Assessment Of Patients Stressors At Intensive Care Units
تقييم الضغوط التي يتعرض لها المرضى في و حدات العناية المركزة

*Prof .Dr. wafa M. A. AL Attar
**Assit. Lecture Nuha Adel AL Wondowi

الخلاصة:

الهدف: تقييم الضغوط التي يتعرض لها المرضى في و حدات العناية المركزة و ايجاد العلاقة ما بين ضغوط المرضى و بعض الصفات الديموغرافية مثل العمر و الجنس

المنهجية :اختيرت عينة عرضية (غير احتمالية) ل 50 مريض في وحدات العناية المركزة و التي اجريت لهم عملية القلب المفتوح في ثلاثة مستشفيات لجراحة القلب في مدينة بغداد وللفترة من الاول من شهر كانون الاول 2005 ولغاية الاول من شهر نيسان 2006 و لتحقيق اهداف البحث اجريت استمارة استبيانية تكونت من جزئين المعلومات الديموغرافية و مقياس الضغوط المحيطة بالمريض في وحدات العناية المركزة و الذي يتضمن (37) فقرة

النتائج : و قد أشارت نتائج الدراسة ؛ بأن38 من عينة الدراسة اعمارهم تتراوح بين (40-49) سنة و 56% من الذكور و 28% من خريجي الكليات وان اعلى مستوى لمعدلات الوسط الحسابي كانت للفقرات هي الشعور بالضجر بالملل (2.76)و الشعور بالالم (2.7) و الانزعاج من وخز الابر (2.68) و وجود الانابيب في الفم و الانف (2.62)

وكذلك وجدت علاقة ما بين مستوى ضغوط المرضى الراقدين في وحدات العناية المركزة مع جنس المريض

الاستنتاج : معظم العينة يعانون من الضغوط الجسمية في وحدات العناية المركزة اكثر من فقرات الضغط النفسية والاجتماعيه .

التوصيات: توصي الدراسة الى العمل على تدريب العاملين في وحدات العناية المركزة حول تعليم المريض على وسائل التغلب والتكييف مع الضغوط الجسمية والنفسية الاجتماعية والطبيعية في وحدات العناية المركزة

Abstract:

Objective: To assess of patient stressor in Intensive care unit (ICU) and find out relationship between patients stressor and some demographic data age and gander.

Methodology: selected sample of occasional (non-probability) for 50 patients in intensive care units and conducted them open-heart surgery in three hospitals for heart surgery in the city of Baghdad in the period from 1st December 2005 to 1st April 2006. And to achieve the objectives of the research conducted Different Aspects Related to form consisted of two parts of demographic information and Intensive Care Unit Environment Stressor Scale (ICU ESS) which includes 37 items.

Result: The results of the study; that 38% of the sample aged between (40-49) years and 56% of males and 28% of college graduates. The highest level of rates of mean score of the items are feeling weary bored (2.76) and pain (2.7) and the discomfort of needles (2.68) and the presence of the pipe in the mouth and nose (2.62). Moreover, there were a relationship between the level of patient's stressors in ICU and gender

Conclusions: Most of the respondents suffer from physical pressure in the intensive care units of more than items psychological and social pressures.

Recommendations: the study recommends to work on the training of personnel in the intensive care units on patient education and the means to overcome and adapt to the physical and psychological pressures of social and natural and intensive care units.

Keywords: Stressor, Patient perception, ICU.

 *PhD. Nursing\ Iraqi National Cancer Research Center/ Baghdad University
** Adult H. Nursing \ College of Nursing/ Baghdad University

INTRODUCTION:

Intensive care unit (ICU), is a hospital unit is concentrated special equipment and specially treatment for the care of seriously ill patient requiring Immediate and continuous attention [1] [2]. The ICU environment provides unique stressors not found in other hospital units. Stressors that affect ICU patients can be physiologic, psychologies emotional, social, and even cultural [3]. Neurological and metabolic changes leading to delirium can distort perception, sensation, and thing, thus interfering with effective coping responses.

