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Knowledge and Attitudes Regarding Depression Among a Sample of Iraqi Non-Psychiatric Nurses: A Cross-Sectional Study

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Abstract

Introduction: Nurses, comprising the largest profession in healthcare, play a significant role in the identification and management of mental health disorders in hospitals.

Objectives: The study assessed the knowledge and attitudes of non-psychiatric nurses and their encounters with depressive patients throughout their careers.

Methods: This was a cross-sectional descriptive study with 400 non-psychiatric nurses from different hospitals in the Kurdistan Region of Iraq during October and November 2022. The independent Student's *t*-test, one-way analysis of variance, and binary logistic regression were used to assess possible factors associated with knowledge and attitude toward depression.

Results: In this study, 400 non-psychiatric nurses were examined, revealing a mean age of 31.57 ± 8.59 years. Their mean scores for knowledge and attitude toward depression were 5.41 out of a maximum of 11 (standard deviation 1.15) and 5.15 out of 18 (standard deviation 1.83), respectively. Notably, differences in mean knowledge scores were observed concerning participant marital status ($P = .044$), while disparities in mean attitude scores are related to participant gender ($P = .010$). Upon binary logistic regression analysis, none of the independent variables exhibited an association with good knowledge. Nevertheless, gender emerged as a significant factor influencing attitude toward depression (odds ratio: 0.51; 95% confidence interval: 0.30–0.86; $P = .012$). Subsequently, in the multivariate binary logistic regression analysis, gender sustained significance (adjusted odds ratio: 0.573; 95% confidence interval: 0.348–0.942; $P = .028$) as the key variable impacting attitudes toward depression among non-psychiatric nurses.

Conclusion: Based on the results of this study, nurses have insufficient awareness and management skills for depression. It has been experienced and reported that nurses lack knowledge and an attitude toward depression management. The study highlights a significant gap in nurses' skills for managing depression, urging the immediate improvement of training programs. Customizing these programs to enhance nurses' abilities in identifying and managing depression is crucial.

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Introduction

The World Health Organization (WHO) defines depression as a state of ongoing hopelessness and a loss of passion or interest in formerly enjoyable activities (World Health Organization, 2017). The prevalence of depression was reportedly higher among older people: 35.4% of older adults living in nursing homes in Baghdad, Iraq and 12% to 34% of older individuals in Asian nations reported having depression, including those in India (12.7%), Malaysia (16.5%), Vietnam (17.2%), Sri Lanka (27.8%), Japan (30.3%), and Indonesia (33.8%) (Fahrni et al., 2021; Vanoh et al., 2016; World Health Organization, 2017).

Morgan and Townsend defined depression as a change in mood characterized by melancholy, hopelessness, and pessimism (Morgan, 2020). A loss of interest in routine activities occurs, and somatic symptoms may be noticeable. It is typical for eating and sleeping habits to change (Morgan, 2020). Life revolves around different emotions and feelings that get triggered by various events in an individual's day-to-day life. Each individual has their own highs and lows. Extremely happy events, for example, getting a dream job or getting a promotion at work, can make a person full of joy. Similarly, the other way around, painful events, for example, losing a loved one or something, feeling lonely during occasions, etc., can make a person feel down or sad. This elevation and decline are part and parcel of the reaction formed after any particular triggering event that returns to normal after a period of time. However, if the emotional balance is not regained for a prolonged period of time, this signals some abnormality (Womble & Kincheloe, 2020).

Review of Literature

Healthy people occasionally experience the "blues" or a sensation of sadness or melancholy, which is regarded as a typical reaction to life's small disappointments. These episodes pass quickly as the person gets used to the loss, change, or failure (actual or perceived) that they have gone through. Ineffective adaptation leads to pathological depression (Morgan & Townsend, 2021). A brief episode of the "blues" or a gloomy mood is considerably different from a depressive condition. The prolonged emotional tone of a person's mood affects their behavior, personality, and perspective. The severe and incapacitating illness of depression has an impact on every aspect of one's life (Gorman & Anwar, 2019). Depression is one of the major risk factors for suicide and is the most prevalent mental condition (Hawton et al., 2013). Nurses must be knowledgeable about suicide risk factors in depressed patients.

