacists, who can offer a wide range of services to patients with mental health issues, including education, medication counseling, screening and referral, therapy monitoring, and support for treatment adherence. (El-Den, S., et al., 2021).

In order to improve patient outcomes and quality of life, the American Pharmacists Association recently released a white paper advising community pharmacists to handle depression more aggressively. Similarly, improved and standardized clinical pharmacist involvement in depression care was promoted by the European Society of Clinical Pharmacy Special Interest Group on Mental Health. (Stuhec, M., et al., 2023).

With depression being the most prevalent mental ailment, mental disorders account for 14% of the world's disease burden. Because mental illness in general is stigmatized, depression is a significant cause of disability and mortality as well as the aggravation of other mental and non-mental health issues. (Zolezzi, M., et al., 2018) (Santomauro, D. F., et al 2021).

Additionally, there is evidence of a discrepancy between the global demand for and supply of depression treatment. (Shami, R., et al., 2022).

Antidepressant drugs, cognitive behavioral therapy, and short psychotherapy, or a mix of these modalities, are used to treat depression. According to clinical standards, antidepressant use should be continued for at least 6 to 8 months following symptom remission in order to prevent relapse, and for at least 3 to 4 weeks before determining its efficacy. (Beshai, S., et al., 2019).

Notably, there is a significant chance that people with depression won't follow medical recommendations, including not taking their medications as prescribed. which may account for the high relapse rates observed in individuals experiencing serious depression. (Solmi, M., et al., 2020).

Among the most approachable primary healthcare providers are community pharmacists, who can offer a range of counselling and management services or interventions related to antidepressant medication. Patients' understanding of their mental health problem, adherence to antidepressant regimens, acceptability of their treatment, and health-related quality of life are just a few of the ways in which these treatments might improve patient-reported outcomes. (Shami, R., et al., 2022).

According to research from Qatar, people's unfavorable views and lack of understanding about mental illness prevent them from getting treatment for depression. As a result, efforts were focused on improving the delivery of mental health services by raising awareness of the stigma associated with mental illness, improving the training of those who administer it, and urging cooperation and coordination across various health sectors. (Shami, R., et al., 2022).

Over the past ten years, depression rates among young people have sharply climbed, especially among females. This is troubling because adolescence is a period of major life changes and fast social, emotional, and cognitive development. Among the negative outcomes associated with depression in youth include recurrent episodes, the development of other mental illnesses, and

more widespread, chronic deficits in social, academic, professional, and interpersonal functioning. Therefore, it is crucial to prevent and treat depression in young individuals early. (Thapar, A., et al., 2022).

Preventive and early intervention strategies typically focus on depression symptoms, causes, and predisposing factors. Teens are more susceptible to depression if they have a family history of the illness, have gone through traumatic life events, strained relationships, or social stressors like bullying, or belong to specific subgroups like those who identify as sexual minorities or have long-term physical health conditions. Clinical antecedents include signs of depression, anxiety, and irritability. The overwhelming body of evidence Favors recommended and targeted prevention over overall prevention. There is some promise in implementing novel social interventions in communities and schools. A progressive approach to treatment is recommended because depression varies greatly. This includes short psychosocial treatments, specialized psychological therapy, and antidepressant medication. (Thapar, A., et al., 2022).

Numerous distinct symptoms, such as low mood, a noticeable decrease in interest or enjoyment of activities, psychomotor retardation, weight loss or gain, exhaustion or lack of energy, feelings of guilt or worthlessness, recurrent thoughts of suicide or death, etc., are indicative of depression, a common mental health condition. (Anushiravani, M., et al., 2018).

A multitude of studies have assessed the significant economic and financial impact that depression, which is chronic in nature and affects individuals in the working age group, causes. (Guan, N., et al 2022).

Furthermore, The World Health Organization (WHO) predicts that depression will be the second leading cause of disability globally by 2020. Antidepressant non-adherence, defined as more than 75% after six months, may result in ineffectiveness, increased expenses, and a heavy financial burden on the patient, family, and community. (Kamusheva, M., et al., 2020).

Depression is a developing public health concern that is clinically severe. According to estimates, depressive disorders ranked as the third most common cause of disability globally in 2015. The estimated lifetime risk of a severe depressive episode in the United States is currently close to 30%. As the 10th most common cause of death in the US, suicide has been on the rise and is now linked to a diagnosis of depression more than 50% of the time. Major depressive

disorder is a complex illness with a wide range of associated symptoms and several manifestations. (Park, L. T., & Zarate Jr, C. A., 2019).

Table 1 lists the criteria from the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, for major depressive disorder diagnosis and severity rating. Depression's pathogenesis is still not fully understood. (Park, S. C., & Kim, Y. K., 2019).

Table 1. Diagnostic and Statistical Manual of Mental Disorders -5 Criteria for Major Depressive Disorder

Criteria

Five or more symptoms that indicate a change from prior functioning and at least one of which is either a depressed mood or a loss of interest or pleasure in everyday activities over the course of two weeks (symptoms that are obviously attributable to another medical condition are not included).

1. Being depressed for most of the day, almost every day, as evidenced by one's own subjective report (feels depressed, empty, or hopeless) or by others' observations (sees tears). (An irritable mood can be a sign of depression in children and teenagers).
2. Significantly reduced enjoyment or interest in all or almost all activities for the majority of the day, almost every day (as demonstrated by observation or subjective report).
3. Changes in appetite almost daily, or significant weight loss when not dieting or weight gain (e.g., a change of >5% of body weight in a month). (Failure to gain expected weight in youngsters should be taken into consideration).
4. Almost daily insomnia or hypersomnia.
5. Psychomotor agitation or retardation almost daily (not just subjective sensations of restlessness or slowness, but also noticeable by others).
6. Almost daily fatigue or energy loss.
7. Almost daily feelings of worthlessness or excessive or inappropriate guilt (which can be delusional)—not only remorse about being ill or self-reproach.
8. Almost daily indecision or a diminished capacity for thought or concentration (either subjectively or as perceived by others).
9. Suicidal ideation without a particular plan, repeated thoughts of death (not just fear of dying), or a suicide attempt or specific plan to commit suicide.

Severity of depression

- Mild depression: There are few, if any, symptoms that go beyond what is needed to diagnose the condition, the symptoms are distressing but controllable, and they cause a slight impairment in social or professional functioning.
- Moderate depression is defined as having symptoms that fall between those classified as "mild" and "severe," either in terms of frequency, severity, or functional impairment.
- Severe depression: The symptoms significantly impair social and professional functioning, the severity of the symptoms is extremely upsetting and uncontrollable, and the number of symptoms is significantly greater than what is needed to make the diagnosis.