This perceptual distortion is known as delirium or ICU psychosis. At the very least , delirium is anxiety producing for patient and the family ,Anxiety , agitation and combativeness can induce life threatening .Many factors can contribute to this response metabolic factors such as pain, environmental factors such as noise ,sleep deprivation ,frightening atmosphere and absence of windows, psychological factors such as anxiety, fear and lack of control[4]. Patient in the ICU came from a variety of socio cultural and intellectual back grounds have various disease and surgical diagnosis

that differ in severity despite these differences, all ICU patient experience stress as a result of their admission to the ICU[5][6]. Nurses are constantly apart of ICU environment and are in the position to manipulate environmental factors to produce a more therapeutic setting[3]. The intensive care unit (ICU) environment is a stressful one for patients the presence of strange machinery flashing light loud and un familiar noises noxious smells and light on 24 hours a day coupled with invasive procedures lack of privacy separation from family and immobility contribute to making this a stressful environment [7]. The (ICU) environment deprives patients of normal sensory stimuli while bombarding them continuously with strong sensory stimuli this situation may elicit the stress response and trigger (lCU) syndrome and this altered mental function which occurs in some patients while in an ICU and resolves after transfer from the ICU common characteristics of this ICU syndrome include confusion disorientation hallucination and delusion researchers have found this syndrome to be caused by the stressful ICU environment rather than any physical or psychological factor [3][4][8].

OBJECTIVES:

To assess of patient stressor in Intensive care unit (ICU) and find out relationship between patients stressor and some demographic data age and gender.

METHODOLOGY:

Design of the Study: A descriptive design was carried from the period 1st Des. 2005 to 1st April 2006

Setting of The Study: The data were collected from ICU at cardiac surgery hospitals in Iraq which is located in Baghdad city presented as Iraqi center for cardiac disease, Ibn _AL_ Betar and Ibn _ Nafees hospitals

Sample of The Study: A purposive sample of (50) patients, were selected through anon probability sampling techniques from ICU at cardiac surgical hospitals. Patients were excluded from the study if they:
• Had gross neurological deficits
• Had a history of psychotic episodes
• Previously been a patient in an ICU the length of study in the ICU ranged from 2 -4 days.

The instrument of the study :The questionnaires consisted two parts:
• Demographic data sheet, consisted of 7 items with included: age, gender, marital status, level of education, occupational status, smoking and drinking alcoholic
• The specific tool used to assess patients stressors in lCU consisted of (37)items .this tool is developed by investigator from the stander of the lCU environmental stressor scale (ICU ESS)[6][9] .This items are measured on 3 level of likert scale ,always (3), sometimes (2) and never (1). The cut -off point of mean of score of all items was (2) validity of the instrument was determined through the use of panel of (6) experts the reliability of the tool was determined (r = 0.89) which was adequately reliable.

Method of data collection : Data was collected by interviewed techniques used. The patients were contacted 2-3 day after transfer from the lCU and each inter view took approximately (15 -20) minutes with patient.

Data analysis : Data was submitted to statistical analysis which includes the descriptive data analysis (frequencies, percentages, mean of scores (MS), inferential data analysis approach (chi - square test) The questionnaire of tool was also assessed on early stated scale on each item and the cumulative score was obtained and presented as:

Level of the stressors	Score
Low	Less than 66
Middle	66 -83
High	84 -100

RESULTS:

Table (1): distribution of the study sample according to demographic characteristics

No.	Demographic characteristics	F	%
1-	**Age (year)**		
	20 -29	7	14
	30-39	9	18
	40--49	19	38
	50-59	5	10
	More than 59	10	20
	Total	**50**	**100**
2-	**Gender**		
	Male	28	56
	Female	22	44
	Total	50	100
3-	**Marital status**		
	Single	5	10
	Married	39	78
	Widowed	4	8
	Divorced	2	4
	Total	50	100
4-	**level of education**		
	Illiterate	7	14
	Read and write	2	4
	Primary school graduate	11	22
	Intermediate school graduate	7	14
	Secondary school graduate	9	18
	College graduate	14	28
	Total	50	100
5-	**Occupational status**		
	Governmental employed	12	24
	Self employed	16	32
	Un employed	17	34
	Retired	5	10
	Total	50	100
6-	**Smoking**		
	Yes	10	20
	No	40	80
	Total	50	100
7-	**Drinking alcoholic**		
	Yes	1	2
	No	49	98
	Total	50	100

This table indicated that the majority of the study sample were male (56%) and married (78%) those who were (40-49) years old and they were accounted (38%) the mean age of patients was (45.76 ± 13.01) .The majority of educational level was college graduate (28%) and most of them were unemployed (34%) The table presented that the majority of patient no smoking cigarettes were (80%) and no alcohol drinking were (98%).