The burden of mental disease is significant in both industrialized and developing nations (Kurumatani et al., 2004; Saied, Ahmed, et al., 2023; Saied, Metwally, et al., 2023; Swami et al., 2008). Mental health issues are considered one of the leading causes of disability around the world. Among the mental health issues, depression accounted for 6.6% of the world's years with a disability-adjusted life expectancy and 18.9% of the world's years with a disability (Wu et al., 2017). A study of general hospital nurses revealed that most participants possessed inadequate knowledge regarding depression and held unfavorable attitudes toward patients with depression. Additionally, a notable positive correlation was seen between participants' knowledge and attitudes (Kumar & Shoba, 2014; Pitanupong & Sammathit, 2023). Nurses at general hospitals possess restricted knowledge of depression, but maintain a neutral or somewhat positive attitude toward both depression and patients experiencing depressive symptoms (Ni et al., 2020).

A study explained that as mental illnesses have now become common, nurses are increasingly required to identify and care for patients with such ailments. Nurses are expected to have awareness regarding the needs of mentally ill individuals and care for them without any discrimination or prejudice (Shahif et al., 2019). Similarly, another study in China also highlighted depression as a chronic disease like any other chronic disease in the elderly, such as hypertension and diabetes; thus, the new National Health Policy of China indicated that mental illnesses should be managed in the primary care setting (Chen et al., 2011). A systematic review of 72 studies in 30 countries demonstrated that the prevalence of depression was 32.2% globally (Pilevarzadeh et al., 2019). Another study conducted in Sudan involving 407 physicians revealed a moderate level of awareness and a poor attitude toward depression (Mokhtar Ahmed et al., 2023). Similarly, in India, a study conducted among 80 nonpsychiatric physicians revealed that there was a high level of knowledge, but a negative attitude toward depression (Loh et al., 2018). Conversely, in Taiwan, nurses possess a commendable understanding and positive disposition toward depression (Ni et al., 2020). Furthermore, cluster-randomized research revealed that education enhances the level of knowledge and attitude of nurses toward depression management (Lee et al., 2020).

Depression has been proven to be the most frequently diagnosed among other mental disorders, and it is also considered to be the leading etiological factor for causing other diseases (Hofmann et al., 2011). Due to the high rates of the lifetime prevalence of depression, its early onset, higher chronicity, and impairment of the roles, it has been ranked by the WHO as the disease that is the single most burdening in the world in these years (Hofmann et al., 2011). Biological, social, environmental, cultural, and economic factors interact in a complex way to affect mental health; when these determinants are out of balance, it can result in mental disorders, which can afflict anyone, regardless of age, gender, place of residence, or level of living (Chaudhari et al., 2022). For psychiatric services to be provided with quality and holistic treatment and for the integration of mental health into primary healthcare to be successful, it is imperative to comprehend the mindset of nurses (Sahile et al., 2019).

The importance of this study lies in its emphasis on augmenting the comprehension of depression among nurses in non-psychiatric settings. The research attempts to fill a major gap in mental health literacy in non-psychiatric hospitals by examining the knowledge and attitudes of these nurses. Enhanced knowledge and comprehension of depression among non-psychiatric nurses might result in prompter detection, enhanced assistance for patients, and overall enhanced provision of mental health care in settings with low psychiatric expertise. In addition, the results of this study could not only help create specialized training programs, but also have a crucial impact on promoting the inclusion of mental health considerations in the wider healthcare field. This would ultimately benefit both healthcare professionals and patients. As far as we are aware, no research has been done on Iraqi non-psychiatric nurses that particularly investigates the level of knowledge and attitudes toward depression. The study aimed to assess the knowledge and attitudes of non-psychiatric nurses and their encounters with depressive patients throughout their careers.

Methods

Study Design, Time Frame, Setting, and Participants

The cross-sectional study involved 400 non-psychiatric nurses employed in 11 public academic hospitals within Iraq's Kurdistan Region. These hospitals, owned by the government and affiliated with medical institutions, are dedicated to providing comprehensive general medical care to the local population. Equipped with modern infrastructure, these academic hospitals serve as hubs for medical education and research in non-psychiatric fields. The multidisciplinary nature of these institutions is reflected in the various departments, including emergency, intensive care unit (ICU), medical, surgical, pediatric, maternity, and other specialized units tailored to address a wide spectrum of medical needs. Despite the absence of mental health intervention services, these hospitals play a pivotal role in emergency care, critical care, pediatric services, maternity care, and other specialized medical treatments. As academic centers, they contribute not only to the well-being of the community, but also to the advancement of medical knowledge and education in non-psychiatric healthcare disciplines within the Kurdistan Region. The period used for sampling was between the months of October and November of 2022. The STROBE checklist, which is the standardized criteria for reporting cross-sectional studies, was followed (Von Elm et al., 2007).