A thorough evaluation of depression should consider the level of functional impairment, disability, or both, rather than just counting symptoms.

Serotonin, norepinephrine, dopamine, or all of these monoaminergic neurotransmitters have historically been linked to decreased brain function; it is assumed that these functional deficiencies will be corrected in response to efficacious antidepressant treatments. Such monoaminergic mechanisms are observed in the context of neuroplasticity processes, which are characterized as structural, functional, or both changes in the brain in response to experience and environment. These processes are like other molecular and cellular systems that influence human emotion. (Jiang, Y., et al 2022).

The majority of people with major depressive illness experience a bimodal onset, peaking in their fifties after initially displaying symptoms in their twenties. Women are twice as likely as men to experience depression. Being divorced or separated, having previously suffered from depression, having high levels of stress, having gone through trauma, and having first-degree relatives who have also suffered from major depressive disorder can all contribute to the development of major depressive disorder. (Gökdağ, C., &Kızıltepe, R., 2023).

Coexisting anxiety, psychotic symptoms, substance addiction, and borderline personality disorder are linked to a worse prognosis in individuals with major depressive disorder. These factors can extend the duration of episodes and exacerbate symptoms. Specifically, the overlap between anxiety and depression is well-established; compared to patients with depression alone,

in addition to being more resistant to conventional treatments, more than half of depressed patients report having clinically severe anxiety. (Leichsenring, F., et al., 2023).

When it comes to identifying and treating depression, primary care doctors are essential. However, 79% of antidepressant prescriptions are written by healthcare professionals who are not mental health professionals, while primary care settings account for 60% of the delivery of mental health services. (Park, L. T., & Zarate Jr, C. A., 2019).

One study found that 38% of people who had attempted suicide had visited a doctor in the week before, and 64% of those who had attempted suicide had done so in the four weeks before. Most of these individuals had been to a primary care facility. (Stene-Larsen, K., &Reneflot, A., 2019).

Despite efforts to educate people, communities, and medical professionals, stigma remains a significant barrier to recognizing and treating mental illness. (Park, L. T., & Zarate Jr, C. A., 2019).

One of the most common and crippling types of psychopathologies is Major Depressive Disorder (MDD). Epidemiological surveys reveal that the lifetime prevalence of MDD is 16.6%, with estimates as high as 21.3% in women, and that over 30 million Americans have met the criteria for MDD at some point in their lives. (Roest, A. M., et al., 2021).

The fact that MDD is a highly recurring condition is significant, and each bout of depression raises the chance that a person will experience another MDD episode. (LeMoult, J., & Gotlib, I. H., 2019).

Additionally, depression is linked to significant expenses for both individuals and society as a whole; in fact, depression remains the world's biggest cause of disability, accounting for nearly half of disability-adjusted life years. Lastly, MDD has been linked, both today and in the future, to poor physical health, heart issues, and cancer, in addition to the known negative impacts of depression on relationships with others, educational attainment, and financial security. (LeMoult, J., & Gotlib, I. H., 2019).

2.LITERATURE REVIEW

2.1. Pharmacy students' knowledge, attitude and practice

Several studies were conducted to assess the students in medical fields such as pharmacy students regrading the depression knowledge, attitude and practice. For instance, a study conducted in Nigeria included 118 pharmacy students showed that the pharmacy students who correctly evaluated the symptoms of depression were significantly higher than non-pharmacy students. Additionally, most students in the faculty of pharmacy recommended psychiatrist as a therapist for depressed patients (Aluh, D. O., et al., 2020).

Another study conducted in Jordan to assess the pharmacy students' knowledge regarding the depression. An item utilized to assess the students' knowledge about anti-depressants side effects, the results showed that only 48.5% (n=65) of the students believed that side effects of antidepressants are not worse than depression, and less than half (n=60, 44.8%) of them thought that antidepressants do not cause addiction.

The majority of the pharmacy students were able to give patients with depression enough time to discuss their medications. Additionally, most students were able to talk to patients with depression in a private area about their medications (Abdel-Qader, D., & Hamadi, S., 2021).

A study conducted among 45 pharmacy students showed that the students had good knowledge. In details, 81% of the students correctly responds to the items related to the drugs used to treat depression without significant difference compared to other medical fields students (Devraj, R., et al., 2019).

2.2. Pharmacists' Role in Depression Care

One such group that ought to be taken into account when treating individuals with depression is pharmacists, considering their proficiency with drug administration, their accessibility, and their regular and trustworthy interactions with these patients. (Brown, J. V. E., et al., 2019)

In keeping with the idea of pharmaceutical care, pharmacists can provide patient education and support, improve drug adherence, track the efficacy of treatments, spot side effects, and refer patients to their doctor, when necessary, in the context of treating depression. (Haymarket, V., 2022).

But providing care for depression is still a relatively new and unestablished job for pharmacists. It has been demonstrated that pharmacists' attitudes about new roles have an impact on the degree and caliber of their adoption. Therefore, it is crucial to consider these attitudes when introducing new roles. Thus, disapproval of mentally ill people may have an impact on the administration of medication. (Wong, Y. X., et al., 2020)

It has been discovered that views toward mental illness have an impact on patient outcomes and the provision of services by other health professionals. Additionally, understanding how medical professionals feel about depression is critical to supporting them in their work and may point to areas that require further education. (Del Olmo-Romero, F., et al., 2019)

One of the biggest threats to public health in developed nations is depression. According to a recent assessment, the prevalence of major depressive illness in the US is 6.6%. (Goodwin, R. D., et al., 2022).

Although effective treatment is available, the current state of depression care is far from ideal due to a number of factors, such as poor drug adherence, stigma towards persons who have the condition, and inadequate recognition, diagnosis, and treatment by healthcare professionals. (Heinz, I., et al., 2021).

Patients usually only visit one pharmacy, so pharmacists build trusted relationships with them. They are also readily available to customers and have experience with prescription management. (Adekunle, O. A., et al., 2023).

2.3. Knowledge

With this role, pharmacists may help with depression care in a number of ways that primary care physicians frequently cannot, including monitoring treatment results, identifying adverse effects, enhancing medication adherence, and providing patient education and support. (Silvia, R., Plum, M., & Dufresne, R., 2020).

This possible role for pharmacists in treating depression is related to the push for expanding their scope of practice and the rise of "pharmaceutical care" as a field of medicine. This idea suggests that pharmacists should adopt a patient-centered practice model in place of their current medication-oriented dispensing position. (Shalash, A., & Zolezzi, M., 2024).

