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«Волгоградский государственный медицинский
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Российской Федерации
Кафедра нормальной физиологии

Фонд оценочных средств
ОТЧЕТ по производственной
практике (научно-
исследовательская работа)

- 1 -

REPORT

MANUFACTURING PRACTICES

(RESEARCH WORK)

Topic: FATIGUE SEVERITY SCALE

Done by

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Grade 3 **Group** 36

Specialty: FACULTY OF GENERAL MEDICINE

Checked by : RODION KUDRIN

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- 2 -

INTRODUCTION:

Fatigue is considered to be one of the most common and disabling symptoms of multiple sclerosis (MS), affecting about 80% of patients (Minden et al., 2006; Weiland et al., 2015).

However, there is, no universally accepted definition for fatigue. MS-related fatigue has been reported to manifest itself as an overwhelming sense of tiredness and lack of energy that affects a patient's participation in the activities of daily living and work. Fatigue is observed at all stages of disability and clinical forms of the disease. The causes of fatigue in MS are multifactorial and not well understood. Fatigue has been associated with dysfunction in the central nervous system and in immune- and neuroendocrine regulation. Pro-inflammatory cytokines, over activity of neural circuits, defects in pre-frontal basal ganglia circuitry, and axonal injury have been suggested as possible mechanisms. Depressive symptoms, impaired sleep, heat sensitivity, physical deconditioning, and medications have also been related to fatigue in MS (Induruwa et al., 2012).

Promoting quantity and quality sleep is an essential factor for ensuring optimal performance during work time. Generally speaking, majority of people need about 8 h of sleep per day to preserve full alertness. A few people can function well on sleep less than 8 h. Obtaining only 6 h for an individual who requires 8 h of sleep result to sleep-deprivation by 2h. It is recommended to have adequate resting time before a shift. The data showed that risk of fatigue increased exponentially at the 12-h shifts and early start shifts. It is necessary to avoid overtime on 12-h shifts and provide at least a 24-h break between shifts. (Folkatd S, Lombardi DA, Tucker PT.)

The major need for the people is sleeping but when the peoples don't get enough amount of sleep so that they feel fatigue during their work and the med-school learners are affected as much as they work to get better performance in the academic side. For that we use Fatigue severity scale with 9 questions to the person whom we are going to check their level of fatigue and we calculate the profile and recommend how to get rid of with this disorders. (BOMBARDIER.C.,1996).

Fatigue severity scale is used to measure how much the student is affected with fatigue due to their hard working on studies to perform in the academic. There is a confusion between fatigue and sleepiness and this will be revealed in our research work that will



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исследовательская работа)

- 3 -

confirm you that the symptoms are independent in disturbances of sleep. To support our research we use Fatigue severity scale(FSS) for the investigation of disorder in sleep or it's because of fatigue problems. (FORBES.R.S.,2002).

This scale is frequently used to find the fatigue score and to provide them a good recommendation to get rid of these disorders but it doesn't generate the state of health which is valuable that are very cost efficient and applicable to every person's. It's based on the measurable the EQ-5D-3L,SF-6D and this was also measured in Multiple Sclerosis impact Scale -8D.The objective of this research to make statistical methods and graphical representation (FORBES.R.S.,2002).

This study was done in VOLGOGRAD STATE MEDICAL UNIVERSITY. Excellent guidance and support was given by the professors on the department of normal physiology to us in. The study was successfully and recieved good results on tests done with the help of the Fatigue severity scale.

LITERATURE REVIEW:

The main burden of the med-school learners is that they carry more loads of academic which may affect potential contribution of their sleep. They usually get poor sleep during the night time and often they get REM which is abbreviated as rapid eye movement which everyone experience in these upcoming fashion world. There is a literature review of med-school learners on the experience about sleep mean while it attempts a chance of risk is more, higher for the students of the other profession other than medicine and also for the general peoples. There are several risk factors like attitude of students who study medicine, should be given proper learnings about the importance of sleep, the demand of performance in the side of academic risk causing agents, which is potential are not understandable and it is incomplete. University students experience disturbances in their circadian cycle because of the stress of the academic environment, which is increased by habits such as surfing the Internet, watching television, and using alcohol and tobacco, habits that are common in this population. Improved sleep quality is associated with engaging in sports and extracurricular activities. (Mesquita G, Reimão 2010;68(5):720–72)

The expansion of disorders of sleep and also the distances that occur during sleep has an bad reflection on the academic side. This is the main goal to go through the work on the literature according to sleepiness disorders, work due to that the problems of sleep may occur, the college should give awareness of sleep, This is about UG medical school students sleep disorders. This are recorded and mentioned on sleep



