



Depressive Symptoms among Nurses who Working in Pediatric Wards

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Abstract Background: Nurses are nearly twice as likely as other professionals to experience depression. Major depression has an impact on both employees and organizations. Depression can lead to increased job absenteeism, short-term incapacity, lower productivity, and presenteeism. **Objectives:** To estimate the incidence of depressed symptoms among nurses of pediatric wards, to describe the range of depressive symptoms experienced by the nursing sample, and to examine factors associated with persistent depressive symptoms. **Methods:** A cross-sectional study of (119) nurses aged between 20 and 50 years, working in pediatric wards in six hospitals (Mosul General Hospital, Ibn Alatheer Hospital, Alkhansaa Hospital, Alsalam teaching Hospital, Albatool teaching Hospital, Ibn-sina Hospital) in Mosul city, Iraq. For the period from 1st November 2024 to 5th January 2025. Depressive symptoms and risk factors were assessed by using developed scale Zung's Self-Rating Depression Scale. **Findings:** The study results show that the largest proportion of samples belong to the age group 25-29 years, and the highest percentage of the participant is female (59%). Regarding education, the table presents that the highest percentage of nurses (43%). The table show feeling and positive symptoms p-value 0.000, Moderately Depressed, and feeling and negative symptoms p-value 0.017 severely depressed. **Conclusion:** The study proves a considerable correlation between depression symptoms and job demands/resources. Critical care nurses reported depression symptoms such as fatigue, motor difficulties, and hunger issues. Paying attention to these indicators may aid in identifying depression among critical care nurses. **Recommendations:** Suggested a healthy sleep pattern, effective stress management involves healthy coping mechanisms. Regular self-care activities include exercise, meditation, and yoga.

Key Words Depressive symptom, Nurses, Pediatric wards

INTRODUCTION

Depression is a condition of emotional distress that impacts personal relationships. It is marked by persistent negative thoughts, a desire for isolation, feelings of hopelessness, sadness, exhaustion, insomnia, trouble focusing, anxiety, intense fear, guilt, and changes in both sleep patterns and appetite [1]. Nursing is a demanding and high-pressure profession due to various factors. Constant interaction with patients, the responsibility for safeguarding their health, performing medical procedures, facing the reality of caring for terminally ill patients, managing emergencies and unpredictable scenarios, dealing with high noise levels in the workplace, and irregular shift schedules are some of the key stressors that affect those in the nursing field [2]. Workplace

challenges such as high stress levels, overwhelming clinical duties, and job-related stress significantly threaten nurses' mental health. Additionally, nurses often face various life events, including illness, trauma, and death, which further affect their physical and emotional well-being. Beyond influencing their health, the psychological state of nurses also directly impacts the quality of care they provide to patients in a hospital environment [3]. Clinical nurses are particularly susceptible to depression and other negative emotions, as well as psychological issues, due to the demanding nature of their work over long periods. A survey conducted on the prevalence of depressive symptoms among nurses in China found similar results [4]. In the study, 43.83% of the participants reported experiencing depressive

symptoms, with 31.12% of them experiencing mild depression. Another survey found that 30.1% of nursing home staff were affected by depressive symptoms [5]. Depression is a mood disorder, depression is characterized by feelings of sadness, loss, or anger that disrupt a person's daily activities. Individuals experience depression in various ways, and it can affect work performance, leading to missed time and decreased productivity. Additionally, depression can impact personal relationships and exacerbate certain chronic health conditions [6]. Depression impacts both individual employee performance and overall organizational productivity. It is associated with higher rates of absenteeism, short-term disability, and reduced productivity, as well as presentism. Employees dealing with depression may experience impaired decision-making, which can lead to significant workplace accidents. It is estimated that depression contributes to the loss of 200 million workdays annually [7]. Depressive symptoms not only harm nurses' health but also have a negative impact on their job performance and the quality of care they deliver [8]. Depressive symptoms significantly diminish a person's quality of life and overall life satisfaction. Nurses are particularly vulnerable to mental health issues, including depression. Depressive symptoms significantly diminish a person's quality of life and overall life satisfaction. Nurses are particularly vulnerable to mental health issues, including depression [9]. A meta-analysis revealed that around 30% of nurses working during the COVID-19 pandemic experienced psychological symptoms, such as anxiety, stress, and depression, with prevalence rates of 37%, 43%, and 35%, respectively [10]. most current research on nurses' depressive symptoms has primarily focused on the link between depression and negative physical and psychological outcomes, such as perceived stress [11], Burned out [12], chronic fatigue [13], sleep quality [14], medication error [14] and reduced quality of care for patients are key issues [15]. In China, there is a lack of an effective supervision system and organizational framework to assist nurses in managing negative psychological health. Instead, the focus has been primarily on improving nurses' professional skills and qualifications. Recently, however, there has been increasing recognition of the importance of nurses' career identity and organizational support in helping them cope with occupational stress, reduce their workload, and prevent depression [16].

