



Comparing Mental Disorder, Sleep Disorder and Perceived Stress on Intensive Care Unit Nurses to Other Nurses

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Abstract: *Although there is stress on all jobs, but in professions which deal with human health, this is most important, so current study was done with the aim of comparing mental symptoms, sleep disorder and perceived stress of intensive care unit nurses with other nurses. Statistical society are the Vali Asr hospital nurses. Sampling method was census to selecting intensive care unit nurses statistical sample and other nurses, as from statistical society which were 175, 195 nurses stated the qualification of participating in research with regarding entrance criterion and they were asked to answer research questionnaire. Research method was cause – comparative method. For collecting information, mental disorder symptoms questionnaire (SCL-90-R), Peterzburg sleep quality questionnaire (PSQ1) and perceived stress questionnaire (PSS-14) were used. for analyzing research data, descriptive and deductional statistic was used. In descriptive statistic part using frequency indicators, percentage and graph, We described studied variable and in deductional statistic part with variance analyze MONOVA and t- independent, we considered research hypothesis. All data analyze was done with software SPSS – 18. Findings show that as meaningful level (sig =0/000) is smaller than 0/05 error, so with the confidence 95%. We conclude that there is meaningful difference among mental symptoms, sleep disorder and perceived stress on intensive care unit nurses to other nurses.*

Keywords: *Mental Symptoms, Sleep Disorder, Perceived Stress and Intensive Care Unit Nurses.*

INTRODUCTION

Nurses job need different work personality, specially night shift more than any job. There are 1/000/000 nurses in Japan that %75 work in night shift. (Ohaida and et al., 2015). In our country, %80 of care and hygiene organization are nurses and they are in top line of providing care and hygiene services. Nurses work in morning, afternoon and night shift irregularly, and are exposed with mental tension more than other jobs. (Suzuki and et al., 2014). Nurses are peoples who exposed on sleep duration and irregural sleep and wake pattern in them cause to decreasing sleep quality and sleep time with decreasing job action quality. (Potter and et al., 2007). of other night sift negative effect is sleep disorder . Studies showed that accidents and work errors and job exhaustion in night shift nurses is more than nurses who work in morning and afternoon shifts .(Samaha and et al., 2010).

The result of one new avaluation in American showed that more than 60% nurses in night shift who suffer from sleep disorder have stress in nursing (Gabril, 2008). In study based on the relation among burnout with nursing care, two groups of nurses in day and night shift had chronic burnout , but night shift nurses had higher depression and most unsuitable sleep pattern than day shift nurses. (Fridman et

al., 2011). In other study, sleep deprivation was a problem for nurses. because focus with decreasing attention in works were the consequence sleep deprivation.

Intensity of perceived stress is one of the main health belief model that is based on psychologist learning theory. (Rosentak, 1974).

In the respective of this model, the intensity of perceived stress is a main component expressing the likelihood of adopting the collation strategy by people in stressful situation.

The intensity of perceived stress is showing individual belief in the field of the stress enthusiasm. with high likelihood, one can adopt special collation strategy that he believe the physical, psychologist and social effect of stress and its important consequence (e.g social relations change, independency, depression, pain, inability and even death.

Based on two above variables, as perceived intensity and enthusiasm be more, likelihood of adopting collation action increase. (Resentak, 1990). Although there is stress in all jobs, but in jobs which deal with human health, this subject is most important (Wa, Know, Wang, Lan, 2007). the members of medical team special nurses, are who receive the high level of stress. American Occupational Safety National Association, has introduced nursing the peak of 40 stressful professions. (Eli 2016).

If the mental pressure is very high, can danger human health with creating physical, mental and behavioural consequences and lead to decreasing job satisfaction and exhaustion. (Allten, 2008)

Because of nurses daily encounter with stressful situations and lacking positive situations And spending high time for supporting other peoples, they catch chronic emotion pressure and so job exhaustion. This cause to leaving job, mental and physical illness and decreasing productive work and damage to country production and economy and not only catch the health of millions staff but also clients with stress and tension. (Beheshtian, 2012).