Inclusion and Exclusion Criteria

The present study had specific criteria for inclusion and exclusion. To be included, participants needed to agree to participate, be employed at a public hospital, and reside in either Sulaymaniyah or Erbil City. Participants who did not answer 100% of the questionnaire variables and nurses who had only graduated from high school or completed a 6-month training program were excluded from the study.

Data Collection Tool, Validity, Reliability, and Procedures

The data were collected using a validated paper-based, self-reported, structured questionnaire. The questionnaire was developed based on previously published studies (James et al., 2012; Kapungwe et al., 2011; Kerr et al., 1995; Mbatia et al., 2009; Mulango et al., 2018; Ndetei et al., 2011; Norton et al., 2011; St Louis & Roberts, 2013; van Rijswijk et al., 2009; Zabihi et al., 2012), and the questions were modified for better understanding. To guarantee its correctness and consistency, the questionnaire was initially drafted in English, then translated into the local Kurdish language, and finally back into English. Furthermore, the instrument was distributed to seven psychiatrists and psychological specialists to solicit their comments to determine the validity of the qualitative content. After evaluating and incorporating their feedback, none of the items were removed. Before the main data collection period began, 10% of the study participants were recruited from health institutions that were not chosen for the main study to fill out a pre-test version of the questionnaire. Pre-test results were used to make changes to question wording, scope, and redundancy to improve clarity, relevance, and test-taker efficiency. In addition, a pilot study was performed to assess the clarity of the questionnaire in advance. By contrast, for the reliability of the questionnaire, the researchers performed an internal consistency coefficient. The Cronbach's alpha values for the knowledge and attitude scales were 0.739 and 0.701, respectively, indicating an adequate level of reliability.

In the next phase of this study, five experienced nurses collected the data. A total of 540 non-psychiatric nurses

agreed to participate in this study, and 400 non-psychiatric nurses returned and completed the questionnaire. The questionnaire was completed by all nursing staff, such as supervisors, head nurses, and matrons, in the different hospitals.

The questionnaire was composed of three sections. The first section of the questionnaire dealt with socio-demographic information about the nurses, including age, gender, marital status, level of education, service unit, residential area (Erbil or Sulaymaniyah), and years of experience.

The second section of the questionnaire consists of 11 questions with scoring on a three-point Likert-type scale, and response options include 1 = agree, 0 = disagree, and do not know to assess the knowledge of nurses about depression identification, diagnosis, and management. Points were reversed for inverted questions (agree = 0 and disagree and do not know = 1). The 75% interquartile range scores indicated good knowledge (Alm-Roijer et al., 2004). The third section of the questionnaires consists of 18 questions. This section examines the nurses' attitude toward depression with scoring on a three-point Likert-type scale, and response options include 1 = agree, 0 = disagree, and do not know. Points were reversed for inverted questions (agree = 0 and disagree and do not know = 2). The 75% interquartile range scores indicated a positive attitude (Alm-Roijer et al., 2004).

Outcomes

The study's main findings concerned the nurses' knowledge and attitude about depression. The researchers used demographic factors, such as age, education, and years of experience, as independent variables (predictors).

Ethical Considerations

On the first page of the survey, we included a section requesting informed consent. Before filling out the survey, each nurse who took part in the study provided written informed consent. The principles for this survey included non-harm, confidentiality, and respect for the respondent's privacy. The ethics committee of the College of Science, University of Raparin approved the research and assigned a study ID (5971).

Statistical Analysis

For statistical analysis, IBM Statistical Package for the Social Sciences (SPSS) software version 25.0 was used. For continuous variables like age, years of work experience, knowledge, and attitude scores, the mean and standard deviation (SD) were computed. For categorical variables, we applied frequency and percentage distributions. An independent-sample *t*-test, an ANOVA test, and a Pearson correlation test were used for continuous variables. A *P*-value of <.05 was considered statistically significant. The independent variables consisted of two possible outcomes, so the binary logistic regression was used to identify predictive factors for good knowledge and positive attitudes. All variables with $P < .25$ in the univariate binary logistic regression analysis were retained for the multivariate binary logistic analysis. In the univariate binary logistic regression analysis, the crude odds ratio (OR) and 95% confidence interval (CI) were computed for each independent variable; in the multivariate binary logistic regression analysis, the adjusted odds ratio (AOR) and 95% confidence interval (CI) were computed. The *P*-value for statistical significance was set to .05.

