

DDH is essential in all newborns, physical examinations revealing alterations must be complemented with ultrasound imaging study to avoid the delayed diagnosis of the condition and therefore decrease incidence of the complications.

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## WORK-RELATED STRESS EVALUATION AMONG THE NURSES AT REFERRAL HOSPITALS IN MONGOLIA. /DURING THE COVID-19 PANDEMIC PERIOD/

DOI: 10.31618/ESU.2413-9335.2020.1.77.965

Otgonbaatar D<sup>1</sup>, Lkhagvasuren Ts<sup>1</sup>,  
Naranbaatar N<sup>2</sup>, Munkhkhand J<sup>2</sup>

<sup>1</sup>Mongolian National University of Medical Science,

<sup>2</sup>School of nursing, Mongolian

### ABSTRACT

**Background:** Occupational or work-related stress is defined as a person's response to cope with situations that make it impossible for them to perform normally due to colleagues or co-workers' relationships and the working environment. Nursing, itself, is a stress-prone profession, we cannot eliminate the stressors, but teaching nurses effective ways to deal with stress and avoid stress will allow them to focus on their work and work energetically and satisfactorily. Thus we saw the need to figure out the workplace stress among the nurses who worked in the referral hospitals in Mongolia.

**Methods:** The study involved a totally 473 nurses from the tertiary referral hospitals of Mongolia. We employed Work Stress Profile (WSP) questionnaire of Rice in 57 questions in 3 domains. This questionnaire was considered to determine how nurses perceive and accept the stress. The Likert scale was used in measuring the questions. The indicators were evaluated by the cross-sectional model.

**Results:** The survey was conducted by selecting nurses according to the age groups similar to the age pyramid of nurses working in the hospitals. **Conclusion:** Nursing work-related stress levels were  $F=3.071$ ,  $p=0.028$ ; and it expressed statistical significant differences regarding the ANOVA analysis.

**Keywords:** stress, work, nurse

### Background

In recent years, there have been a number of stressors, such as emotional instability, anxiety, and worry, due to a variety of factors, including social and economic conditions, drastic changes in science, technology, information, urbanization, and

overcrowding. The stability and improvement in social wellbeing mostly depend on the personnel who work in the healthcare system. Thus, the work-related or workplace stress among the nurses who are considered as the closest people to a client is needed to be studied.

### Purpose

The purpose of our study is to find out whether the referral hospital nurses have the work stress.

### Materials and Methods

The study was conducted at the Mongolian National Centers of Traumatology and Orthopedics (1), Infectious Diseases (2), Cancers (3) and Mental Health (4) in February-April, 2020, by cross-sectional model of research among the 473 nurses.

We employed a Work Stress Profile (WSP) questionnaire of Rice – in 57 questions in 3 domains; the questions aim to assess the co-workers relations (1-26), the working environment (27-48) and the personal attributes (49-57). This questionnaire was considered to figure out how nurses perceive and accept the stress. The Likert scale was used in measuring the questions. The indicators were evaluated by a cross-sectional model. The study result tables/graphics and statistical

data were developed and analyzed by Microsoft Excel-2018 and Statistical Package for the Social Sciences (SPSS)-25.0. The standard deviation (SD) and regression data, differences between the groups were revealed by Student's test – the statistical difference should be at  $p < 0.05$ . In addition, we measured the participants' saliva alpha amylase, arterial blood pressure, level of glucose in blood and heart pulse as the physiological indicators.

### Results

A total of 473 nurses were included in the study, including 121 NCTO, 89 NCMH, 146 NCID, and 117 NCC. Meanwhile, 46 administrative workers, 75 doctors, 208 nurse-midwives, 105 cleaners, and 46 organizational workers participated in our study, too. The general information of the study participants is demonstrated in Table 1.

Variables	Frequency (percent)	P value
Gender		
Male	13(2.7)	.005
Female	460(97.3)	
Age		
18-24	34(7.2)	.002
25-30	139(29.4)	
31-40	99(20.9)	
41-50	169(35.7)	
above 51	32(6.8)	
Educational level		
Diploma	150(31.7)	
Bachelor	306(64.7)	.059
Masters	17(3.6)	
Working years in this sector		
≥1 year	32(6.8)	.035
2-5 years	64(13.5)	
6-9 years	128(27.1)	
10years≤	249(52.6)	
Working experiences		
≥1 year	48(10.1)	.146
2-5 years	67(14.2)	
6-9 years	131(27.7)	
10years≤	227(48.0)	

\*NCID – National Center of Infectious Diseases

\*NCC – National Center of Cancer

\*NCMH – National Center of Mental Health

\*NCTO – National Center of Traumatology and Orthopedics

Table 1 illustrates that the gender – 97.3% female and 2.7 % male, but not the age and education statistical difference presents among the participants.

