POINT PREVALENCE OF DEPRESSION, ANXIETY AND STRESS AMNOG NURSES AND PARA-MEDICAL STAFF IN TEACHING HOSPITALS IN MOSUL [+]

انتشار اعراض الاكتآب والقلق والكرب عند الممرضين والفنيين الصحيين في المستشفيات التعليميه في مدينة الموصل

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Abstract:

Symptoms of mental illness greatly vary dependent upon the specific disorder, but may include mild to chronic forms of distress, depression, anxiety, emotional disturbance, difficulties with attention, loss of cognitive abilities, maladaptive behavior, or the presence of hallucinations or delusions. This descriptive study was conducted throughout the period between (1rst) October (2006) to (15th) August (2007) to identify the prevalence of depression, anxiety and stress among sub-medical staff in Mosul Teaching Hospitals. The sample of the study were convenience, consisted of two groups: Nurses (250) and Paramedical staff (250); X-Ray personnel, Laboratories personnel, pharmacists and Physiotherapists working in Teaching Hospitals . International scale (DASS) was depended to identify the mental disorders. Data were collected through interview method with the subjects. Mean of score, Frequency and Percentage were used as statistical methods to analyze the data obtained. Almost of the items of the scale for the three disorders were excellent, (16%) of nurses were depressed while (7.6%) of the paramedical staff were depressed; (20.8%) of nurses were anxious while (7.6%) of the paramedical staff were anxious; (10%) of nurses were stressed while (6%) of the paramedical staff were anxious. The study concluded that there are more chances of exposure to psychological disorders among nurses than among other health personnel. It recommended that development of nurses and sub-medical personnel, relationship, communications with patient's family and community,; financially, psychologically and legally may be undertaken.

Key Words: Point prevalence, Depression, Anxiety, Stress, Nurses, Para-medical Staff

المستخلص:

تتغير أعراض المرض العقليِ اعتمادا على الاضطراب الحاصل، لكن قد تتراوح بين شكل بسيط إلى شكل مزمن من الشد النفسي، الكآبة، القلق، الاضطراب العاطفي، صعوبات الانتباه، خسارة القدرات الإدراكيـــة ، الـــسلوك غيـــر المتكيف، أَو الشكوى من الهلوسةِ أَو الأوهامِ.

أجريت هذه الدراسة الوصفية للفترةِ (الأول من أكتوبر/تـــشرين الأولِ ٢٠٠٦ إلـــى الخـــامس عـــشرِ مـــن أغسطس/آب ٢٠٠٧) للتعرف على انتشار الكآبة والقلق والشد النفسي بـــين الملاكـــات الطبيـــة المـــساعدة فـــي مستشفيات الموصل التعليمية. شملت العينة الملاكات المتواجدة حال الدراسة، وشملت مجموعتان: الملاك التمريضي

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(٢٥٠) والملاكات شبه الطبية (٢٥٠): المصورين الشعاعيين والعاملين في المختبرات ومساعدي الصيادلة والمعالجين الطبيعيين من العاملين في المستشفيات التعليمية. وتم اعتماد المقياس الدولي (دي أي إس إس) لتحديد الاضطرابات العقلية. وتم جمع البيانات خلال طريقة المقابلة، وتم استخدام معدل وسط الفقرة والتكرار والنسبة المئوية كطرق إحصائية. لتحليل البيانات المستحصلة.

كانت معظم فقرات المقياس المستخدم وللاضطرابات الثلاثة ممتازة، حيث يشكو (١٦ %) من الملاك التمريضي و(٧,٦%) من الملاكات شبه الطبية من الكآبة؛ ويشكو (٢٠,٨ %) من الملاك التمريضي و(٧,٦%) من الملاكات شبه الطبية من القلق؛ في حين يشكو (١٠%) من الملاك التمريضي و(٦%) من الملاكات شبه الطبية من الشد النفسي. استنتجت الدراسةُ بأنّ تعرض الملاكات التمريضية إلى الاضطرابات النفسية أكثر من الملاكات الطبية المساعدة الأخرى، وتوصي الدراسة بتطوير الملاكات التمريضية والطبية المساعدة الأخرى، العلاقات، الاتصالات مع عائلة المريض والمجتمع؛ مالياً، نفسياً وقانونيا.