Results

Out of a total of 540 non-psychiatric nurses who consented to be part of this research from 11 academic hospitals, 400 non-psychiatric nurses submitted their responses and successfully completed the questionnaire, resulting in a response rate of 74.07%. Table 1 presents an overview of the demographic information pertaining to the 400 nurses who participated in the study. The mean age of the nurses was 31.57 ± 8.59. The majority of the participants were female, accounting for 55.8% of the total sample. A majority of the participants, specifically 59%, were found to be married. In relation to the educational attainment of nurses, it is observed that a majority of them (52.3%) possessed diploma degrees, while a smaller proportion held bachelor's degrees (40.8%).

Table 1. Sociodemographic Characteristics of the Participants (*n* = 400).

Variables	*n*	%
Gender		
Male	175	44.3
Female	225	55.8
Marital status		
Single	151	37.8
Married	236	59.0
Widow/er	13	3.2
Level of education		
Diploma	209	52.3
Bachelor	163	40.8
Master and above	28	7
Work place		
Emergency	110	27.5
Medical ward	104	26.0
Surgical ward	54	13.5
Operation room	18	4.5
Others	114	28.5
Residence area		
Sulaymaniyah	200	50
Erbil	200	50
	Mean	SD
Age	31.57	8.598
Work experience (years)	7.53	7.450

A mere 7% of nurses held master's degrees or higher. The mean duration of practice (work experience) was 7.53 ± 7.45 years.

Table 2 presents the findings of our study, which indicate that the nurse's understanding of depression diagnosis and treatment was assessed. Ninety-five percent of the participants were found to have heard of depression. However, a significant majority of individuals lack awareness regarding the potential for a depressed patient to experience a sudden emotional collapse (92.8%). Furthermore, over half of the population remains uninformed about the potential risks posed by a depressed individual to both themselves and others (52.5%). Similarly, a significant proportion of participants (96.5%) exhibited a lack of awareness regarding the potential link between depression and suicide or suicide attempts. Furthermore, a considerable number of nurses (89.0%) were found to be unfamiliar with effective strategies for managing depression.

A significant majority of nurses, specifically 73.5% and 70.8%, express disagreement with the notion that depression can be effectively managed solely through the practices of traditional doctors and orthodox treatment. In relation to the topic of anti-depression medications, it has been observed that a significant proportion of individuals lack awareness regarding the primary usage of two commonly prescribed drugs for depression, namely, amitriptyline and fluoxetine, with percentages of 80.5% and 82.5%, respectively. Furthermore, a substantial majority of nurses exhibit a deficient level of knowledge in this domain, with a prevalence of 89.3% (Figure 1).

Furthermore, it was found that a significant proportion (94.8%) of non-psychiatric nurses lack knowledge regarding the causal relationship between misfortune and depression. Additionally, approximately half of these nurses (53%) have not observed any notable increase in depressive symptoms, particularly within the last 5 years. However, a majority of participants (55.3%) expressed disagreement with the notion that depression can be effectively treated without the use of medication. Similarly, a significant proportion (55.5%) did not agree that it is easy to differentiate between psychological depression and biochemical depression. The findings of this study indicate that there is a limited understanding (1.8%) regarding the early life symptoms experienced by individuals with depression. An additional noteworthy discovery pertains to the discomfort experienced by a significant proportion of nurses (57.3%) when confronted with patients suffering from depression. Furthermore, a substantial majority (91.8%) of nurses exhibited a lack of awareness regarding the responsibilities of primary healthcare workers in managing patients with depression (Table 3).

The findings of the study indicated that a significant majority of the participants (76.5%) held negative attitudes toward individuals diagnosed with depression, as depicted in Figure 1.

Table 4 presents the results of the analysis examining the correlation between participants' characteristics, knowledge, and attitudes toward depression. The findings indicate that there are significant differences in the mean scores of knowledge based on participants' marital status ($P = .044$). Additionally, there are significant differences in the mean scores of attitudes based on participants' gender ($P = .010$).