Pharmacists' first duties might involve promoting medication adherence and teaching patients about depression and antidepressant medications. Patients with depression frequently have a poor understanding of antidepressant medicine and hold a lot of false ideas about it, which contributes to their generally poor adherence to treatment. (Dell'Osso, B., et al., 2020).

They seem to need a lot of information on depression and medicine, as well as continuous and strong encouragement to take antidepressants as prescribed. General practitioners may not have the same opportunities to give this information as pharmacists. (González de León, B., et al., 2022).

Pharmacists have been shown to improve treatment outcomes, boost adherence, and influence patients' attitudes about depression and antidepressants. They can also answer common misconceptions, educate patients on antidepressants, and gauge their comprehension. (Yusuf, H., et al., 2021).

Furthermore, physicians are reported to be comfortable with pharmacists providing patient education. Pharmacists may also be responsible for monitoring patients with depression diagnoses, with a focus on drug adherence, effectiveness, and side effect presence. (Brown, J. V. E., et al., 2019).

Referrals back to the prescribing physician are appropriate for patients who show significant adverse effects or do not respond to treatment. Requirements for this job include keeping a trustworthy relationship with the patient as soon as they become a client at the pharmacy and documenting their prescription history, for instance, through electronic patient records. Additionally, pharmacists and general practitioners must work together and communicate in order for pharmacists to monitor patients. Nonetheless, there are now several gaps in the relationships between pharmacists and general practitioners. One in three pharmacists who participated in a UK study on depression management reported having some (practical and informal) contact with general practitioners, while half reported having little to no contact. (Scheerder, G., et al., 2008) (Park, L. T., & Zarate Jr, C. A., 2019).

2.4. Attitudes

The literature makes it abundantly evident that perceptions of mental illness, and more especially depression, are complex and cannot be boiled down to a single idea. These include the mindset

regarding the cause or origin of the disease, the available treatments and their outcomes, and the mindset regarding patients (typically expressed in terms of social distance). (Abi Doumit, C., et al., 2019).

There is a widespread report of negative views concerning mental illness in the general public. People with mental illnesses are typically perceived as unpredictable, dangerous, weak, and difficult to communicate to, which makes them desirable to keep socially apart from them. (Robinson, E. J., & Henderson, C., 2019).

The same is true of public perceptions of depression in particular, however these are often slightly more favorable than those of other mental diseases like schizophrenia. But depression is more often referred to as a "crisis" than as an illness. Male gender, educational attainment, belief in biogenetic origins, and pessimistic outcome expectations appear to be associated with more negative sentiments. They are also linked to being older and having less mental health experience. (Waqas, A., et al., 2020).

In addition, the public has a poor opinion of mental health medications because they are thought to be more detrimental than beneficial. Antidepressants (ADs) are not often suggested as a therapeutic option because they are widely believed to be addictive and ineffective. Such unfavorable views do not go unnoticed by health professionals. For instance, despite having greater understanding about mental health, general practitioners and mental health professionals support the same prejudices as the general public and do not demonstrate a greater inclination to engage directly with patients. (Read, J., 2020).

Patients may lose hope as a result of their decreased optimism over the prognosis and long-term results. Crucially, general practitioners who have a negative outlook on how depression develops are less likely to take an active role in its treatment. About half of respondents in a study involving general practitioners and nurses said that dealing with patients who have depression is "heavy going." Healthcare providers need to understand how these unfavorable views affect patients and the general population. **(**Ramanuj, P., Ferenchick, E. K., & Pincus, H. A., 2019).

Patients suffering from depression want medical professionals to sympathies with them, encourage them, and provide them with hope. They place high value on these professionals' attitudes toward their care and recovery. Patients frequently interpret negative attitudes as stigma,

which exacerbates feelings of misery and isolation and has a detrimental impact on requests for assistance, adherence, self-worth, and rehabilitation. A few research on pharmacists' views toward patients with mental illness in general show that they generally have positive opinions. (Kerst, A., Zielasek, J., & Gaebel, W., 2020).

According to a preliminary study, pharmacists believed that patients with mental illnesses were mostly reasonable, not hazardous, not to fault for their condition, and essentially the same as patients with other illnesses. In two recent investigations, the majority of pharmacists concurred that anyone can experience mental illness but disagreed that these people are instantly identifiable, stupid, and indifferent to appearance.

But as far as we are aware, no research has really looked into pharmacists' perspectives on depression. Research must differentiate attitudes based on individual mental diseases because these differences can be rather significant. Given that patients with depression frequently attend regular pharmacy practice, we concentrated on depression. (Brown, J.et al., 2019)

Pharmacists may not always think that AD is an appropriate treatment for depression, based on initial qualitative interview research about their interactions with depressed patients. Nevertheless, there hasn't yet been a survey study on pharmacists' attitudes toward depression using a standardized questionnaire. Thus, the current survey was designed to act as a pilot study to investigate community chemists' perceptions of depression and the factors that influence these perceptions. (Shalash, A., & Zolezzi, M., 2024).

According to earlier studies, pharmacists' views towards treating patients with physical conditions like diabetes, asthma, or hypertension were more positive than those towards treating patients with mental conditions like depression and schizophrenia. Pharmacists' disapproval of this kind of patient care may reduce the efficacy of pharmaceutical care services offered to patients with mental illness. The willingness to provide mental health counselling was more helpful, even among pharmacists who had a negative attitude towards treating patients with schizophrenia or depression. (Soliman, M., 2020).

Pharmacists had a very favorable attitude on their prospective involvement in providing depression care: at least 85% (N=59) of them believed that they should offer this service for all nine roles. However, current practice was fairly low: the majority of pharmacists reported

playing several roles for few or no patients. Giving information on depression received the lowest score (83%; N=57), with few or no patients receiving it. Consequently, a disparity was noted for the majority of jobs. The categories with the highest discrepancies in scores were keeping a trustworthy relationship with patients who suffer from depression (N=19, 28%), monitoring adherence to depression medication (N=25 of 68, or 37%), and offering information about depression medication (N=24, or 35%). Of the respondents, 26 had a high discrepancy score for providing information on depression. However, a high degree of current practice was noted for being aware of the patient's medical history, encouraging the patient to see a doctor, and offering assistance to the patient. There were various disparities between the care given to people with depression and those with other medical disorders. When it came to treating patients with depression, pharmacists' attitudes regarding playing each role were just as positive, if not more so, as when they treated patients with other disorders. All roles, however, were being played in practice to a greater extent with patients suffering from illnesses other than depression. Therefore, compared to depression, the gap between attitude and practice was less for all items on other conditions. (Scheerder, G., De Coster, I., & Van Audenhove, C., 2008).