Table (2): Stressors rating and mean of score of patients in ICU

| No. | Items | Patient | | Response | | | | MS | Rating |
| | | Always | | Sometimes | | Never | | | |
		F	%	F	%	F	%		
1.	Being tied by tubes	22	44	16	32	12	24	2.2	17
2.	Not having nurse introduce them selves	11	22	18	36	21	42	1.8	28
3.	Being thirst	30	60	20	40	0	0	2.6	5
4.	Having your blood pressure taken often	10	20	14	28	26	52	1.68	31
5.	Having the nurses be in too much of a hurry	6	12	14	28	30	60	1.52	35
6.	Uncomfortable bed and pillow	23	46	23	46	4	8	2.38	12
7.	Hearing the telephone ring	17	34	22	44	11	22	2.12	18
8.	Frequent physical exams by doctors and nurses	14	28	16	32	20	40	1.88	25
9.	Having strange machines around you	17	34	19	38	14	28	2.06	22
10.	Feeling the nurses are watching the machines closer than they are watching you	7	14	13	26	30	60	1.54	34
11.	Hiring the buzzers and alarms from the machinery	21	24	24	48	5	10	2.32	14
12.	Having to wear oxygen	18	36	23	46	9	18	2.18	18
13.	Hearing your heart monitor alarm go off	31	62	13	26	6	12	2.5	7
14.	Nurses and doctors talking too loudly	27	54	18	36	5	10	2.44	8
15.	Having nurses constantly doing things around your bed	9	18	12	24	29	58	1.6	32
16.	Having tubes in your nose or mouth	35	70	11	22	4	8	2.62	4
17.	Hearing other patient cry out	22	44	22	44	6	12	2.32	15
18.	Having men and women in the same room	6	12	14	28	30	60	1.52	36
19.	Only seeing family and friends for few minutes	20	40	21	24	9	18	1.86	26
20.	Not knowing when to expect things will be done to you	32	64	16	32	2	4	2.6	6
21.	Unfamiliar and unusual noises	15	30	25	50	10	20	2.1	20
22.	Watching treatment given to other patient	5	10	19	38	26	52	1.58	33
23.	look at the pattern of holes in the ceiling	10	20	16	32	24	48	1.72	30
24.	Not being able to sleep	21	42	27	54	2	4	2.38	12
25.	unable to move arms due to IV lines	26	52	18	36	6	12	2.4	10
26.	Being aware of unusual smell around you	17	34	21	42	12	24	2.1	21
27.	Having light on constantly	13	26	12	24	25	50	1.76	29
28.	Being in pain	35	70	15	30	0	0	2.7	2
29.	Bing stuck with needles	35	70	14	28	1	2	2.68	3
30.	Seeing bags over your head	13	26	21	42	16	32	1.94	24
31.	Not knowing where you are	3	6	12	24	35	70	1.36	37
32.	Nurses use word you cannot understand	29	58	11	22	10	20	2.38	12
33.	Not being in control of your self	13	26	35	70	2	4	2.22	16
34.	Being in bored	38	76	12	24	0	0	2.76	1
35.	Having no privacy	16	32	20	40	14	28	2.04	23
36.	Being cared for by un familiar doctors	12	24	18	36	20	40	1.84	27
37.	Being in a room which is too not or cold	29	58	14	28	7	14	2.44	9

MS= mean of scores; F= frequencies

　　Table (2) shows that (23) items from (37) items have suffering from stressor and mean of scores (MS),above cut -off point (2)

The table also show descending order of ICU ESS items and it appears the first four items with the highest rating were being in bored (2.76) and pain (2.7) and the discomfort of needles (2.68) and the presence of the pipe in the mouth and nose (2.62) Patient appeared to be most concerned with items that directly related to physical stressor more than the psychosocial stressor.

Table (3): Disruption of level of stressors of patient in ICU.

No.	Level of the stressors	F	%
1.	High	3	6
2.	Middle	33	66
3.	Low	14	28

Table (3) found that the highest level of stressors was middle (66%) and (28%) of the level of stressors was Low and (6%) was high level of patient in ICU.

Table (4): association between the age of the sample and level of stressor

Level of stressor	High		Middle		Low		Total	
Age (year)	F	%	F	%	F	%	F	%
20-29	1	2	6	12	0	0	7	14
30-39	0	0	7	14	2	4	9	18
40-49	2	4	12	24	5	10	19	38
50-59	0	0	3	6	2	4	5	10
60-69	0	0	5	10	5	10	10	20
Total	3	6	33	66	14	28	50	100

X^2 obs =12.522 X^2crit .=15.507   df = 8 $p > 0.05$

Table (4) indicated that were not significant difference between the age of the sample and patient stressor level at $p>0.05$,also show (38%) were middle of age range from (40-49) year.