Table 5 presents the findings of the univariate binary logistic regression analysis, which identified the factors that exhibited a significant association with a high level of knowledge and a positive attitude toward depression. There was no observed correlation between any of the variables and the acquisition of knowledge. Gender was found to be

Table 2. Knowledge of the Participants about Depression ($n = 400$).

	Scales			
	Yes	No	Do not know	
Items	*n* (%)	*n* (%)	*n* (%)	MS
Have you ever heard about depression?	382 (95.5)	16 (4)	2 (0.5)	1.92
Patients with depression can breakdown at anytime	13 (3.3)	16 (4)	371 (92.8)	0.99
Patients with depression are dangerous to themselves and others	27 (6.8)	163 (40.8)	210 (52.5)	0.66
Depression can lead to suicide or suicide attempts	11 (2.8)	3 (0.8)	386 (96.5)	1.02
Depression can be treated with pharmacological methods and psychotherapy	27 (6.8)	17 (4.3)	356 (89)	1.03
Depression is best managed by traditional doctors/healers	83 (20.8)	294 (73.5)	23 (5.8)	1.53
Depression respond better to traditional remedies than orthodox treatment most of the time	94 (23.5)	283 (70.8)	23 (5.8)	1.47
Amitriptyline is an anti-depressant drug	67 (16.8)	11 (2.8)	322 (80.5)	1.14
Methotrexate is an anti-depressant drug	56 (14)	322 (83)	12 (3)	1.69
Fluoxetine is an anti-depressant drug	58 (14.5)	12 (3)	330 (82.5)	1.65
Carbamazepine is an anti-depressant drug	57 (14.2)	287 (71.8)	56 (14)	1.58

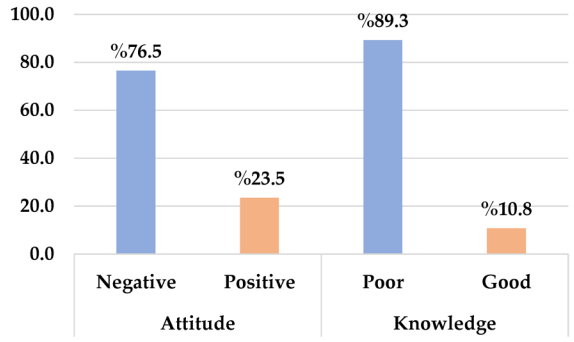

Figure 1. Identifying knowledge and attitude of the participants toward depression ($n = 400$).

significantly associated with differences in attitude, with males exhibiting a more positive attitude compared to females (OR: 0.51, $P = .012$).

The findings presented in Table 6 demonstrate the outcomes of a multivariate binary logistic regression analysis, indicating that males exhibited a greater likelihood of possessing a positive attitude toward depression in comparison to females (adjusted odds ratio [AOR]: 0.57; 95% CI: 0.34–0.94). Ultimately, none of the variables demonstrated the ability to accurately predict a comprehensive understanding of depression.

Discussion

The present study aimed to assess the knowledge and attitudes of non-psychiatric nurses in the Kurdistan Region of Iraq about depression. Based on our study, many of the nurses were in their early thirties. There were almost equal proportions of males and females. Two-thirds of the participants were married. Regarding the level of education, more than half of the nurses held diploma degrees; a small proportion had bachelor's degrees; and only 7% of the nurse's held master's or higher.

The vast majority of nurses in the Kurdistan Region of Iraq have inadequate knowledge about depression. The attitudes of nurses regarding depression were neutral or slightly negative. This was supported by many published studies around the world (Chuang & Kuo, 2018; Ni et al., 2020).

A study done in South West Cameroon found that a majority (85.8%) of the participants accepted that pharmacological methods and psychotherapy can treat depression (Mulango et al., 2018). In our study, more than two-thirds of nurses disagreed with the use of traditional and orthodox methods of treating depression. While the majority of the participants (95.5%) had heard about depression, similar to a study done in Korea where 82.1% of study subjects had above-average levels of knowledge regarding depression (Park et al., 2015), 80.5% and 82.5% of nurses were not aware of the use of two types of anti-depressants, namely, amitriptyline and fluoxetine, respectively. The Korean study also found that only 28.3% of their participants agreed on the use of fluoxetine to treat depression (Park et al., 2015).