Introduction:

A work hazard is an aspect of the work situation, or an event, which carries the potential for harm. Work hazards can be broadly divided into: (1) the physical " biomechanical, chemical, microbiological and radiological", and (2) the psycho-social. Psycho-social hazards are those which relate to the interactions among job content [1], work organization [2], management systems [3], environmental and organizational conditions [4] and the health workers' competencies and needs. Those interactions have hazardous influence on workers' health through their perceptions and experience. Exposure to both types of hazards may threaten psychological and physical health [5].

Customarily, work influences mental well-being. Quality of medical care is dependent upon the mental well-being of health care professionals. Determination the factors of stress in job is important in diagnosis, treatment and prevention. Depression, anxiety and psychological distress have been shown to be elevated in individuals working in high stress jobs [6]. Health and Safety Executive (1999) define work-related stress as: "The reaction people have to excessive pressure or other types of demands placed upon them. It arises when they worry that they can't cope" [7]. Hospitals in particular are facing a workforce crisis. The demand for acute care services is increasing concurrently with changing career expectations among potential health care workers and growing dissatisfaction among existing hospital staff [8]. From another side depression within the nursing community is a major problem [9].

This study aimed to identify the prevalence of depression, anxiety and stress among sub-medical staff in Mosul Teaching Hospitals.

Methodology:

A descriptive design was depended to achieve the aim of the study for the period 1^{rst} October 2006 to 15th August 2007. The study sample composed of two categories; Paramedical staff except nurses that composed of (250) subjects taken from many specialties (X-ray, laboratory, pharmacy and physiotherapy), and equal number of nurses (250) selected randomly (convenience) during pointed two days weekly through the period of the study from the wards in seven teaching hospitals in Mosul city (Ibn-Sina, al-Jamhuri, Al-Batool, Al-Khansa'a, Ibn Al-Atheer, Al-Salam and Al-Mosul), the nurses selected from each hospital as their percentage from the target nurses in the city. Data were collected through interview method depending on Depression Anxiety and Stress Scale (DASS) [10] in addition to identifying some demographic characteristics of the samples. Pilot study was conducted from 5th February to 25th February/2007 to check the validity (through a panel of experts = 10

specialists) and reliability of the instrument - on (10) nurses selected from Ibn-Sina Teaching Hospital who excluded from the final sample of the study – and by checking the Internal Consistency and calculation of Cronbach Alpha Correlation of the results, it was (r= 0.84). Responses to items were classified as: less than (1.5) was far from the problem while (1.5) and more was susceptible to have a problem. Mean of scores, Frequency and Percentage were used to analyze the data obtained.

Results:

Table-1: Demographic characteristics of Nurses and Paramedical samples:

Variables	Nurses		Paramedical staff	
	Number	%	Number	%
Age:				
More than 20 yrs to 30 yrs.	160	**64**	147	**58.8**
More than 30 yrs to 40 yrs.	55	22	72	28.8
More than 40 yrs.	35	14	31	12.4
Total	250	100	250	100
Gender:				
Male	210	**84**	163	**65.2**
Female	40	16	87	34.8
Total	250	100	250	100
Marital status:				
Single	110	44	138	**55.2**
Married	140	**56**	112	44.8
Total	250	100	250	100
Educational level:				
Secondary	125	**50**	*	*
Institute	80	32	250	**100**
College	45	18	*	*
Total	250	100	250	100
Experience years:				
1 – 7 yrs.	165	**66**	149	**59.6**
More than 7 yrs. to 14 yrs.	40	16	51	20.4
More than 14 yrs. to 21 yrs.	20	8	35	14
More than 21 yrs.	25	10	15	6
Total	250	100	250	100