However, we can see statistical significance in the working area/place and the years of working there.

We identified the nurses' stress at three levels: high, medium/normal, and low. Table 2 reveals that the workplace low, normal and high stress level groups occupied 7.6%, 27.1% and 65.3%, respectively. Moreover, they (cancer nurses) occupied the less percentage in the low and normal (19.7%) stress groups. The NCTO nurses cover the least percentage in high stress levels - 53.7%.

The findings expose that the traumatology nurses' perceived stress level is low rather than the other hospitals. Conversely, the cancer nurses are the participants who are mostly suffering from workplace stress. Nurse stress variability statistics also confirmed these results.

**Discussion:** In 1978 Weiman and in 1990 Holmgren<sup>1</sup> had separately noted that workplace or work-related stress and stressors are the major reasons for such as sick-leave; physiological and psychological illnesses, work burnout and consequently these issues can cause the individual or organizational problems. We employed the Rice (1999) WPS self-esteem questionnaire because we considered that our study participants will be categorized as relatively healthy, i.e. they never complain about being sick and leave the work. Furthermore, we decided that it would be reasonable if the participants assess themselves whether they are in work-related stress by reading and getting an idea what can be called workplace stress indeed<sup>2</sup>.

It is clear that women dominate nursing around the world, however regardless of the work environment, requirements, or workload, regardless of gender all are exposed to workplace stress. The results of our study agree that it depends only on individuals. Our study gave proof that due to ANOVA the gender differences on workplace stress is absent ( $F=0.404$ ), ( $p=0.525$ ) statistically. According to literature, workplace stress is often treated by the gender of nurses, but the results vary. Certain researchers noted that there is no gender difference in work stress<sup>3</sup> and others claimed that female nurses are more vulnerable to various

occupational stresses than men<sup>4</sup> moreover; some researchers figured out those female nurses are more intended for psychological stress; meanwhile the men tend to physiological stressors.<sup>5</sup> The results of this study are similar to the results of a 2013 study by Finnish researchers as well as Mauno that found that young nurses are less exposed to workplace stress than older nurses<sup>6</sup>. We agreed with the global studies that the nurses at younger age are less exposed to the work stress because they are working in a fellowship system and they are always relying on co-workers help. Particular researchers, such as Takase, Teraoka, and Yabase, suggested in a 2016 study that nurses over the age of twenty-five who want to keep their workplaces are more stressed than middle-aged and older nurses.<sup>7</sup> The statistically significant differences in the stress levels ( $F = 1.923$ ) and ( $p = 0.105$ ). Above demonstrated results suggested that the onset of stress in a nurse's workplace depends on many different levels of social factors, such as age, gender, organizational characteristics, organization, place of work, and years of service. And these stressors have different impacts on individuals.

**Conclusion:** Nursing work-related stress levels were  $F=3.071$ ,  $p=0.028$ ; and it expressed statistical significant differences regarding the ANOVA analysis.

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## STUDY OF THE POSSIBILITIES OF PREOPERATIVE CHEMOTHERAPY IN MULTIPLE METASTASIS OF COLORECTAL CANCER IN THE LIVER

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DOI: 10.31618/ESU.2413-9335.2020.1.77.958

Islamov Kh.D.<sup>1</sup>, Niyozova Sh.Kh.<sup>2</sup>

<sup>1</sup>Republican Scientific and Practical Medical Center of Oncology and Radiology of the Ministry of Health of the Republic of Uzbekistan (RSSPMC OR MOH RUz),

<sup>2</sup>Tashkent medical academy

### SUMMARY

Preoperative chemotherapy (CT) in 35 patients with colorectal cancer (CRC) with liver metastases demonstrated a high frequency of objective effects - in 22 (62.9%) patients, stabilization was noted in 10 (28.6%) cases. With bilobar liver metastases and the use of oxaliplatin-containing regimens, partial regression was 62.9%. Side effects in most cases were clinically insignificant, no deaths were observed. The results obtained demonstrate the possibility of performing extended surgical operations in the majority of CRC patients with multiple liver metastases after preoperative CT.

**Key words:** colorectal cancer, liver metastases, preoperative chemotherapy

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