Nearly more than half of the participating nurses had a negative attitude toward patients with depression. This was supported by a study done with community facilitators and nurses, which also reflected less favorable attitudes regarding depression (Scheerder et al., 2011). Another research done in Lagos, Nigeria also found negative attitudes of primary healthcare workers toward patients with depression (Adewuya et al., 2017). Likewise, 60% of nurses had insufficient knowledge, and 56% of nurses had a negative attitude toward treating patients who were depressed (Kumar & Shoba, 2014). In Bangalore, India, when managing patients with depression, a majority of 35 (58.33%) had a moderately favorable attitude; 18 (30%) had a negative attitude; and just 7 (11%) had a good attitude (Chopade, 2017). However, a study done in the Philippines had contradictory results regarding the attitudes of nurses, where the authors stated that the nurses' scores were higher overall on attitudes toward the functioning and prognosis of depressed patients, indicating that they held positive attitudes toward patients with depression (Cruz & Mariano, 2019). Another study conducted among advanced practice nursing students found that they had sufficient knowledge and attitude toward depression (Delaney & Barrere, 2012).

There had been very limited research studies that focused on the knowledge and attitude of nurses without a psychiatric-mental health nursing background. Evidence suggests that the mental health field is still stigmatized, even among healthcare professionals. Although healthcare professionals have knowledge regarding depression, there is an absence of positive attitudes among healthcare workers. With depression on the rise at an alarming rate, it is important for healthcare professionals, including nurses, to adopt a culture of acceptance toward patients who are depressed. This is applicable to nurses from a non-psychiatric background who should be equally equipped to manage patients with depression using adequate skills and competencies. This area could be highlighted and worked on while continuous medical education is provided by the facilities' human resources and training departments.

Strengths and Limitations

The present study has several notable strengths. Firstly, it involved a substantial number of participants ($n = 400$). Secondly, a validated paper-based, self-reported, and structured questionnaire was utilized, which was developed based on previously published studies. Additionally, the sampling process encompassed various hospitals, departments, and cities, ensuring the inclusion of nurses from different levels. The study includes several limitations. We used a convenient sampling technique, which might affect the generalizability of the results. In addition, the use of a

Table 3. Attitude of the Participants toward Depression ($n = 400$).

Items	Scales			
	Yes	No	Do not know	
	n (%)	*n* (%)	*n* (%)	MS
During the last 5 years I have seen an increase in the number of patients presenting with depressive symptoms	10 (2.5)	178 (44.5)	212 (53)	2.51
The majority of depression cases I see originated from recent misfortune	6 (1.5)	15 (3.8)	379 (94.8)	2.93
Most depressive disorders improve without medication	45 (11.3)	221 (55.3)	134 (33.5)	2.22
Biochemical abnormality is at the basis of more severe depression	57 (14.2)	40 (10)	303 (75.8)	2.62
Difficult to differentiate unhappiness or a clinical depressive disorder that needs treatment	47 (11.8)	158 (39.5)	195 (48.8)	2.37
It is possible to distinguish two groups of depression, one psychological in origin and the other caused by biochemical mechanisms	117 (29.3)	49 (12.3)	234 (58.5)	2.29
Depressed patients are more likely to have experienced deprivation in early life than other people	7 (1.8)	19 (4.8)	374 (93.5)	2.92
I feel comfortable dealing with depressed patients	11 (2.8)	229 (57.3)	160 (40)	2.37
Becoming depressed is a natural part of becoming old	57 (14.2)	243 (60.8)	100 (25)	2.11
The primary health care worker could be a useful person to support depressed patients	9 (2.3)	24 (6)	367 (91.8)	2.90
There is little to be offered to depressed patients who do not respond to what primary health care workers do	15 (3.8)	94 (23.5)	291 (72.8)	2.69
It is rewarding to spend time looking after depressed patients	2 (0.5)	1 (0.3)	397 (99.3)	2.99
If depressed patients need antidepressants, they are better off with psychiatrists than with primary health care workers	34 (8.5)	11 (2.8)	355 (88.8)	2.80
Antidepressants usually produce a satisfactory result in the treatment of depressed patients in general practice	52 (13)	119 (29.8)	229 (57.3)	2.44
Depressed patients can be managed or treated with exorcism methods	105 (26.3)	274 (68.5)	21 (5.3)	1.79
Psychotherapy for depressed patients should be left to a specialist	12 (3)	16 (4)	372 (93)	2.90
If psychotherapy were freely available, this would be more beneficial than antidepressants for most depressed patients	55 (13.8)	14 (3.5)	331 (82.8)	2.69
Patients with depression are discriminated in by the general public and avoided	38 (9.5)	195 (48.8)	167 (41.8)	2.32

Table 4. Factors Associated with Score of Knowledge and Attitude toward Depression ($n = 400$).