METHODS

A cross-sectional survey was conducted with 119 nurses aged 20-50 years working in pediatric wards at six hospitals in Mosul city, Iraq (Mosul General Hospital, Ibn al-Atheer Teaching Hospital, Al-Khansaa Teaching Hospital, AL Salam Teaching Hospital, Al-Batol Teaching Hospital, and Ibn-sina Teaching Hospital) from November 1, 2024, to January 5, 2025. Depressive symptoms and risk factors were assessed using the Zung Self-Rating Depression Scale

(SDS). The participants were chosen randomly by the researcher within the hospitals, every nurse included in the study provided informed consent, Inclusion criteria nurses with high risk factors aged between (20-50) years old and nurses with depressive symptoms. Exclusion Criteria the pilot study participants were excluded from the final analysis. Nurses below 20years and those above 50 years old. Nurses with less than six months of experience. Anyone who did not wish to participate was excluded. The Zung Scale of Self-Rating Depression grade ranged from 25 to 100, with the following classifications: (25 to 49) indicates a normal range, (50 to 59) suggests mildly level, 60-69 represents moderately level, and scores of 70 and above indicate severely level of depression. Data collected an interview was conducted to fill out the questionnaire. some nurses filled the questionnaire on their own. and the researcher or their companions provided assistance to participants who were illiterate. the taken time for each participants is (15-20 minutes) to complete the questionnaire. the questionnaire consisted of 2 part. The initial section collected demographical features, while the second part designed for assess depressive symptoms using a 5-point Likert scale (1 = never, 2 = seldom, 3 = occasionally, 4 = frequently, and 5 = usually). The validity and content of the study instruments were confirmed by presenting them to a panel of 14 experts from various fields. To measure The instrument's internal consistency was assessed using Cronbach's alpha test, yielding a finding of ($r = 0.78$). Descriptive statistical data evaluation conducted using (SPSS) version 27.

RESULTS

Table 1 indicates that the largest percentage of age groups was 35%, falling between the age (25-29) and the percentage of age categories was (20%) between age (30-34). The table also shows that for participants, the percentage of females was (59%), while the percentage of males was (41%). The table also shows the participant from the rural was (20%) and from urban was (80%). Housing type shows own their homes was 72% and people had rent house was 28%.the table also shows the percentage of marital status as single was 16% and married was 75% and divorced was 3% and a widower was 6%.

Table 3 appeared the feeling and the negative symptoms. and the nurse's response. also show the degree of the depression for each question and at the macro level the nurses being severely depressed mean of percentage 3.07, the p-value 0.017.

DISCUSSION

The participants in this study were 119 nurses who visited the pediatric wards of six hospitals in Mosul city. Their age was ranged between 20-50 years old. The findings It show a largest percentage of the participant (35%) the group of 25-29 years old (Table 1, 2). This is considered a good

Table 1: Distribution of the participants according to their demographical characteristic (N = 119)

Demographical data	Categories	No.	%
Age	20-24	16	13
	25-29	41	35
	30-34	24	20
	35-39	12	10
	40-44	15	13
	45 and more	11	9
Gender	Male	49	41
	Female	70	59
Place of Residence	Rural	24	20
	Urban	95	80
Housing Type	Ownership	86	72
	Rent	33	28
Marital Status	Single	19	16
	Married	89	75
	Divorced	4	3
	A widower	7	6
Profession	Wife profession	Employee	20
		Not employed	29
	Husband profession	Employee	67
		Not employed	3
Family Members number	1-5	69	58
	6-10	50	42
Educational level	Nursing Preparatory School	18	15
	Diploma (Technician nurse)	51	43
	Bachelors (University nurse)	47	40
	Master	3	2
	Ph. D	0	0
Service Years (Ys)	5 years or fewer	61	51
	6-10	16	14
	11-15	19	16
	16-20	17	14
	21 years and over	6	5
Daily Working Hours (Hs)	6 hours	38	32
	7 hours	60	50
	8 hours every 3 day 1	21	18
The name of the hospitals where you work	Alsalam	8	7
	Ibn ceina	17	14
	Albatool	13	11
	Mosul general	18	15
	Ibn alatheer	41	34
	Alkhansaa	22	19
The workplace is inside the hospital	Children lounges	55	46
	Emergency unit	26	22
	Intensive care unit	12	10
	Neonatal unit	26	22
Monthly income	Less or equal to 500 thousand	27	23
	600-1000000	73	61
	More than 1000000	19	16