The majority of pharmacists had positive opinions regarding prescribing medication to patients who were depressed as well as other patients who weren't depressed. Patients with depression had fewer positive attitudes towards receiving pharmaceutical care than patients with other conditions, according to P0.05 for all items except monitoring efficacy and adverse effects, where chemists' attitudes regarding treating patients with depression and other physical conditions were similar. Obtaining medication histories for patients with depression elicited a substantially lower positive attitude than other pharmaceutical care activities, where 54 (62.8%) pharmacists reported being more or much more engaged, comfortable, confident, and likely to do so. (Soliman, M., 2020).

The number of packages sent, and prescriptions filled, may be used to gauge the level of adherence during routine patient visits after discussing the patient's attitude towards the therapy and the treatment plan. According to a study, patients recommend a number of pharmacy services to increase antidepressant adherence, including small group instruction sessions or reminder emails sent before each prescription. Research has shown that pharmacists play a critical role in enhancing antidepressant adherence. (Solmi, M., et al., 2020).

According to a comprehensive evaluation, pharmacist interventions may be able to increase antidepressant adherence by 15–27%. For example, based on reported adverse drug reactions and other DRPs, the customised plan may be optimised to promote adherence, such as taking the medication in the morning to prevent sleeplessness or in the evening to avoid sedation during the day. (Kamusheva, M., et al., 2020).

It was clear, nevertheless, that their opinions of depression patients were comparatively more negative than their opinions of the illness itself or of their own involvement in overseeing its treatment. These results contrast with those of Scheerder et al., who found that Belgian community pharmacists had a positive outlook on patients who were depressed as well as the nature and progression of depression. (Scheerder, G., De Coster, I., & Van Audenhove, C., 2008).

These inconsistent results may be the result of cultural variations in the stigma associated with mental illness, which has been found in various studies to be especially prevalent in Arab nations. Additionally, our study found a statistically significant positive association between chemists' attitudes about depression and their current depression-related practices, which is consistent with findings from the literature. (Shami, R., 2020).

Gender was a key sociodemographic component linked to pharmacists' practices in providing depression treatment; compared to male pharmacists, female pharmacists shown much lesser involvement in this area. This correlates with findings from the literature at the regional level and shows that stigmatizing beliefs about depression are more prevalent among women. Nonetheless, there isn't any solid worldwide proof in the literature about how gender affects one's perspective on depression. Regardless of the number of years of experience, pharmacists who graduated within the last five years had substantially higher practice scores than those who graduated more than five years prior. (Shami, R., Alam, M. F., & ElHajj, M. S., 2022).

2.5. Practices

The disparity scores between chemists' attitudes and current practice about their possible roles helped to clarify this finding. For patients with depression, pharmacists thought the nine different responsibilities of treatment were more important than they were for patients with other physical illnesses.

This suggests challenges in the provision of depression care, particularly with reference to educating patients about depression (medicine), keeping track of medication compliance, and preserving a rapport based on trust. We suspect special obstacles in carrying out pharmacists' prospective responsibilities for patients with depression because it has been demonstrated that these roles can be fulfilled when patients have diseases other than depression. The primary perceived obstacle identified in this research was insufficient education about mental health concerns; the standard curriculum for pharmacists does not adequately address this subject. (Gide, D. N., et al., 2023).

Pharmacists who want to get involved in the treatment of patients with depression must complete training programs to acquire the knowledge and abilities necessary to educate them about depression and antidepressant medications. It has been demonstrated that role-specific training improves the execution of pharmacists' new responsibilities. Additionally, it has been demonstrated that include patients with mental illnesses in this type of training improves pharmacists' attitudes about this patient population and may make it easier to maintain a trustworthy connection with them. (Kamusheva, M., et al., 2020).

In line with earlier studies on mental illness generally, Lack of time for individual patients, lack of privacy at the pharmacy, and lack of knowledge about people and their prescriptions were other major perceived obstacles. By working more closely with general practitioners, pharmacists can better provide patients with information, which is directly tied to their ability to overcome the information barrier.

Because of this, it is especially challenging for pharmacists to follow up with patients about depression symptoms and medication—information that patients must disclose and that pharmacists must communicate to general practitioners. Including nearby general practitioners in pharmacist education programs about depression could be one approach to improve collaboration and remove obstacles. However, greater cooperation between general practitioners and pharmacists will need to take patient confidentiality into account. (Shami, R., Alam, M. F., & ElHajj, M. S., 2022).

Because the majority of the pharmacists in this study saw depressed patients on a regular basis, they were in a position to respond appropriately and typically supported a very favorable attitude regarding their prospective role in depression therapy. Depression treatment was acceptable to

these pharmacists, as seen by their overall willingness and the significance they attached to this possible new function. This is encouraging for the role's future development. Providing specialized care tasks was more challenging for persons with depression than for those with other medical disorders. This result, which is particular to depression treatment, is consistent with two previous studies' conclusions on the use of medications to treat mental illness generally. (Strowel, C., et al., 2023).

This finding was clarified by the discrepancy ratings between the attitudes of pharmacists and the existing practice regarding their prospective roles. Pharmacists believed the nine distinct tasks of care were more significant for patients with depression than they actually were; this perception was much stronger than it was for patients with other medical disorders. This suggests that it can be challenging to provide depression treatment, particularly when it comes to educating patients about depression (medicine), keeping track of medication compliance, and fostering a trustworthy connection with the patient. Given that it has been demonstrated that pharmacists can fulfill their potential roles in treating patients with diseases other than depression, we suspect that there may be particular obstacles in carrying out these duties for patients who are depressed.

The primary perceived obstacle identified in this research was insufficient education about mental health concerns; the standard curriculum for pharmacists does not adequately address this subject. (Rendrayani, F., et al., 2022).

Pharmacists who want to get involved in the treatment of patients with depression must complete training programs to acquire the knowledge and abilities necessary to educate them about depression and antidepressant medications. It has been demonstrated that role-specific training improves the execution of pharmacists' new responsibilities. Additionally, it has been demonstrated that include patients with mental illnesses in this type of training improves pharmacists' attitudes about this patient population and may make it easier to maintain a trustworthy connection with them. (Silvia, R., Plum, M., & Dufresne, R., 2020).