Table (1) shows that the majority of nurses (64%) and Paramedical staff (58.8%) were from the age group (20-30) years respectively. Regarding the gender, the majority of both

groups; (84%) of nurses and (65.2%) of paramedical staff were males. In relation to marital status, the highest percentage of nurses (56%) were married, while the highest percentage of paramedical staff (55.2%) were single. With regard to level of education, the highest percentage of nurses (50%) were graduated from secondary nursing schools, while all paramedical staff were institute graduates. According the experience period, the majority of both groups (66%) of nurses and (59.6%) of paramedical staff had seven years or less.

Table-2A: Mean of scores regarding Depression scale items:

No.	Items	Mean of score	
		Nursing group	**Paramedical group**
1.	I couldn't seem to experience any positive feeling at all	1.472	1.32
2.	I just couldn't seem to get going	1.641	1.216
3.	I felt that I had nothing to look forward to	1.572	1.416
4.	I felt sad and depressed	1.472	1.54
5.	I felt that I had lost interest in just about everything	1.664	1.548
6.	I felt I wasn't worth much as a person	1.372	1.468
7.	I felt that life wasn't worthwhile	1.532	1.552
8.	I couldn't seem to get any enjoyment out of the things I did	1.732	1.452
9.	I felt down-hearted and blue	1.3	1.596
10.	I was unable to become enthusiastic about anything	1.664	1.528
11.	I felt I was pretty worthless	1.832	1.424
12.	I could see nothing in the future to be hopeful about	1.608	1.428
13.	I felt that life was meaningless	1.68	1.468
14.	I found it difficult to work up the initiative to do things	1.536	1.376

The table presents that (71.4%) and (35.7%) of the items were above the main of score among nurses group and para-medical groups respectively.

Table- 2B: Mean of scores regarding Anxiety scale items:

No.	Items	Mean of score: Nursing group	Mean of score: Paramedical group
1.	I was aware of dryness of my mouth	1.62	1.256
2.	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	1.42	1.376
3.	I had a feeling of shakiness (eg, legs going to give way)	1.556	1.496
4.	I found myself in situations that made me so anxious I was most relieved when they ended	1.824	1.536
5.	I had a feeling of faintness	1.22	1.112
6.	I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion	1.528	1.324
7.	I felt scared without any good reason	1.584	1.54
8.	I had difficulty in swallowing	1.408	1.192
9.	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	1.892	1.348
10.	I felt I was close to panic	1.66	1.476
11.	I feared that I would be "thrown" by some trivial but unfamiliar task	1.592	1.624
12.	I felt terrified	1.648	1.424
13.	I was worried about situations in which I might panic and make a fool of myself	1.68	1.548
14.	I experienced trembling (eg, in the hands)	1.56	1.54

The table depicts that (78.6%) and (35.7%) of the items were above the main of score among nurses group and para-medical groups respectively.

Table-2C: Mean of scores regarding Stress scale items:

No.	Items	Mean of score: Nursing group	Mean of score: Paramedical group
1.	I found myself getting upset by quite trivial things	1.812	1.452
2.	I tended to over-react to situations	1.54	1.574
3.	I found it difficult to relax	1.468	1.414
4.	I found myself getting upset rather easily	1.408	1.54
5.	I felt that I was using a lot of nervous energy	1.44	1.468
6.	I found myself getting impatient when I was delayed in any way (eg, lifts, traffic lights, being kept waiting)	1.656	1.488
7.	I felt that I was rather touchy	1.56	1.464
8.	I found it hard to wind down	1.608	1.388
9.	I found that I was very irritable	1.796	1.52
10.	I found it hard to calm down after something upset me	1.524	1.492
11.	I found it difficult to tolerate interruptions to what I was doing	1.36	1.428
12.	I was in a state of nervous tension	1.672	1.5
13.	I was intolerant of anything that kept me from getting on with what I was doing	1.478	1.512
14.	I found myself getting agitated	1.644	1.556

The table demonstrates that (64.3%) and (42.9%) of the items were above the main of score among nurses group and para-medical groups respectively.