result, as it allows for a deeper understanding of his symptoms and enables him to describe them more clearly than other age groups. Additionally, it is a preferable age group because they fill out questionnaires by self-report, so the answers are more accurate. These findings supported by a study they found nurse's participant age group (22-30) highest percentage of the sample [17]. Regarding the study participants' gender. The results demonstrated that approximately male n49 (41%), female n70 (59%). This result compatible with study found Half of the study participants were male (11.2%), while the majority of the participants were females (88.8%). Thus, analysis of the

sample characteristics ensures the equivalence of both males and females who participated in the study woman more than male (2.2) while female (97.8) [18]. Concerning the study participants' place of residence. The results illustrated that more than half of the sample participants are residence in urban area of the Mosul city was highest percentage (80%) while the rural (20%) (Table 1). This result is due to the proximity of the distance and the low cost of transportation within the city, and to estimate the nurses lived in poor areas, this result incompatible with study found Place of residence in urban was percentage (47%) [19].

Table 2: The Study participants' responses to Zung self-Rating depression scale (the positive feelings and symptoms)

Paragraph	Response scale										One sample t test			Degree of depression
	Always (5)		Most times (4)		Sometime s (3)		Rarely (2)		Never (1)					
	No	%	No	%	No	%	No	%	No	%	Mean	Statistic	p-value	
Q1	26	22	27	23	22	19	28	24	16	13	3.16	1.276	0.205	Moderately Depressed
Q2	34	28	26	22	32	27	13	11	14	12	3.45	3.665	0.000	Mildly Depressed
Q3	28	24	28	24	30	25	20	17	13	11	3.32	2.677	0.008	Moderately Depressed
Q4	20	17	35	29	36	30	16	13	12	10	3.29	2.683	0.008	Moderately Depressed
Q5	31	26	30	25	36	30	12	10	10	8	3.50	4.507	0.000	Mildly Depressed
Q6	17	14	24	20	43	36	13	11	22	19	3.01	.072	0.943	Moderately Depressed
Q7	16	13	27	23	39	33	18	15	19	16	3.03	.220	0.826	Moderately Depressed
Q8	31	26	41	35	26	22	9	8	12	10	3.59	5.184	.000	Mildly Depressed
Q9	31	26	30	25	35	29	10	8	13	11	3.47	4.049	.000	Mildly Depressed
Q10	15	13	18	15	31	26	8	7	47	40	2.55	3.404	.001	Moderately Depressed
At the macro level														
Mean of percentage	20.9		24.1		27.6		12.4		15.0		3.24	4.581	0.000	Moderately Depressed

The results of this study also shown that were significant depressive symptoms in nurses, Table 2 show the total mean of percentage of 3.24, moderately depressed. The result found first item nurses answer on my mind is as clear as it used to be the mean of percentage 3.16 moderately depressed. this study is disagreeing with study they found confusion, was 3.28 (3.22-3.33). Factor II seems to represent symptoms associated with trouble focusing or making decisions, confusion or a lack of mental clarity, and psychomotor slowing retardation [20]. Regarding psychomotor ("I find it simpler to do things I'm accustomed to), mean 3.45, mildly depressed this result in compatible with study found mean score 3.29 (3.24-3.34) Psychomotor retardation has been characterized as a major feature of depression since antiquity. Concerning Factor I. "Core Depressive, Hopelessness; I feel hopeful about the future, the mean 3.32, moderately depressed. This not line with study found not at all no 200 (79.4%), several days' no 43 (17.1%), more than half the day's no 7 (2.8%), nearly every day no 2 (0.8) [21]. In other hand, factor II "Cognitive, Indecisiveness; I find it easy to make decisions, The mean 3.29, moderately depressed, this result compatible with study found trouble concentrating on things, such as reading the newspaper or watching television, not at all n 182 (72.2%), several days' n 34 (13.5%), more than half the day's n 27(10.7%) nearly every day n9 (3.6%) [21]. Regarding "Core Depressive" Personal devaluation (I feel useful and people need me) the mean 3.50, mildly depressed, this result incompatible with study found feeling bad about yourself or that you are a failure, not at all no217 (86.1), several days no24