Because most pharmacists had frequent interaction with patients who were depressed, they generally indicated a very favorable attitude toward their prospective involvement in providing care for patients with depression. Depression treatment was acceptable to these pharmacists, as seen by their overall willingness and the significance they attached to this possible new function. This is encouraging for the role's future development. Providing specialized care tasks was more

challenging for persons with depression than for those with other medical disorders. This result, which is particular to depression treatment, is consistent with two previous studies' conclusions on the use of medications to treat mental illness generally. (Strowel, C., et al., 2023).

The degree of such cooperation was quite low at the time because it is uncommon among these professions. Because of this, it is especially challenging for pharmacists to follow up with patients about depression symptoms and medication—information that patients must disclose and that pharmacists must communicate to general practitioners. Including nearby general practitioners in pharmacist education programs about depression could be one approach to improve collaboration and remove obstacles. But greater cooperation between pharmacists and medical practitioners will need to take patient confidentiality into account. (Khalifeh, A. H., & Hamdan-Mansour, A. M., 2021).

To validate the findings of this exploratory study in larger sample sizes, more investigation is required. It should also cover how patients and other healthcare professionals view pharmacists' contributions to depression treatment, the results of these contributions, and strategies for removing obstacles. (Shami, R., Alam, M. F., & ElHajj, M. S., 2022).

3.METHODOLOGY

3.1 Aim

The study's objective is to assess Near East University pharmacy students' understanding, attitudes, and practices regarding depression. A prospective cross-sectional study was carried out between May and September 2024 with a standardized questionnaire to gather data in order to accomplish the goal. All subjects gave their verbal agreement before to the trial. The majority of the questions were closed-ended, pretested, organized, and self-administered.

3.2. Sampling

All pharmacy students were eligible to fill the instrument except if they refuse.

3.3. The Instrument

The modified questionnaire is comprised of five sections and twenty-five questions.

Section 1: Respondent demographics

We collected data on respondents' CGPA, years of study, age, and gender.

Section 2: Knowledge

Understanding on depression and 11 (Yes/No/I don’t know) items on knowledge were asked. Corrected answers were coded as 1 and uncorrected as 0. The following items were coded reversibly: 3,9,10. The knowledge score categorized into 3 categories: from 0-4 poor knowledge, 5-9 average knowledge and 10 or more is a good knowledge.

Section 3: Attitude

Twenty items were used to gauge the respondents' attitudes. Highly disagree, disagree, neutral, agree, and highly agree were the five Likert scales that were used and coded from 1 to 5 respectively. The following items were coded reversibly: 6,7,9,10,12,14,18,19.

Section 4: Practice

Ten items on a 5-Likert scale—strongly disagree, disagree, neutral, agree, and strongly agree—were used to gauge the respondents' practices with reference to depression. Each item was coded from 1 to 5. The following items were coded reversibly: 4 and 7.

3.4 Data Analysis

Version 20.0 of the Statistical Package of Social Sciences (SPSS) software was used to analyze the data that was gathered. Analyzing descriptive statistic variables, such as percentages and frequency for the categorical variables, is one of the techniques used to examine data. Standard

deviations and means were used to express the continuous variables. The Kolmogrov-smirnov test was applied to assess the normality of the data, and the data supported parametric tests. Hypothetical tests such as independent t-test and Analysis of Variance (ANOVA) tests were applied. For multiple group comparison, Tukey Post hoc was applied when applicable. Level of significance is $p < 0.05$.

3.5 Ethical Consideration

The study was approved by the Near East Institutional Reviews Board (IRB) of Near East University Hospital and designated as an observational study. During the trial, only initials were utilized, and no patient location or other pertinent but non-clinically necessary individual data was recorded (YDU/2024/122-1846).

4. RESULTS

4.1. Demographic Characteristics of the Respondents

A 300 survey was distributed among pharmacy students from first year to the fifth year, 50 survey were excluded due to incomplete data or refusing to participate by the students. The response rate was 250, which showed a good and acceptable rate. 250 students were included in the analysis. Among our sampled pharmacy students (131, 52.4%) were females and (119, 47.6%) were males. The majority of our sample were in 2nd, 3rd and 4th years of study (68, 27.2%) (63, 25.2%) (55, 22.0%), respectively. The mean age of the students was (22.60±2.35). More details about demographic characteristics were mentioned in Table 2.

Table 2. Demographic characteristics of the respondents

		N	%
Gender	**Female**	131	52.4
	Male	119	47.6
Marital Status	**Single**	245	98.0
	Married	5	2.0
What is your GPA?	**<2**	31	12.4
	2-2.5	69	27.6
	2.5-3	79	31.6
	>3	71	28.4
What is your educational level?	**1st**	20	8.0
	2nd	68	27.2
	3rd	63	25.2
	4th	55	22.0
	5th	44	17.6
Do you know someone with depression?	**No**	112	44.8
	Yes	138	55.2

4.2. Knowledge

Knowledge about depression was assessed using 11 items with response option of “yes”, “no” and “I don’t know items.” The majority of the participants (212,84.8%) reported having prior knowledge about depression. In response to whether they considered depression to be a health problem, the majority (186,74.4%) that it is a health issue. Further details on participants’ knowledge are provided in Table 3.

Table 3. Participants knowledge

	No		Yes		I don't Know	
	N	**%**	**N**	**%**	**N**	**%**
Have you ever heard about depression?	36	14.4	**212**	**84.8**	2	0.8
Do you consider depression as a health problem?	56	22.4	**186**	**74.4**	8	3.2
Depression affects people of particular age group	107	42.8	**115**	**46.0**	28	11.2
Depression is caused by witchcraft, charms or evil spirits	**129**	**51.6**	70	28.0	51	20.4
Patients with depression can break down at any time	41	16.4	**185**	**74.0**	24	9.6
Patients with depression are dangerous to themselves and others	51	20.4	**171**	**68.4**	28	11.2
Depression can lead to suicide and suicide attempts	32	12.8	**193**	**77.2**	25	10.0
Depression can be treated with pharmacological methods and psychotherapy	41	16.4	**181**	**72.4**	28	11.2
Depression is best managed by traditional doctors /healers	**111**	**44.4**	83	33.2	56	22.4
Depression responds better to traditional remedies than orthodox treatment most of the time	82	32.8	77	30.8	**91**	**36.4**
Do you know of a tool used classify depressed patients?	96	38.4	53	21.2	**101**	**40.4**

4.3 Attitude

Participants' attitude towards depression were assessed using a 20-item Likert scale, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). The first item evaluated whether participants had noticed an increase in number of depression cases, with 106 (43.1%) agreeing. Regarding the believe that more severe depression is caused by biochemical abnormalities, with 106 (42.4%) of the participants expressed a neutral stance. Furthermore, 116 (46.6%) of the participants agreed that depression can be categorized into two types: one arising from psychological factors and the other physiological factors. The mean score on the attitude scale was 64.6 (SD = 5.3), with scores ranging from 52 to 83. Further details on participants' attitudes can be found in Table 4.