Toosi and et al (2015) in the research with the name of group cognition therapy efficiency in decreasing depression , anxiety and perceived stress in men with HIV, considered 131 men with the positive HIV, and evaluated all of them in the respective of DASS21 that measure depression psychology symptoms, anxiety and stress, and it showed that 545 (41/2%) have the score higher than cut point and 30 peoples were classified to two test (n=15) and control (n=15) groups randomly, test group participated in 12 group sessions but in control group , any psychological intervention was done.

Finally each group intervention revalued. Findings showed that the experience of challenging the relation among negative thoughts and psychological symptoms by group intervention CT for men with HIV was successful. (Salari Far and Poor Emad, 2011)

In the research with the name of relation among meta recognition with depression , disorder and anxiety of nurses, autheres concluded that meta belief has positive relation with depression disorder and anxiety. The results of this research showed that considering ultra recognition in educational programs and psychological interventions can be effective in preventing emotional disorders and treating them.

In the research of considering relation among sleep and stress and behavioral malformation concluded that high outbreak of sleep disorder increase stress and behavioral malformation.

So, this research for comparing mental sleep disorders and perceived stress would paid attention to intensive care unit and other nurses in Vali Asr hospital in Qaemshahr to perform small help in caring patients in intensive care unit and also studious nurses for achieving result and providing situation and purposes.

So current research want to answer to this question " is the mental symptoms, sleep disorder and perceived stress in intensive care unit different from other nurses?"

Material and Methods:

The method of this study is comperative-cause. Because researcher using questionnaire want compare mental symptoms, sleep disorder and perceived stress of intensive care unit with the nurses in other unites and discover is mental symptoms, sleep disorder and perceived stress in intensive care unit different to other nurses or no?.

The statistical society of current study is all nurses of the Vali Asr hospital of Qaemshahr that are 194. The sampling method was census for selecting statistical sample of intensive care unit nurses and other nurses.

As from 194 nurses, 175 nurses answered to research questions with regarding to entrance and exit criterions.

for collecting information , mental disorder, symptoms questionnaire (SCL-90-R), Peterzburg sleep quality questinnaire (PSQI) and perceived stress questionnaire (pss-14) were used . Entrance criterion to this research was nurses with least B.S degree , informal and formal engagement situation. Exit criterion is reluctancy in each time based on continuing participation in study. Data collecting material was mental disorder symptoms questionnaire (SCL-90-R) that has 90 questionnaire and was introduced by Derugatis (1973) for rapid evaluating the type and intensity of refenences symptomes by self evaluating. peterzburg sleep quality questionnaire (PSQI) was introduced by Dr Bouis and et al in Peterzburg psychology institute in 1989 and perceived stress questionnaire was introduced by Kuhen (1983) and this scal has 14 items and each item is based on a five points Likert scale rated from zero to four. and this questionnaire was distributed among men and female nurses in intensive care unit (ICU, CCU, and dialysis), also other nurses in unites (internal, surgery, childbirth, childs and orthopady) in Vali Asr hospital in Qaemshahr and for each necessary expressions for completing questionnaire was provided.

Questionnaire for completing questionnaire was provided. questionnaire perpetuity was done with performing study on sample peoples that Kerunbakh Alpha for determined questions is showing suitable questionnaire authenticity. Collected data in this research was analyzed using statistical software SPSS and variance analyze statistical method MONOVA for mental symptomes and sleep disorder variables and statistical method, t-independent for perceived stress variable. Variance analyze results showed that there is meaningful difference among mental symptomes, sleep disorder and perceived s sletress in intensive care unit nurses with other nurses.

In current research moral considerations include getting justification from university morality commitee , providing necessary expressions and research aims to participators in study , getting conscious and secret consent and information anonymity , announcing the justification for exiting participators each time and complet explanation about study and answering to question and providing results.

Study findings and results:

As we show in table 1, all of studies sample were in the age range of 35-45 and least are in the age of higher than 45 , and in the respective of gender it showed that 46/3%of responders with least frequency were men and 53/7% were femal.