(9.5%), more than half the days no8 (3.2%), nearly every day n 3 (1.2). Regarding Core Depressive" Emptiness; (My life is pretty full) the mean 3.01, moderately depressed, this result compatible with study found emptiness mean score 3.02 (2.96-3.07). Regarding core depressive dissatisfaction; (I still enjoy the things I used to do), the mean 3.03, moderately depressed, this result compatible with study found the score mean 2.82 (2.76-2.88) [19]. In other hand, diurnal variation; (Morning is when I feel the best), the mean 3.59, mildly depressed, this result incompatible with study found score mean 2.99 (2.93-3.06) [19]. Regarding Somatic, decreased appetite; (I eat as much as I used), the mean 3.47, mildly depressed, this result incompatible with study found score mean 2.72 (2.66-2.79) [19]. Regarding core depressive, decreased libido; (I still enjoy sex), the mean score 2.55, moderately depressed, this result compatible with study found mean score 2.99 (2.92-3.06) [19].

Table 3, show result, at the macro level feeling and negative symptoms mean of percentage 3.07, the p-value 0.017 severely depressed the nurses appear depressive symptoms, regarding Core Depressive" Item 1: Depressed mood; (I feel sad and hopeless) the mean 2.5798, moderately depressed, this result incompatible with study found depressed affect 3.01 (2.96-3.06) [13]. Concerning the frequency of Crying episodes (I experience moments of crying or feel the urge to cry), the mean 3.4538, severely depressed, this result incompatible with study found crying spells 2.68 (2.62-2.73). Regarding anxiety, sleep disturbance, (I have difficulty sleeping at night), the mean 3.3950, severely depressed, this result compatible with study found difficulty falling asleep or staying asleep, or sleeping

Table 3: The study participants' responses to Zung self-Rating depression scale (the negative feelings and symptoms)

Paragraph	Response scale										One sample t test			Degree of depression
	Always (5)		Most of time (4)		Some times (3)		Rarely (2)		Never (1)					
	No	%	No	%	No	%	No	%	No	%	Mean	Statistic	p-value	
Q1	5	4	6	5	63	53	24	20	21	18	2.5798	4.684	0.000	Moderately Depressed
Q2	6	5	15	13	42	35	31	26	25	21	3.4538	4.458	0.000	Severely Depressed
Q3	6	5	21	18	41	35	22	19	29	24	3.3950	3.650	0.000	Severely Depressed
Q4	9	8	14	12	32	27	33	28	31	26	3.5294	4.761	0.000	Severely Depressed
Q5	4	3	9	8	40	34	27	23	39	33	2.2605	7.330	0.000	Moderately Depressed
Q6	3	3	16	13	39	33	32	27	29	24	3.5714	5.782	0.000	Severely Depressed
Q7	10	8	22	19	51	43	24	20	12	10	3.0504	0.517	0.606	Moderately Depressed
Q8	12	10	21	18	38	32	15	13	33	28	2.6975	2.503	0.014	Moderately Depressed
Q9	18	15	30	25	43	36	14	12	14	12	2.7983	1.848	0.067	Moderately Depressed
Q10	9	8	15	13	32	27	19	16	44	37	2.3782	5.211	0.000	Moderately Depressed
Q11	7	6	21	18	46	39	22	19	23	19	2.7227	2.649	0.009	Moderately Depressed
Q12	6	5	27	23	34	29	27	23	25	21	2.6807	2.938	0.004	Moderately Depressed
Q13	4	3	22	19	37	31	25	21	31	26	2.5210	4.492	0.000	Moderately Depressed
Q14	6	5	22	19	39	33	17	14	35	29	3.4454	3.940	0.000	Severely Depressed
Q15	4	3	28	24	33	28	16	13	38	32	3.4706	4.093	0.000	Severely Depressed
Q16	9	8	18	15	22	19	20	17	50	42	3.7059	5.709	0.000	Severely Depressed
Q17	9	8	19	16	28	24	19	16	44	37	2.4118	4.824	0.000	Moderately Depressed
Q18	7	6	22	19	26	22	25	21	39	33	3.5630	4.799	0.000	Severely Depressed
Q19	9	8	14	12	38	32	25	21	33	28	3.4958	4.407	0.000	Severely Depressed
Q20	4	3	20	17	36	30	20	17	39	33	3.5882	5.333	0.000	Severely Depressed
At the macro level														
Mean of percentage	6.10		16.20		32.00		19.30		26.40		3.07	2.416	0.017	Severely Depressed