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- 4 -

disorder awareness, it is accompanied for the medical student sleep which is poor and make impact in the problem which arises due to sleep & accompany & brings the performance on the study, state of ability to perform physiological functions normally. These makes the trainers in the med-school to make a literature and professor awake to make necessary procedure to bring up the student's life in a better way. Identify the factors that influence the learners in the med-school(ERNSTSSON.O.P.,2017)

Academic achievement is one of the reasons why students alter their sleep pattern in college . Good sleep quality has been shown to be a predictor of better academic performance among college students Sleep duration has also been shown to influence academic performance although the research findings have been inconsistent: while most studies documented association between better academic performance and optimum sleep duration (7-8hours of sleep per night few reported no association Notably, one study documented a U-shaped association, where both long (> 8 hours) and short (<6 hours) sleep duration result in poor performance Since impairment in sleep quality directly affects academic performanceand also emotional aspects, we emphasize the importance of measuring sleep quality in medical students and monitoring it across the various phases of the medical course. (Lemma S, Berhane Y, Worku A, Gelaye B, Williams MA 2014;18)

We should make a good capacity of understandable on the basic knowledge of sleep diseases in their trainings due to the course they study in medicine, more essential for the students of medical college. This is provided to increase personal knowing of learners. While they study about the sleep disorders in med-school. Which may also help for their own health condition and they will take care of the student performance in the academic performance the Fatigue Sleepiness Scale(POWELL.R.K.,1984)

The problems lead to sleeping abnormalities like REM (rapid eye movement), blabbering during sleep (this is due to thinking of some problems before sleeping), sleepwalking (this is due to thinking of some work before sleeping). Pre-sleep cognition such as rapid thinking, planning, being stressed worrying and analyzing about worries at the time offset may lead to the disorder named Insomnia.To avoid kind of complaints there should be classes for med-students and trainers in medical colleges should be given awareness in the topic of disorders that may occur due to lack of rest.(SIDOVAR.M.B.,2013).



They will be getting self-awareness on the disorders of sleep and general studies gain them a knowledge that which appear and factors are more for the sleep disorders, so improving the education style may be helpful in beneficial contribution & invention in the world. Hereby we should give them a sample evidence for condition of the problem, there we should start a detailed study in the criteria to explain & expand ideas to the innovation to educate more peoples for the education based on the sleep for the students those who are still in med-school, and to identify those who undergo of this risk, and teach them with some awareness program on sleep to bring the life quality better. Now we understand the important to know how much we need sleep. If we are not sleeping properly we should know the future problems we will get lack of rest.(TREMMAS.I.G.,2018).

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исследовательская работа)

- 6 -

The needed thing in the life is sleep. The learner and the trainer need to improve outcome among the peoples they treat. This factors are classified as two such as environmental and inner body factors. The bio-resources (metabolic) like hyper arousal in the ANS and anterior gland of pituitary hypothalamus & axis of adrenal gland over activation factor for predisposing; the events which leads to increase stress level due to problems in the relations, due to tests of semester may provide sleep abnormalities for precipitating, worries of future may lead to abnormalities of sleep which may lead to increase of psychological & tension & pressure.(HAWTON.A.J.,1995).

This review is documented for the future reference of med-students studying in foreign countries they undergo more stress and heavy work load on them. So, we use FATIGUE ASSESSMENT SCALE/Fatigue Assessment Scale to determine the med-learners capacity of sleep & to provide lectures based on the disorders of sleep lack of rest.FSS total scores and this will be considered on the norms of the FSS TO determine the stage of fatigue they belongs to and this was a correlation of the coefficient that leads to the difference between the values resulted from spearman correlation which is the coefficient that assessed to determine the stage of fatigue on the med-school learners.

MATERIALS AND METHODS:

Fatigue is highly prevalent and has a negative impact on quality of life and performance in a variety of disorders. The nine item Fatigue Severity Scale (FSS) is one of the most commonly used questionnaire to measure fatigue To determine the correct accurate value of victim tiredness affect impact we are using the (FSS), but there is one problem we can't create the life value until we are getting the information about cost-effective analysis, and by limitation of the work we can get the relation. This objective study is helpful to creating blue print for statistical methods. Statistical method is help to convert (FSS) score to the state utility valued by the base measure.

The measure of source and target is related by measuring the statistical convention that are reported in the blue print. Here we are taking five models by the regressive selection called regressive models.



The following ten statements refer to the usual feelings experienced . For every statement you can choose one out of five answer categories, varying from Never to Always. Answers should be provided for every question.