Table 4. Participants' attitude toward depression

	Strongly disagree		Disagree		Neutral		Agree		Strongly Agree	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
During the last 5 years I have seen an increase in the number of patients presenting with depressive symptoms.	1	0.4	9	3.7	57	23.2	**106**	**43.1**	73	29.7
Most of the depression cases I see were	5	2.0	22	8.8	**115**	**46.0**	68	27.2	40	16.0

brought on by recent catastrophe										
More severe depression is caused by biochemical abnormalities	23	9.2	42	16.8	**106**	**42.4**	55	22.0	24	9.6
Depression can be divided into two categories: one produced by psychological factors and the other by physiological ones.	5	2.0	18	7.2	47	18.9	**116**	**46.6**	63	25.3
Patients with depression are more likely than other people to have grown up in a deprived environment.	11	4.4	17	6.8	74	29.6	**86**	**34.4**	62	24.8
People with low stamina use depression as a coping mechanism for their problems	15	6.2	23	9.5	**97**	**39.9**	69	28.4	39	16.0
Depression is a natural part of becoming old	47	18.8	60	24.0	**77**	**30.8**	41	16.4	25	10.0
Are those who suffer from depression avoided and treated differently	12	4.8	41	16.4	**96**	**38.4**	68	27.2	33	13.2
Its difficult to tell the difference between sadness and a clinical depression that requires treatment	15	6.0	31	12.4	**78**	**31.2**	77	30.8	49	19.6
Depression indicates a recognizable reaction that cannot be altered	19	7.6	40	16.0	**103**	**41.2**	65	26.0	23	9.2
In normal practice, antidepressants successfully cure depressed individuals in the majority of cases.	9	3.6	36	14.4	92	36.8	82	32.8	31	12.4
The majority depressive disorders get well on their own	25	10.0	50	20.0	**92**	**36.8**	54	21.6	29	11.6
The main healthcare provider may be able to help people who are depressed	0	0.0	22	9.1	60	24.7	**105**	**43.2**	56	23.0
When depressed people do not improve after receiving treatment from primary healthcare providers, there is not much they can do.	29	11.6	56	22.4	**77**	**30.8**	56	22.4	32	12.8
It is preferable for depressed people to see psychiatrists rather than primary care providers, if they need antidepressants.	15	6.0	26	10.4	**83**	**33.2**	73	29.2	53	21.2
Patients with depression should only receive psychotherapy from professionals	18	7.2	42	16.8	54	21.6	**69**	**27.6**	67	26.8
Most depressed individuals would benefit more from psychotherapy than medications if it were freely available.	16	6.4	22	8.8	**79**	**31.6**	72	28.8	61	24.4
Dealing with patients who are depressed comes naturally to me	5	2.0	26	10.4	**93**	**37.2**	77	30.8	49	19.6
Working with depressed patients is demanding tiresome ,or challenging	12	4.8	20	8.0	**89**	**35.6**	88	35.2	41	16.4
Spending time with sad patients is fulfilling	22	8.8	32	12.8	**103**	**41.2**	61	24.4	32	12.8

4.4. Practice

Participants' practice towards depression were assessed using a 10-item Likert scale, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). The first item evaluated the feeling towards depression patients' needs, with 90 (36.1%) were neutral. Regarding the dealing with depression patients, with 83 (33.2%) of the participants agreed it is difficult. Furthermore, 116 (46.4%) of the participants agreed that there is little to be offered to those depressed patients who do not respond to what general practitioners do. The mean score on the practice scale was 33.2 (SD = 3.8), with scores ranging from 18 to 44. Further details on participants' practice can be found in Table 5.

Table 5. Participants' practice toward depression

	Strongly disagree		**Disagree**		**Neutral**		**Agree**		**Strongly Agree**	
	N		**N**		**N**		**N**		**N**	
I feel comfortable dealing with the needs of depressed patients	13	5.2	35	14.1	**90**	**36.1**	71	28.5	40	16.1
Nursing staff could be useful in supporting depressed patients	9	3.6	25	10.0	80	32.0	**92**	**36.8**	44	17.6
Working with depressed patients can be difficult	6	2.4	26	10.4	72	28.8	**83**	**33.2**	63	25.2
There is little to be offered to those depressed patients who do not respond to what general practitioners do	6	2.4	26	10.4	**116**	**46.4**	74	29.6	28	11.2
I find it rewarding to look after depressed patients	9	3.6	23	9.2	**120**	**48.0**	69	27.6	29	11.6
If psychotherapy were freely available ,this would be more beneficial than antidepressants for most depressed patients	7	2.8	19	7.6	**82**	**32.8**	80	32.0	62	24.8
Psychotherapy is of little help for depressed patients	20	8.0	47	18.8	64	25.6	**86**	**34.4**	33	13.2
If depressed patients need antidepressants ,they are better off with psychiatrist than with a general practitioner	11	4.4	28	11.2	**94**	**37.6**	70	28.0	47	18.8
Psychotherapy for depressed patients should be left to specialist	8	3.2	29	11.6	**86**	**34.5**	70	28.1	56	22.5
Most depressive disorders seen in general practice improve without medication	24	9.6	31	12.4	**88**	**35.2**	69	27.6	38	15.2

The female participants showed significantly better attitude compared to males (65.63 ± 6.01) (63.50 ± 4.24) (p =0.002), respectively. Furthermore, fifth year students had better practice compared to third year (34.98 ± 3.38) (32.71 ± 3.82) (p =0.02), respectively. Participants who know someone with depression had significantly higher level of attitude compared to who don't know (65.35 ± 5.24) (63.70 ± 5.33) (p =0.01), respectively. Participants who know someone with depression had significantly higher level of practice compared to who don't know (33.89 ± 3.79) (63.70 ± 5.33) (p =0.01), respectively. Further details on participants' characteristics and the scales can be found in Table 6.