excessively, or not sleeping at all n178 (70.6%), several day n40 (15.9%), Over half of the days n23 (9.1%), Almost every day n11 (4.4%) [21]. Sleep disturbance incompatible according with study found the score mean 2.96 (2.90-3.02). Regarding somatic, Weight reduction (I observe that I'm losing weight), the mean 3.5294, severely depressed, this result incompatible with study found the score mean 1.73 (1.67-1.79). Regarding Constipation (I suffer from constipation), the mean 2.2605, moderately depressed, this result incompatible with study found (the score mean 1.99 (1.92-2.05). Regarding somatic, Tachycardia, (My heart beats faster than usual), mean 3.5714, severely depressed, this result incompatible with study found the score mean 2.23 (2.17-2.29). Regarding Cognitive Item 7: Tiredness; (I feel exhausted without any apparent reason), the mean 3.0504, moderately depressed, this result incompatible with study found the score mean 2.87 (2.82-2.93). Concerning Anxiety” Irritation; (I am more easily annoyed than usual), mean 2.6975, moderately depressed, this result compatible with study found the score mean 2.62 (2.56-2.68). Regarding Anxiety” Psychomotor restlessness; (I feel uneasy and can't stay in one place), mean 2.7983, moderately depressed, this result compatible with study found the score mean 2.54 (2.48-2.60). Regarding core depressive Item 10: Suicidal rumination; (I often think that others would be happier or better off if I weren't alive), mean 2.3782, moderately depressed, this result incompatible with study found the score mean 1.63 (1.57-1.79) [18]. Regarding internal factors (I did not seem to be able to feel positive emotion), mean 2.7227, moderately depressed, this result incompatible with study found exhaustion (0.807), This study discovered a

major link between exhaustion and depression manifestations, showing that high level of burnout related to more severe symptoms [22]. Regarding physical activity (I found it difficult to take initiative in doing things), mean 2.6807, moderately depressed, this result compatible with study found lower 1.51 and upper 3.78 Physical activity level and aOR 2.383 [23]. Regarding (I felt like I did not have anything to look forward to), mean 2.5210, p-value 0.000, moderately depressed, this result incompatible with study found feeling sad, depressed and without hope OR adjusted 2,16, CI95% (0,82-5,66), p* value 0,118 [24]. Regarding (I felt sad, distressed and lonely), mean 3.4454, p-value 0.000, severely depressed, this result compatible with study found anhedonia, a core feature of depression). Regarding, (I felt like I had little value as a person), mean 3.7059, severely depressed, this result incompatible with result Personal devaluation the score mean 2.71 (2.65-2.77) [25]. Regarding (I felt like life had no meaning), mean 2.4118, moderately depressed, this result, unfortunately, there are no previous research data to support this finding. Regarding, speech, (I felt like talking less than usual), (I was speaking more slowly than usual), nurses talk less, mean 3.5630, severely depressed, this result, unfortunately, there are no previous research data to support this finding, speaking more slowly than usual), mean 3.4958, severely depressed, this result, unfortunately, there are no previous research data to support this finding, my opinion's isolation effect on appearance of depressive symptoms appearance make them talk more slowly and less than usual. Regarding,

(I thought bad things would happen to me), mean 2.4118, severely depressed, this result, unfortunately, there are no previous research data to support this finding. Regarding the macro level of feeling and negative symptoms.

CONCLUSIONS

Pediatric nurses may experience depression owing to insufficient sleep, long work hours, and poor physical health. This finding can inform the development of intervention approaches to avoid depression and depressed symptoms among nurse's team at Mosul hospital. Healthcare practitioners with a feminine gender, unmarried status, family history of mental illness, and current substance use were much more likely to have depressive symptoms. Therefore, they require urgent screening and management at a healthcare facility.

Limitations

The study suggested regular physical activity impacts mental health and maintain well-being as a primary treatment or in conjunction with medication/therapy, also healthy food is medicine, and research underscores the significant impact of nutrient-rich diets on mental health. Diet and nutrition can impact the symptoms of mental health conditions and the risk for them, creating and maintaining social connections contributes to broad enhancement of psychological well-being and health and can help in preventing and alleviating psychiatric symptoms, it is advised that nursing management encourage critical care workers to identify their "meaning in work", apply resilience-building activities for nurses, foster meaningful relationships and support, and foster a harmonious and supportive workplace culture.

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Conflicts of Interest

No conflict of interest has been noted.

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