Table 1: Mean and standard deviance of variables

percentage	frequency	gender	percentage	Frequency	Age (year)
46.3	81	men	41.1	72	25-35
53.7	94	female	47.4	83	45-35
			11.4	20	More than 45

Table 2: mean and standard deviance showes mental symptomes general sign index (GSI) in intensive care unit nurses and other nurses. with regarding to nurses mental symptomes situation results, anxiety in intensive care unit nurses is higher than 2/5 and therefore is showing illness symptomes, and in nurses in other unites, mental symptomes general signs mean scores in all dimensions is less than 2/5 that show normal situation in this group.

Other nurses			Special nurses			
Standard deviance	mean	number	Standard deviance	mean	Number	
0/81	1/99	100	0/79	1/98	75	Physical complaints
0/76	1/88	100	0/74	1/97	75	Whim-compulsory

0/78	1/92	100	0/71	2/06	75	Individual sensibility
0/72	2/39	100	0/63	2/49	75	depression
0/63	1/35	100	0/73	2/76	75	Anxiety
0/54	1/58	100	0/57	1/63	75	Disease phobia
0/91	2/32	100	0/91	2/46	75	Virulence(aggression)
0/67	2/18	100	0/61	2/21	75	Paranoid thoughts
0/64	1/33	100	0/63	1/43	75	Psychosis
0/54	2/41	100	0/55	2/57	75	Totall

Table three shows mean and standard deviance of sleep quality scores in intensive care unit nurses and other unit nurses. In the descriptive aspect and with comparing mean , we observe that sleep mind quality score, delay in sleeping , sleep time duration, sleep random rate , sleep disorders in intensive unit nurses is higher than nurses scores mean in other unites but in scores using hypnotic medicine and daily action disorders , there is small difference among two groups.

Table 3: Sleep scores quality mean and standard deviance

Other nurses			Special nurses			
Standard deviance	mean	number	Standard deviance	mean	number	
0/62	0/59	100	0/52	0/69	75	Sleep mental quality
0/68	0/56	100	0/68	0/67	75	Delay in sleeping
1/12	0/68	100	0/87	0/94	75	Sleep duration
0/49	0/11	100	0/68	0/33	75	Sleep output
0/62	0/58	100	0/49	0/89	75	Sleep disorders
0/53	0/17	100	0/35	0/15	75	Using hypnotic medicine
0/78	0/88	100	0/62	0/89	75	Daily action disorders
2/25	4/14	100	1/56	4/00	75	Totall

Table four shows mean and standard deviance of stress scores in intensive care unit and nurses in other units. with comparing means in two groups, we observe that stress scores mean in intensive care unit nurses (42/05) is higher than other units.

Table 4: mean and standard deviance of perceived stress scores in intensive care units nurses and other units.

Standard deviance	mean	number	Groups	Variable
9/33	42/05	75	Intensive care units nurses	Stress
9/56	38/95	100	Other nurses	

Theories test:

First theory: mental symptoms mean in intensive care unit nurses is different from other nurses. As we observe from table 5, results related to mental symptoms difference in two groups nurses of intensive care unit nurses and other units nurses from all components , anxiety is meaningful (sig >0/05)

Anxiety scores mean in intensive score unit nurses is higher than other nurses in other unites . so we can conclude that there is meaningful difference among anxiety in intensive care unit nurses with other units.

Second theory: sleep disorder mean in intensive care unit nurses is different with other nurses.

As we can observe from table 6, results related to sleep quality difference in two group nurses of intensive care unit and other units in all components except sleep disorders and sleep output mean is meaningful. (sig >0/05).

Table 5: two way variance analyse test results (MONOVA)