Table 6. Participants characteristics and the scales

		Knowledge	P	Attitude	P	Practice	P
		Mean ± SD	value	Mean ± SD	value	Mean ± SD	value
Sex	**Female**	7.19 ± 2.18	0.48	65.63 ± 6.01	0.002*	33.56 ± 4.03	0.18
	Male	7.37 ± 2.44		63.50 ± 4.24		32.91 ± 3.61	
Marital Status	**Single**	7.25 ± 2.3	0.43	64.49 ± 5.35	0.21	33.27 ± 3.59	0.38
	Married	8.2 ± 2.58		67.80 ± 4.87		35.40 ± 4.98	
What is your GPA?	**<2**	7.08 ± 2.53	0.17	64.27 ± 4.80	0.03	34.30 ± 4.05	0.42
	2-2.5	7.66 ± 2.17		63.69 ± 5.33		32.90 ± 4.15	
	2.5-3	7.33 ± 2.34		64.08 ± 4.72		33.20 ± 3.80	
	>3	6.92 ± 2.28		66.18 ± 5.91		33.23 ± 3.48	
What is your educational level?	**1st**	6.47 ± 2.14	0.06	64.70 ± 3.88	0.40	33.00 ± 3.93	0.02*
	2nd	6.89 ± 2.60		64.12 ± 4.47		33.01 ± 4.19	
	3rd	7.54 ± 2.40		64.54 ± 5.31		32.71 ± 3.82	
	4th	7.70 ± 2.08		64.04 ± 5.46		32.89 ± 3.49	
	5th	7.26 ± 1.96		66.02 ± 6.72		34.98 ± 3.38	
Do you know someone with depression	**No**	7.20 ± 2.77	0.18	63.70 ± 5.33	0.01*	32.49 ± 3.78	0.04*
	Yes	7.34 ± 1.82		65.35 ± 5.24		33.89 ± 3.79	

*** Significance at p < 0.05.**

The below table showed the knowledge categories with demographic variables. As the below table showed, there is a significant association between knowledge category and educational level. First year students have poor and average knowledge (2, 10%) (18, 9.4%), respectively, and no one had good knowledge (p=0.03). The majority of the student who know someone with depression had average knowledge (114, 59.4%), and (17, 44.7%) had good knowledge, which showed a significant association between the knowledge category and dealing with depressed people (X^2 = 6.3, p-value = 0.04).

Table 7. Knowledge category with demographic variables.

		Knowledge						
		Poor		Average		Good		X^2, p value
		N	%	N	%	N	%	
Sex	**Female**	**11**	**55.0**	**104**	**54.2**	**16**	**42.1**	**1.9, 3.8**
	Male	**9**	**45.0**	**88**	**45.8**	**22**	**57.9**	
Marital Status	**Single**	**20**	**100.0**	**189**	**98.4**	**36**	**94.7**	**2.6, 0.26**
	Married	**0**	**0.0**	**3**	**1.6**	**2**	**5.3**	
What is your GPA?	**<2**	**2**	**10.0**	**24**	**12.5**	**5**	**13.2**	**1.6, 0.94**
	2-2.5	**5**	**25.0**	**53**	**27.6**	**11**	**28.9**	
	2.5-3	**6**	**30.0**	**59**	**30.7**	**14**	**36.8**	
	>3	**7**	**35.0**	**56**	**29.2**	**8**	**21.1**	
What is your educational level?	**1st**	**2**	**10.0**	**18**	**9.4**	**0**	**0.0**	**16.5, 0.03***
	2nd	**11**	**55.0**	**46**	**24.0**	**11**	**28.9**	
	3rd	**5**	**25.0**	**47**	**24.5**	**11**	**28.9**	
	4th	**1**	**5.0**	**43**	**22.4**	**11**	**28.9**	
	5th	**1**	**5.0**	**38**	**19.8**	**5**	**13.2**	
Do you know someone with depression?	**No**	**13**	**65.0**	**78**	**40.6**	**21**	**55.3**	**6.3, 0.04***
	Yes	**7**	**35.0**	**114**	**59.4**	**17**	**44.7**	

*** Chi-square test significant at p < 0.05.**

5. DISCUSSION

The purpose of this study is to assess students' knowledge, attitudes, and actions about depression. Despite participant names being different, the findings demonstrate the sample's strong practice, optimistic attitude, and thorough knowledge.

Several studies concluded that mental health conditions such as depression are not given enough respect. These negative viewpoints are held by both students and community people. (Alsahali, S., 2021), (Tesfamariam, E. H., et al., 2018), (Abolfotouh, M. A., et al., 2019), (Ma, Z., et al., 2018).

Merely 32.1% of the participants were aware that amitriptyline is an antidepressant medication. Our results agreed with those of a study carried out in Nigeria. and Cameron. (Mulango, I. D., et al., 2018) This consistency in the results could be a typical reflection of the enrolled sample's similarity. Most members of our sample are enrolled in their second or third year of college. (Odejide, A. O., et al., 2002).

Most of the participants in our study have a neutral opinion on treating depressed patients. According to the results of a Cameron study, most respondents found it difficult to deal with depressed patients. This is in line with earlier research. (James., Jenkins & Lawani., 2012), (Smolders, M., et al., 2010). A third of PHCPs including pharmacists reported that they had trouble telling the difference between being unhappy and having a clinical depression that requires medical attention. Compared to health care providers in France, our findings are comparable to research conducted among Brazilian GPs (Norton, J. L., et al., 2011). This can be explained by the fact that doctors in wealthy nations have received more education on mental health issues. (Mulango, I. D., et al., 2018).

The mean knowledge score in our study was moderate (7.22±2.3). In contrast, a study conducted among health care providers including the pharmacists in Kenya reported a higher level of knowledge, where the mean knowledge was high (Muriuki, M. M., et al., 2024). These variations in knowledge levels are expected due to differences in the study population. In particular, our

sample consists of pharmacy students, whereas Kenyan study included medical professionals, such as pharmacists.

According to our research, students who know someone who is depressed had better practice ($p < 0.05$). This could be because the participants had intimate contact with the patients, which helped them develop better attitudes and practices.
(Yalçın, N., et al., 2024).

According to a different study, there has been no change in the past ten years in the stigmatizing and discriminatory views of medical professionals regarding mental health issues. Studies on the attitudes of students aspiring to work in the health care industry toward mental health issues have shown that students view depression as a disease and have a positive outlook on the phenomenon. One such study examined the attitudes of Saudi Arabian pharmacy students toward depression. (Alsahali, S., 2021) However, in another study conducted in Turkey to assess first- and fifth-year students' attitude, students reported negative attitudes. (Yalçın, N., et al., 2024).

In our study, the attitudes towards depression were comparable to those on knowledge, where individuals exhibited a high awareness of overall characteristics of depression but less so when asked about specific features of depression. Fewer respondents were confident in the specific treatment of depressed patients, even if the majority felt that their profession had a role to play in their care. It was comparable to studying in Kenya. (Muriuki, M. M., et al., 2024).