Table-2: Prevalence of Depression, Anxiety and stress symptoms "in respect to their levels" among Nurses and Para-medical Staff groups.

Problem	Nursing group		Para-medical group	
	F.	%	F.	%
Depression:				
Normal	210	84	231	92
Mild	34	13.6	15	6
Moderate	6	2.4	4	1.6
Anxiety:				
Normal	198	79.2	231	92.4
Mild	30	12	11	4.4
Moderate	18	7.2	5	2
Severe	4	1.6	3	1.2
Stress:				
Normal	225	90	235	94
Mild	15	6	11	4.4
Moderate	10	4	4	1.6

It is obvious from the table that prevalence of the psychological symptoms among nurses and paramedical groups are as: Depression; (16%) and (7.6%), Anxiety; (20.8%) and (7.6%), Stress; (10%) and (6%) respectively.

Discussion:

The mental health of workers is a growing concern among employers today, however, it has been aware of the problem of occupation stress among health care workers and the important, specific risks that are linked to it for medical professionals[10]. It has an impact on job satisfaction, psychological wellbeing and physical health[11.]A recent review of MetLife Disability claims found that psychiatric concerns accounted for seven percent of all the short term disability claims with that number being nearly double for white collar employees. It was found that fifty-five percent of the claims were for depression and another thirty percent were for stress and anxiety [12].

Health care services provide a continuous service around the clock, for the benefit of all citizens in any country. In most health care systems, nurses are the largest working group and play a major role in the system's success. As health care providers, nurses are obliged to work during day and night to cater for needs of sick people (13).

Nursing is a stressful profession. Caring for clients, individuals, families, groups, populations or entire communities, with multiple, complex and distressing problems can be overwhelming for even the most experienced practitioner. Nurses regularly face emotionally charged situations and encounter intense interpersonal and interprofessional situations and conflict in the workplace while trying to make appropriate and safe decisions [14].

Working in nursing increases the risk of experiencing both minor and major psychiatric morbidity [15,16], with job strain contributing to this outcome[17]. Minor psychiatric morbidities include feelings of tension, anger, anxiety, depressed mood, mental fatigue, and sleep disturbance; these are classified variously as burnout, subthreshold depression, or adjustment disorders. Mental disorders such as major depression, anxiety disorders, and psychotic disorders are less common, but they can be induced or exacerbated by work stress [18]. A variety of exposure types are associated with psychiatric morbidity. These fall into two categories: the overall allostatic load demanded by the work, and the organization of the work, including schedule and such job demands as the emotional toll when caring for patients. Proctor and colleagues found that both the number of overtime hours and the number of cumulative days worked by automotive workers were associated with changes in mood States such as depression and tension [19,20]**.**

Nursing profession is a challenging task for nurses physically and psychologically, nurses are faced with professional work demands imposed by nurse supervisors and managers, and by medical administrative staff, in addition, relationships with peers, subordinates, other staff-coworkers, physicians, and other departments were also predictors of psychological distress, or relate to the conflict inherent in the instrumental and goal oriented demands of "getting the patient better" and those related to providing emotional support and relieving patient stress. Verbal abuse from physicians can be stressful for staff nurses, so, other nurses, and patients' families were also another source of abuse.

Working conditions can play an important role hidden behind these problems: as; shift and week-end work, inadequate remuneration, conflict, discrimination, and danger in the work environment. Nursing practice consists of ever-changing conditions and experiences, which subjects to a wide variety of feelings and emotions. In the health care environment, nurses deal with such things as death and dying, conflicts with colleagues and roles, inadequate job preparation and lack of support in their work. Nurses also deal with ethical and moral compromise, rapid advances in technology and legal issues. Health care reform has affected nursing care by increasing workloads, higher patient acuity, staff cutbacks and job insecurity, ill-defined role, functions, expectations, and duties. From another side, people who are prone to depression are those who score high in reward dependence, those who like to help others, those who are sympathetic, and those who are sensitive to social cues – certainly, nurses share these characteristics.