Meaningful level	F	Squares mean	Freedom degree	Squares sum	resource	
0/935	0/007	0/004	1	0/004	Physical complaints	group
0/468	0/529	0/304	1	0/304	Compulsive obsession	
0/199	1/662	0/939	1	0/939	Inter individual sensitivity	
0/352	0/870	0/412	1	0/412	Depression	
0/000	15.846**	7/181	1	7/181	Anxiety	
0/254	1/309	0/406	1	0/406	Disease phobia	
0/416	0/664	0/550	1	0/550	Enmity(aggression)	
0/753	0/099	0/042	1	0/042	Paranoid thoughts	
0/313	1/023	0/423	1	0/423	Phychosis	
		0/646	173	111/71	Physical complaints	Error
		0/574	173	99/35	Compulsive obsession	
		0/565	173	97/71	Inter individual sensitivity	
		0/473	173	81/83	depression	
		0/453	173	78/39	Anxiety	
		0/310	173	53/67	Disease phobia	
		0/829	173	143/44	Enmity(aggression)	
		0/424	173	73/31	Paranoid thoughts	
		0/413	173	71/52	psychosis	
			175	1671/75	Physical complaints	total
			175	743/81	Compulsive obsession	
			175	784/32	Inter individual sensitivity	
			175	1124/12	depression	
			175	1207/00	anxiety	
			175	1264/28	Disease phobia	
			175	1238/24	Enmity(aggression)	
			175	916/84	Paranoid thoughts	
			175	2062/44	Psychosis	

Sleep disorders score mean and sleep output mean in intensive care unit nurses is higher than other units. Then one can conclude that there is meaningful difference among sleep disorders and other nurses.

Table 6: two way variance analyze test results (MONOVA)

Meaningful level	F	Squares mean	Freedom degree	squares	resource	
0/245	1/362	0/458	1	0/458	Sleep mental quality	
0/310	1/038	0/488	1	0/488	Delay in sleeping	
0/097	2/785	2/897	1	2/897	Sleep duration	
0/013	6/326*	2/138	1	2/138	Sleep output mean	
0/001	12/187**	3/943	1	3/943	sleep disorders	
0/743	0/108	0/023	1	0/023	Using hypnotic medicines	

0/904	0/015	0/008	1	0/008	daily action disorders	Error
		0/336	173	58/14	Sleep mental quality	
		0/470	173	81/31	Delay in sleeping	
		1/040	173	179/96	Sleep duration	
		0/338	173	58/45	Sleep output mean	
		0/324	173	55/97	Sleep disorders	
		0/217	173	37/49	Using hypnotic medicines	
		0/519	173	89/71	Daily action disorders	
			175	129	Sleep mental quality	Total
			175	146	Delay in sleeping	
			175	303	Sleep duration	
			175	68	Sleep output mean	
			175	161	Sleep disorders	
			175	42	Using hypnotic medicines	
			175	227	Daily action disorders	

Third theory: perceived stress mean in intensive care unit nurses is different with other nurses. Findings of table 7 shows that perceived stress mean in intensive care unit nurses is higher than other nurses. (42/05 against 38/95). this shows that difference in independent t- test is meaningful, because meaningful mean (sig =0/033) is less than 0/05 , so it is rejected with the confidence percentage of zero that it show the lack of difference and research theory is supported. so there is meaningful difference among perceived stress in intensive care unit nurses with other nurses.

Table 7: t- test of two independent groups for comparing mental symptoms in intensive care unit nurses with other nurses.

Meaningful level	Freedom degree	t-mean	Standard deviance	mean	number	groups	Variable
0/033	173	2/146	9/33	42/05	75	Intensive care unit nurses	stress
			9/56	38/95	100	Other nurses	

Discussion and Conclusions:

Main aim of this research is comparing mental symptoms , sleep disorder and perceived stress in intensive care unit nurses with other units and current study findings showed that anxiety in intensive care unit nurses is higher than other nurses. So one can conclude that there is meaningful difference among anxiety in intensive care unit nurses with other nurses, as it is assumed that the cause of increasing anxiety in this patients is confronting with unwell patient and seldom dying patients that there is some hope to recovering and least difficult in doing responsibility may cause to creating irrecoverable consequences with the findings of Salarifar and Poor Etemad, Amis (2011), Danial and et al (2010) and Bilmaz, Grougez and Walz (2007) which each considered the relation among ultra cognition with depression disorder and nurses anxiety, prime discordant pilot and life negative accidents in expecting depression and anxiety, studying on older anxiety and special role of cognition and meta cognition in depression, all were consonant and agreeable. also findings showed that there is meaningful difference among sleep disorder in intensive care unit nurses with other nurses. As having different types of sleep disorder in intensive care unit nurses is different from other nurses , and it was consonant with the findings of Khooshab and et al (2013), Merdus and et al (2013), Habib zade and et al (2011) Mousavi and et al. (2010), Bahrami nejad and et al (2006) that each of them compared doctors, nurses and patients viewpoint about factors related to patients sleep disorder, considering massage effect on mothers sleep disorders in the period after