In a study conducted in Turkey to assess the knowledge level of 1st and 5thyear students regarding depression, their findings were similar to ours. (Yalçın, N., et al., 2024), There is no significant difference between knowledge level. This may highlight the importance of encouraging and implementing the clinical courses and practice in pharmacy curriculum.
There was a similarity between our findings and a study conducted in Nigeria included 118 pharmacy students showed that the pharmacy students who correctly evaluated the symptoms of depression were significantly higher than non-pharmacy students. This is similarity due to the similarity in the sample characteristics and the shared curriculum between faculties (Aluh, D. O., et al., 2020).

A study conducted in Jordan showed that the students' knowledge about anti-depressants side effects, the results showed that only 48.5% (n=65) of the students believed that side effects of antidepressants are not worse than depression, and less than half (n=60, 44.8%) of them thought that antidepressants do not cause addiction. Even our study utilized another tool, but both shared similarity in the drugs assessment items. Both samples showed a good knowledge regarding the drugs used to treat depression, and this similarity my due to the sample characteristics (Abdel-Qader, D., & Hamadi, S., 2021).

It is important to recognize the limitations of this study. First off, because the sample size was restricted to pharmacy students at a particular university, the results might not apply to a larger population. The results' external validity is limited by the use of a convenience sample from a single institution. Second, only pharmacy students were included in the study; students from other medical or health-related colleges were not included. This restricts the study's breadth and hinders cross-disciplinary comparisons that can lead to a more thorough grasp of the problem at hand. Furthermore, because data for the study was only gathered once, the cross-sectional design limits our capacity to determine causal links between the variables observed.

6. CONCLUSION

The study's findings provide some significant insights into the knowledge, attitudes, and practices of pharmacy students about depression. Overall, the results showed that individuals knew very little about depression, indicating gaps in their awareness of this important mental health issue. Students generally displayed a normal or neutral attitude and behavior towards depression, showing a baseline level of engagement with the problem, despite their lack of thorough information. The results, however, raise questions about whether this level of knowledge will be adequate to provide aspiring medical professionals with the abilities needed to successfully manage patients with depression, particularly in light of the rising incidence of mental health issues worldwide.

The study's moderate level of understanding shows that pharmacy curriculum on mental health, especially depression, clearly need to be enhanced in terms of instruction. Pharmacy students, as future healthcare workers, will play a significant part in the interdisciplinary approach to mental health care, notably in assuring adequate medication administration and patient counseling. Therefore, specific interventions, such as increased training programs, workshops, or mental health modules, are needed to bridge this knowledge gap. These kinds of programs could give students the abilities and information they need to better identify and treat depression and other mental health conditions.

In summary, the study's participants had modest attitudes and behaviors related to depression; yet, their overall level of understanding was inadequate. It is advised that more study be done to examine other variables affecting students' beliefs and behaviors in addition to the long-term consequences of improved mental health education in pharmacy programs.

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SURVEY

KNOWLEDGE, ATTITUDE AND PRACTICE TOWARD DEPRESSION AMONG MEDICAL STUDENTS IN NEAR EAST UNIVERSITY

Put(√) mark in relevant brackets.

Personal details:

1- Sex Male( ) Female( )
2- What's your Age? ……
3- Marital status? a- Married( ) b- Single( ) c- Divorced( ) d- Widowed( ) e-In relationship( )
4- What is your faculty? Pharmacy( ) Nursing( ) Dentistry( ) Medicine( )
5- Educational level 4^{th} year( ) 5^{th} year ( )
6- Do you know someone with depression?
   a- Yes ( ) b- No ( )

Knowledge:

NO	VARIABLES	Yes	No	DO NOT KNOW
01	Have you ever heard about depression?			
02	Do you consider depression as a health problem?			
03	Depression affects people of a particular age group			
04	Depression is caused by witchcraft, charms or evil spirits			
05	Patients with depression can break down at any time			
06	Patients with depression are dangerous to themselves and others			
07	Depression can lead to suicide and suicide attempts			
08	Depression can be treated with pharmacological methods and psychotherapy			
09	Depression is best managed by traditional doctors/healers			
10	Depression responds better to traditional remedies than orthodox treatment most of the time			
11	Amitriotyline is an anti-depressant drug			
12	Methotrexate is an anti-depressant drug			
13	Fluoxetine is an anti-depressant drug			
14	Carbamazepine is an anti-depressant drug			
15	Do you know of a tool used to classify depressed patients? If response is yes, please specify the tool			

Attitude:

NO	ITEMS	AGREE	DISAGREE	DO NOT KNOW
01	During the last 5 years I have seen an increase in the number of patients presenting with depressive symptoms.			
02	Most of the depression cases I see were brought on by recent catastrophe			

03	More severe depression is caused by biochemical abnormalities.			
04	Depression can be divided into two categories: one produced by psychological factors and the other by physiological ones.			
05	Patients with depression are more likely than other people to have grown up in a deprived environment.			
06	People with low stamina use depression as a coping mechanism for their problems.			
07	Depression is a natural part of becoming old			
08	Are those who suffer from depression avoided and treated differently?			
09	Its difficult to tell the difference between sadness and a clinical depression that requires treatment			
10	Depression indicates a recognizable reaction that cannot be altered.			
11	In normal practice, antidepressants successfully cure depressed individuals in the majority of cases.			
12	The majority of depressive disorders get well on their own			
13	The main healthcare provider may be able to help people who are depressed.			
14	When depressed people do not improve after receiving treatment from primary healthcare providers, there is not much they can do.			
15	It is preferable for depressed people to see psychiatrists rather than primary care providers, if they need antidepressants.			
16	Patients with depression should only receive psychotherapy from professionals.			
17	Most depressed individuals would benefit more from psychotherapy than medications if it were freely available.			
18	Dealing with patients who are depressed comes naturally to me.			
19	Working with depressed patients is demanding, tiresome, or challenging.			
20	Spending time with sad patients is fulfilling.			

Practice:

NO			
01	What kind of training did you receive on mental health	Never trained	
		Theory only	
		Theory and clinical	
02	Do you have family history of mental illness?	Yes	
		If yes, father, mother or siblings	
		No	
03	Is antidepressant medication available in your health facility?	Yes	
		No	
04	Do you have previous history of medically diagnosed depressive disorder?	Yes	
		No	
05	Do you know someone with psychiatric conditions?	Yes	
		No	
06	Do you have any experience working in psychiatric unit in the past?	Yes	
		No	
07	Have you ever taken mhGAP training?	Yes	
		No	

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