Variables	Items	Number	Knowledge				Attitude			
			MS	SD	T\F	*P*-Value	MS	SD	T\F	*P*-Value
Gender	Male	175	5.47	1.12	0.89[b]	.345	4.88	1.80	6.77[b]	.010[a]
	Female	225	5.36	1.17			5.36	1.83		
Marital status	Single	151	5.58	1.15	3.16[c]	.044[a]	5.19	1.70	1.02[c]	.903
	Married	238	5.29	1.16			5.13	1.89		
	Widow/er	11	5.61	0.65			5.00	2.44		
Level of education	Diploma	209	5.41	1.16	2.01[c]	.818	5.08	1.76	1.67[c]	.188
	Bachelor	163	5.38	1.06			5.32	1.83		
	Master and above	28	5.53	1.52			4.71	2.29		
Work place	Emergency	110	5.35	1.20	1.28[c]	.276	5.27	1.78	0.59[c]	.665
	Medical ward	104	5.58	1.12			4.93	1.88		
	Surgical ward	54	5.42	1.10			5.22	1.93		
	Operation room	18	5.00	1.18			5.00	2.56		
	Others	114	5.36	1.14			5.23	1.67		
Place of residence	Sulaymaniyah	200	5.35	1.22	0.994[b]	.319	5.09	1.94	0.499[b]	.480
	Erbil	200	5.47	1.07			5.22	1.72		
Age		31.57 ± 8.59	$R = -0.012$[d]			.810	$R = 0.042$[d]			.397
Work experience		7.53 ± 7.45	$R = -0.023$[d]			.652	$R = -0.021$[d]			.682

[a]Significant.
[b]Independent sample *t*-test.
[c]One-way ANOVA test.
[d]Pearson correlation test.

Table 5. Univariate Logistic Regression Analysis to Evaluate the Predictive Factors Associated with High Knowledge and Attitude toward Depression ($n = 400$).

	Knowledge				Attitude			
Items	OR	95% CI		*P*-Value	OR	95% CI		*P*-Value
Age (50+ as ref.)								
20–29 years	5.60	0.25	125.65	.278	1.22	0.13	11.53	.858
30–39 years	1.75	0.11	28.11	.690	1.50	0.19	11.68	.695
40–49 years	0.74	0.13	4.19	.740	0.65	0.18	2.27	.0505[a]
Gender (Female as ref.)								
Male	1.35	0.67	2.73	.394	0.51	0.30	0.86	.012[a]
Marital status (Widow/er as ref.)								
Single	1.25	0.13	12.06	.843	0.63	0.15	2.56	.526
Married	0.95	0.10	8.93	.970	0.80	0.21	3.06	.752
Educational level (Post-graduate as ref.)								
Diploma	0.83	0.18	3.68	.811	0.99	0.31	3.20	.998
Bachelor	0.61	0.14	2.66	.512	1.62	0.52	5.02	.398
Work place (Another dep. as ref.)								
Emergency dep.	0.71	0.27	1.88	.501	1.27	0.65	2.49	.476
Medical ward	1.34	0.55	3.29	.515	0.97	0.48	1.93	.934
Surgical ward	1.46	0.47	4.54	.507	1.25	0.54	2.88	.591
Operation room	1.08	0.20	5.79	.926	1.20	0.36	3.92	.762
Residence (Sulaymaniyah as ref.)								
The capital Erbil	10.57	0.54	206.94	.120	1.26	0.12	12.06	.835
Year of working (21+ as a ref.)								
1–5 years	0.22	0.01	5.19	.351	0.31	0.03	2.61	.282
6–10 years	0.42	0.02	7.94	.567	0.30	0.04	2.24	.242
11–15 years	1.08	0.07	16.22	.951	0.34	0.05	2.29	.268

OR: odds ratio; CI: confidence interval; vs.: versus.
[a]Significant.

self-reported questionnaire is a source of potential bias as the parents might respond in a socially acceptable way.