1 = Never, 2 = Sometimes; 3 = Regularly; 4 = Often & 5 = Always.

- I am bothered by fatigue.
- I get tired very quickly
- I don't do much during the day.
- I have enough energy for everyday life.
- Physically, I feel exhausted.
- I have problems to start things
- I have problems to think clearly.
- I feel no desire to do anything.
- Mentally, I feel exhausted.
- When I am doing something.

This cross sectional study with the Fatigue Assessment Scale measured from 10 students from the VOLGOGRAD STATE MEDICAL UNIVERSITY.

FATIGUE SEVERITY SCALE:

The Fatigue Severity Scale (FSS) is one of the most frequently used inventories for measuring fatigue in people with chronic illnesses. The original FSS is a nine-item unidimensional questionnaire developed by Krupp, LaRocca, Muir-Nash, and Steinberg (1989) Each item consists of statements that are scored on a seven-point Likert type scale ranging from 1 (“strongly disagree”) to 7 (“strongly agree”). The mean score of the items is used as the FSS score. Some studies have calculated an FSS score as the sum of all nine items.

Developers Krupp and colleagues conducted an initial psychometric evaluation of the FSS and found an internal consistency of .88 and a test-retest reliability of .84. Scores on the FSS were significantly higher for individuals with multiple sclerosis and systemic lupus erythematosus than they were for healthy control participants; additionally, results on the FSS were found to be significantly correlated with scores obtained using a previously established measure of fatigue.



This objective study is helpful to creating blue print for statistical methods. Statistical method is help to convert F S S score to the state utility valued by the base measure.

In the report scale we are taking 9 victim about the fatigue. We are noting the severity and the affect and activities. By arranging the points that are received from answering by the victim. The points are arranged in seven points (ONE to SEVEN).

- 1) ONE means highly disagree.
- 2) SEVEN means highly agree.

From this we are having a clear information that is the possible maximum score is 9 because of 9 victim and the highest point is 63.

1. MORE THAN SEVEN = SEVER FATIGUE
2. MORE THAN SEVEN = MORE AFFECT ON PATIENT

ACTIONS.

The understanding of this method is very simple and the average taken by the victim to answer up to 6-8 minutes.

Fatigue Severity Scale Questionnaire								
FOR ONE WEEK ON RESEARCH	Agreement scores							
	I	II	III	IV	V	VI	VII	VIII
1. I can't think or boost up me during fatigue	4	3	5	3	1	4	3	2
2. Daily workouts while fatigue	2	3	5	5	2	1	3	4
3. No complication	2	3	4	5	2	4	2	2



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исследовательская работа)

- 9 -

4. Due to fatigue my muscles are week and dull	4	2	1	5	4	2	3	1
5. Due to fatigue I'am having more problems	3	5	1	2	2	5	2	3
6. Due to fatigue I want to do some personal work	4	2	3	5	1	2	5	2
7. Some muscle functions are prevented	1	3	5	2	2	3	5	2
8. There are three symptoms of fatigue	3	3	4	4	4	5	5	2
9. All are in fatigue	2	2	4	2	3	3	5	3

RESULTS:

The results were found by making the measurement based on Fatigue Severity Scale.

Total student's: 10

Standard deviation: 1.5

Mean: 3.6

The high level FSS scores denoting that the subject had disturbance in cycle of circadian that can lead to fatigue & impairment the functions



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ОТЧЕТ по производственной
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исследовательская работа)

- 10 -

SUMMARY:

There is a need for health promotion measures, such as proposals of changes in adopted health behaviors specifically related to good sleep hygiene, among the population of higher education students. Such proposals are found in the literature and are targeted at the general population, but they are also applicable to and indispensable for populations such as that of the present study. The university work load and the amount of information which is required to be remembered by the medical student is enormous. They need to achieve this in very short periods of time, usually this leads to sacrifice of their sleeping time and quality of sleep. The high level FSS scores denoting that the subject had disturbance in cycle of circadian that can lead to fatigue & impairment the functions. Preventive measures must be implemented for the proper cycle of resting period and to get away from negative results of low sleeping period. Following a proper timetable for management of work may give hand in the daily life of students studying in medical university. We aim to promote mental and physical health for students by regulating their sleep, while they achieve high grades and lead an active, healthier life. Stress is a major cause of sleep disorders. People are exposed to variety of stressful factors in their daily life; where a stressor can be social, financial, environmental, educational, health issues or a combination of them. therefore, concluded score cannot be generalized to every health sciences students.



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