Table (5): Association between the gender of the sample and level of stressor in ICU

Level of stressor	High		Middle		Low		Total	
Gender	F	%	F	%	F	%	F	%
Male	3	6	15	30	10	20	28	56
Female	0	0	18	36	4	8	22	44
Total	3	6	33	66	14	28	50	100

X^2 obs =I5.74 X^2crit .=5.991   df=2 $p<0.05$

   Table (5) show that there were significant differences between patient stressor level and gender at $p<0.05$ and (56%) were has stressor of male while (44 %) were female .

DISCUSSION:

The findings of table (1) were similar to those obtained from the two studies. The first one noted that the mean age of the patients was (54) year with ages ranging from (20 -76 years) the patient group was equally divided between males and females. The length of stay in lCU range from 1 day to 8 days[5].The second study stated that 36 male and 14 female ,the ages ranged from 20 -77 with a mean age of (59.4) . Forty-two were married, and 50% of the subjects received only primary or lower level of education [9]. The findings in table (2) to ICU patients being so ill that their primary concern is whether they will live or die, not their environment. Patient also may have been this concern also could be responsible for patients minimizing the negative aspects of the environment, which they may view as necessary for their recovery. Unconsciously and physically reacting to the environment while consciously unaware of its effects. The items which were rated as being highly stressful in the study are similar to those found by[3][5][10] and found the physical stressor more than psychosocial stressor. The findings in table (3) that the highest level of stressors was middle score In this study were no significant differences between patient stressor level and age table (4) and also show (38%) were middle of age range from (40-49) year. While found there were significant differences between patient stressor level and gender at p<0.05 table (5) and (56%) were has stressor of male. In other study reported that, there was no significant relation ship found between the patients total stress score and gender [3].

CONCLUSION:

Most of items of (lCU ESS) had stressful and the physical stressor more than psychosocial stressor. The highest level of rates of mean score of the items are feeling weary bored (2.76) and pain (2.7) and the discomfort of needles (2.68) and the presence of the pipe in the mouth and nose (2.62). And also found a relationship between the level of patient's stressors in ICU and gender.

RECOMMENDATIONS:

The present study recommended that:.
1. Training session to the medical and nurses staff in ICU about stress and stressor in ICU
2. Further studies can be conducted on large sample and comparative this study with nurses staff.
3. Nurses should be Identify each patient stressor in ICU and resolve their problem
4. Patient should be Identify the environment of ICU during pre operative or before surgery procedure.
5. Nurses could be focus attention more effectively on minimizing those items which patients listed as being most stressful such as pain, sleep deprivation, thirst, discomfort of tubes in the nose or mouth.
6. Nurse in ICU must be introduce them selves to the patient and explain the procedure they done him

REFERENCES:

1- Miller K. : **Encyclopedia and dictionary of medicine ,nursing and allied health** ,7th.ed USA,2003 :943
2- Bramma, A. & Sundaram R.: Out-of-hours discharge from the ICU: defining the out-of-hours period and its effect on mortality. **Critical Care,** 2012, 16(Suppl 1):P512.
3- Wenham T.& Pittard A.; Intensive care unit environment .**Oxford Journals** ,2009 9(6):. 178-183
4- Hilde M, Kirsti T., Susanne K.and Olav S.,: Posttraumatic stress, anxiety and depression symptoms in patients during the first year post intensive care unit discharge. **Critical Care**, 2010, Volume 14 Issue 1
5- Hurst S, & Koplin S.: A pilot qualitative study relating to hardiness

in ICU nurses. **Dimensions of Critical Care Nursing**. 2005; 24(2):97-100

6- Hweidi, I.. : perception of stressors in critical care units, **International Journal of Nursing Studies**,2007, 44, 227-235.

7- Pugh R., Griffiths R.: Noise in critical care. **Care Crit Ill**, 2007,23:105-9.

8- Barr J., Ely W., Davidson E.: Clinical Practice Guidelines for the Management of Pain, Agitation, and Delirium in Adult Patients in the Intensive Care Unit. **Critical Care Med**. 2012; 41(1):278-280.

9- McCauley K, & Irwin R. :. Changing the work environment in ICUs to achieve patient-focused care. **Chest**. 2006; 130(5):1571-1578. 3(89):108.

10- So .H. & Chan ,D.: perception of stressor by patients and nurses of critical care units in Hong kong**. International journal of Nursing studies** ,2004,41 .77.