Implication for Nursing Practice

The findings of this study suggest that non-psychiatric nurses in the Kurdistan Region of Iraq have insufficient knowledge and skills in the identification and management of depression. This is concerning as nurses are the largest profession in healthcare and play a significant role in the care of patients with mental health disorders. The study's results underscore the need for immediate improvement in the training of non-psychiatric nurses on depression. Customized training programs, specialized workshops, and ongoing education focused on evidence-based practices are essential to enhancing nurses' abilities to effectively identify and manage depression in patients.

Conclusion

According to the results of this study, nurses have insufficient awareness and management skills for depression. It has been experienced and reported that nurses lack knowledge and an attitude toward depression management. It is essential to provide nurses with rudimentary mental health awareness at various levels of education and in practice. Enhancing nurses' awareness of depression assessment approaches will improve their knowledge, attitude, and decision-making process. In light of the identified deficiencies in nurses' awareness and management skills concerning depression, prospective research endeavors should concentrate on designing, implementing, and rigorously evaluating targeted mental health awareness initiatives within nursing education and professional development frameworks. This proposed research aims to empirically assess the effectiveness and ascertain the impacts of bespoke mental health education programs tailored to address the identified gaps in nurses' proficiency regarding depression management. A longitudinal investigation is warranted to longitudinally track the sustained effects and challenges associated with the integration of these educational interventions across diverse healthcare settings. Additionally, employing qualitative methodologies to capture nurses' perceptions, experiences, and the practical application of acquired knowledge in depression assessment would provide valuable insights indispensable for refining and optimizing future educational strategies. Such scholarly pursuits hold promise for contributing substantively to the enhancement of nurses' competence and proficiency in effectively addressing depression within clinical settings.

Table 6. Multivariate Logistic Regression Analysis to Evaluate the Predictive Factors Associated High Knowledge and Attitude toward Depression ($n = 400$).

	Knowledge				Attitude			
Items	AOR	95% CI		*P*-Value	AOR	95% CI		*P*-Value
Age (50+ as ref.)								
20–29 years	–	–	–	–	–	–	–	–
30–39 years	–	–	–	–	–	–	–	–
40–49 years	–	–	–	–	–	–	–	–
Gender (Female as ref.)								
Male	–	–	–	–	0.573	0.348	0.942	.028[a]
Marital status (Widow/er as ref.)								
Single	–	–	–	–	–	–	–	–
Married	–	–	–	–	–	–	–	–
Educational level (Post-graduate as ref.)								
Diploma	–	–	–	–	–	–	–	–
Bachelor	–	–	–	–	–	–	–	–
Work place (Another dep. as ref.)								
Emergency dep.	–	–	–	–	–	–	–	–
Medical ward	–	–	–	–	–	–	–	–
Surgical ward	–	–	–	–	–	–	–	–
Operation room								
Residence (Sulaymaniyah as ref.)	–	–	–	–	–	–	–	–
The capital Erbil	8.25	0.46	145.11	.149	–	–	–	–
Year of working (21+ as a ref.)								
1–5 years	–	–	–	–	0.49	0.17	1.43	.197
6–10 years	–	–	–	–	0.60	0.19	1.87	.386
11–15 years	–	–	–	–	0.60	0.17	2.05	.422

AOR: adjusted odds ratio; CI: confidence interval; vs.: versus.
[a]Significant.

Recommendations

Based on the study's findings, which revealed a significant gap in nurses' awareness and practical skills related to depression management, there exists a pressing need to augment existing training programs. These programs should be tailored to equip nurses with comprehensive knowledge and enhanced competencies in identifying, assessing, and effectively managing depression in clinical settings. Implementing specialized workshops and ongoing education initiatives focusing on evidence-based practices and the latest advancements in mental health interventions is crucial. Furthermore, fostering a supportive ecosystem within healthcare institutions, encouraging interdisciplinary discussions, and facilitating continuous learning opportunities among healthcare professionals can significantly contribute to creating a culture that prioritizes and strengthens expertise in depression management, ultimately leading to improved patient care quality and outcomes.

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Data Availability Statement

All data generated or analyzed during this study are included in this article and available on request to the corresponding author.

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