parturition, relation among restless foot symptoms with sleep quality disorder in haemo dialysis patients , considering sleep disorder outbreak and factors related to them in Tehran Islamic Azad University medical students and sleep pattern disorders in Zanjan selected hospitals nurses. sleep and relaxation are necessity that are very important in human life and anyone need them with different quality and mean . also there is meaningful difference among perceived stress in intensive care unit nurses with other nurses. As intensive care unit nurses perceive stress different than other nurses. It is consonant with the findings of khooshan and et al (2010), Seyyed Bonakdar and et al (2011), Hosseini and et al (2013), Toosi and et al (2015) that each of them considered the effect of relational skills education on perceived stress mean in nursing branch students, the efficiency of stress management behavioral cognitional treatment on perceived stress in female with systemic arytmatous lopus , analyzing the relation among perceived organizational support with perceiving occupational stress and deviance behaviors based on structural equations for considering Tehran nurture and education nineteen fold zones and analyzing relation among perceived organizational support with perceiving occupational stress and deviance behaviors, group remedical cognition efficiency (CT) in decreasing depression, anxiety and perceived stress in men with HIV. Research findings showed that mental symptoms, stress and sleep quality in intensive care unit nurses is higher than other nurses. One may think that these nurses deal with critical conditions, they receive higher score in these three variable. It was consonant with the findings of Khooshab and et al (2013), Merdus and et al (2013), Habib zade and et al (2011) Mousavi and et al. (2010), Bahrami nejad and et al (2006) that each of them compared doctors, nurses and patients viewpoint about factors related to patients sleep disorder, considering massage effect on mothers sleep disorders in the period after parturition, relation among restless foot symptoms with sleep quality disorder in haemo dialysis patients, considering sleep disorder outbreak and factors related to them in Tehran Islamic Azad University medical students and sleep pattern disorders in Zanjan selected hospitals nurses. sleep and relaxation are necessity that are very important in human life and anyone need them with different quality and mean . also there is meaningful difference among perceived stress in intensive care unit nurses with other nurses. As intensive care unit nurses perceive stress different than other nurses. It is consonant with the findings of khooshan and et al (2010), Seyyed Bonakdar and et al (2011), Hosseini and et al (2013), Toosi and et al (2015) that each of them considered the effect of relational skills education on perceived stress mean in nursing branch students, the efficiency of stress management behavioral cognitional treatment on perceived stress in female with systemic arytmatous lopus , analyzing the relation among perceived organizational support with perceiving occupational stress and deviance behaviors based on structural equations for considering Tehran nurture and education nineteen fold zones and analyzing relation among perceived organizational support with perceiving occupational stress and deviance behaviors, group remedical cognition efficiency (CT) in decreasing depression, anxiety and perceived stress in men with HIV. SO high mental pressure and vulnerability have reciprocal effect on each other. As if mental pressure be high, so less vulnerability may cause to illness, in contrast, as mental pressure be less but vulnerability be high, so likelihood of creating discordant behavior is high. Discordant description show that there is a problem and individual high vulnerability or high mental pressure in environmental cause to this inability in confronting with life problems.

It is proposed that one must pay attention to that nurses deal with persons with physical problems and sometimes mental problems and with regarding to that each person has emotion and sentiment , so nurses weren't excluded from this and we propose that hospital evacuate them in the respective of emotion and sentiment with holding public meetings and performing self hypnotic . Also for removing sleep disorder in nurses, it is necessary that hospitals solve this problem with lowering work time and increasing nurses in shifts.

Current research has some limitations include all factors effecting on mental symptoms, perceived stress and sleep disorder such as nurses family state, and family characteristics which aren't considered. With regarding to that study was limited to small geographical sphere, generalizing result of this research to other feilds must be done with caution.

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