Career Development, also have an adverse effects reflecting on occurrence of such sufferings: as; Under utilization of skills or failing to reach full potential, change to a position ill-suited to the skills and interests of the individual, uncertain job expectations, job insecurity and lack of opportunities to learn and advance, all these imposes adverse health consequences on the nursing staff.

Major life events, such as divorce, death, and changing work conditions are stressful for anyone. Aside from the chance that nurses may be experiencing these events on a personal level, they are likely to experience them vicariously through their patients on a daily basis. Stress may result from the combined responsibilities of work, marriage and children. In same cases, where pressure is intense, sustained stress can lead to long term psychological and physical ill health as depression, anxiety and hypertension.

Providing best quality of nursing care to client in health agencies leads to increase burdens upon nurses instead of the social burden which leads the nurses to suffer from many stressors. Trauma and work burdens compromises a total effect upon the past, present and

future of the nurse's sufferings, if these effects are not recognized, the consequences will appear in their life problems and will be more complicated and last as life- long disorders.

In our country, the nurse suffered from many psychological problems like the rest of people, they are suffering from bad security, complicated situation and negligence in the professional role in health agencies that decreases their rights if it is compared with other professions and imposed additional burdens on their lives.

This study tries to identify the responses of the study subjects of the two samples (nurses & paramedical staffs) in an attempt to investigate the status of their mental health. Their responses against the items of the National Scale used in the study (Lovibond & Lovibond, 1995) are presented in Table -1 (A, B, C) where they are:

- (71.4%) and (35.7%) of items among nursing and paramedical groups respectively are remarks for depressive complaints..
- (78.6%) and (35.7%) of items among nursing and paramedical groups respectively are remarks for anxiety complaints.
- (64.3%) and (42.9%) of items among nursing and paramedical groups respectively are remarks for stress complaints..

The surveys of work-related illness in UK estimated that (563,000) individuals suffered from work-related stress, depression or anxiety. Surveillance schemes indicated an estimated (6946) new cases of work-related mental ill health reported by psychiatrists and occupational physicians in Britain in (2002). Over (85%) of these cases were categorized as work-related anxiety and depression or other work-related stress that probably together represent cases of work-stress related psychological ill health [21]. Recent research shows that while (17.8%) of those in general employment show signs of psychiatric illness caused by work, this figure reaches (22%) to (46%) among health care workers[22,23]. Among health care workers, it is particularly apparent in intensive care physicians, anaethesiologists, emergency physicians [5,6,8-10], and pre-hospital emergency physicians [29]. It also seems to occur, although less frequently, among physicians working in other specializations and has even been observed among general practitioners and nursing staff [22,23]. In a study carried out on British emergency department 44% showed signs of psychological alterations in the GHQ-12 and 18% symptoms of depression in the SCL-D. There was a statistically significant link between this and the hours worked full time in the departments [30]. Numerous studies had shown high levels of psychological stress in doctors, nurses and other healthcare professionals working in various situations [31]**.** The prevalence of stress among dental health workers in Kelantan / Malaysia was (22.2%) one dental healthcare worker (1.9%) experienced severe stress whilst (20.4%) experienced mild to moderate stress. Eleven (20.4%) reported mild to moderately severe stress. This finding was lower than the prevalence reported among laboratory technicians in Hospital University Sains Malaysia which was (33.3%) [32].

A study conducted in the USA concluded that 29% of workers experienced various level of stress at their workplace [33], depression has the highest percentage score (36.8%). Other studies showed that the prevalence of suspected psychological disorders in workplaces of Iran according to the traditional ranking and cut point of (6) on the GHQ-28, were (43.8%),(15.2%) and (35%) [34-36]. Mizoue and colleagues (2007) in their study in Japan has reported that the prevalence of mental health problems was (5.4%) [37] . Chasemkhani and colleagues (2007) showed that the prevalence of suspected mental health problems are higher than what was found in the epidemiological studies of mental health problems in Iran [38]. In Britain, nearly (27%) of health care respondents met criteria for a minor psychiatric disorder (mostly depression and anxiety) versus (18%) in the general population. When compared by

occupational group, case rates among health care workers exceeded their counterparts in the general population. Managers, doctors, nurses, and allied health professionals had the highest rates of minor psychiatric disorders [39].

Large numbers of nurses appeared to be experiencing emotional exhaustion due to the demands of their work [40]. Borril colleagues (1996) found that (28%) of nurses in the National Health Statistics were suffering from minor mental health problems, generally identified as anxiety and depression [41]. In Brazil, Psychological alterations were prevalent in (32%) of the nurses and (27%) of physicians in neonatal intensive care units[38-39] and these levels were associated to the presence of professional stress [42]. In Pakistan, (39%) of family physicians were shown to suffer from depression or anxiety [43]. The prevalence rate of negative emotional states among PHC physicians in Aseer was (13.2%), anxiety occupied the highest prevalence (8.6%), followed by depression (7.6%), and stress (7.2%). These results are relatively lower compared with the results reported among Saudi secondary school teachers using the same tool [44], as well as the prevalence of any depressive disorder in Saudi population which is (22.8%) [45]), In both the USA and Europe, (30-40%) of the workforce is exposed to workplace stress, and levels of stress appear to have been rising over the last two decades [46]. Ardekani and colleagues (2008) found that 45.4% of nurses studied were at risk of developing mental disorders [13].

The incidence of new episodes of major depression among health care workers in Toronto / Canada who were still working was (4%; five of 133 participants) and the incidence of new-onset PTSD was (2%). The incidence of any new onset of a psychiatric disorder was (5%). These incidence rates appear to be lower than those found in the general population. For example, the estimated annual incidence of major depression in Canada for women aged (25 – 44 yrs.) has been reported to be (4.5%), and for women aged (45 – 64 yrs.) it is (4.1%) . The incidence of depression also appears to be lower than the recently reported one-year rate of (9%) for Canadian nurses [47,48].

There is evidence that stress can affect the efficiency of treatment. Medical personnel are less likely than other professionals to acknowledge the effect of stress. Because of the culture in which health professionals work, they might feel that they should not fail or acknowledge difficulties. The nature of their work means that nurses are more exposed than other employees to factors known to cause stress. More is known about how stress affects particular groups, but it can affect anyone at any time. **Table-2** presented the point prevalence of Depression, Anxiety and Stress among the nursing and paramedical groups as:

- **Depression:** as, (16%) among nurses and (7.6%) among paramedical personnel.
- **Anxiety:** as, (20.8%) among nurses and (7.6%) among paramedical personnel.
- **Stress:** as, (10%) among nurses and (6%) among paramedical personnel.

A study conducted in Rawalpindi found that almost all nurses reported their work related stress as either severe or moderate. However, over two-third of them reported as being in control of work life [14].

The results from the BDI-R among Australian hospitals indicated that (19.7%) of surveyed nurses were mildly depressed, (8.0%) moderately depressed, and (1.6) % were severely depressed [21].

Conclusions:

1. Exposure of health personnel, especially nurses, to any of mental disorders had been arised.
2. Undesired shared behaviors, feelings, personal characteristics among nurses can result in any of mental disorders.

Recommendations:

1. Development of nurses and sub-medical personnel, relationship, communications with patient's family and community,; financially, psychologically and legally may be undertaken.
2. Pay more attention to the nursing staff regarding the work-related aspects.

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