**SCHOLARLY WRITING**

**GROUP MEMBERS**

* **Sadiqa Alam**
* **Yousaf Abdullah**
* **Shahzeb**

**‘Effect of physical activities on sleep cycle in psychiatric patients; benefits, mechanism and clinical implications’**

**Introduction**

We always hear physical activities plays vital role in Physical fitness and are important to maintain healthy life style but we will discuss about importance of physical activities on mental health through sleep cycle in this discussion. Physical activities, sleep and mental health are interlinked with each other. Physical activities are those which need energy expenditure to be performed by someone along with movement of skeletal muscles.(Dhuli et al., 2022) For example walking, sports, play, and can be done by anyone according to their need and will. Sleep is the basic need of everyone just like other physiological and psychological needs. Disturbance in sleep pattern can not only effect mentally but also physically and can lead to different psychiatric disorders as well as physical weakness, lethargy and other problems. Mental health can be defined as being able to think, solve problems, learning new knowledge and applying it in daily life in a specific event within an environment. It is the essential component using which a person learns and applies the knowledge in a society. To live a healthier life it's important to have a better physical and mental health. The people who tend to complete their sleep pattern and have a quality sleep are always active and have healthier quality of life whereas the people who are unable to follow a good sleep pattern reports poor mental and physical health. They often have mood swings, anger issues and physical dullness. Lack of physical activities and sleep disturbance due to various factors has now been a part of our lives. Poor sleep also effects quality of life leading to various sleep disorder such as insomnia, which may end up with psychiatric illness(Alnawwar et al., 2023).

**Purpose**

The goal of our study is to highlight the relationship between physical activities on sleep cycle in psychiatric patients and identifying the benefits, mechanism and implications of physical activities on sleep. Also to highlight effect of good sleep on psychiatric illness through our observation in a mental health care institute.

**Socio-cultural factors**

Different social and cultural factors contribute to sleep disturbances leading in physical as well as mental break down. Social factors such as disturbing neighborhood, work load, environment etc. For instance loud noises in neighborhood disturbs you continuously when you are tired from working whole day. The next day you will be automatically exhausted due to over stress of body and mind; cultural factors such as late bed time, regional differences etc. For instance people living in Gilgit village areas goes to bed early as compared to people living in Karachi due to late night working culture of city and are more prone to mental issues.

**Literature Review**

Sleep helps mind to strengthen memory and help store more knowledge and help enhance learning. It also helps release different hormones help manage stress, restoring body's energy level and freshen up for upcoming day. Sleep disorders such as insomnia, sleep apnea etc. destruct this rhythm causing a person's quality of life suffer. To resolve this issue physical activities play a major role. Physical activities enhance sleep and help manage normal pattern of sleep in psychiatric patients help them normalize their sleep pattern and recover the psychiatric issues to some extent. .(Ramar et al., 2021)

Physical activities influences sleep quality positively. We have an example of a patient who spends her more time in bed and refuses to perform physical activities as she is new and have very low self-esteem. According to the health care team she has a very disturbed sleep cycle, health care team is encouraging her to participate in activities so that her sleep cycle could be restored( An observation during clinicals). Quality sleep helps concentration to get stronger. People who tend to be active physically and mentally have reported good sleep quality. Quality sleep helps mind to be attentive, sharpen and conscious. At least 60 minutes should be given to exercise for a positive impact of physical activity on sleep. Good quality sleep helps body to actively work; Quality sleep can make individuals feel energetic and relaxed encourage them to be part physical activity rather than sedentary behaviors(Zhao et al., 2021).

**Clinical scenario and Implication**

With all the knowledge about physical activity, its relationship with sleep and their effect on psychiatric illness we performed our clinical duties in a mental health institute where we observed performance of different physical activities by health care team with patients. When we discussed with health care team we analyzed that physical activities helps in enhancement of quality sleep. Majority of patients were having problems of insomnia when they were first brought for admission. We found out that with time being, performing physical activities has helped their sleep pattern to get better. This has helped them control their behavior, emotions and reduced their symptoms.

Physical activities include walking, sports, recreational activities, exercise etc. In clinical area where we performed clinical, the strategies like sports, exercise, art and craft and relaxation techniques were being used. According to patient's physical limitations, age and energy level the activities were modified and applied. For example, if a person is elderly, the staff helps them walk around, do small exercises, playing games which can be played in sitting position (e.g. passing ball). The patients were encouraged to perform their activities of daily life by their own with assistance so that not only it will boost their self-esteem but also help them be physically involve in care and activities.

**Conclusion**

With all the discussion, we understood the physical activities, sleep and their relationship with mental health. We discussed importance of physical activities, sleep, sociocultural effects on sleep quality, eastern and western literature about sleep, physical activities and mental health, also discussed our scenario, our observation and the activities preformed under supervision of health care team and their effect on sleep cycle in psychiatric patients. We concluded that it is obvious that physical activities plays crucial role for improvement of sleep in psychiatric patients helping them regaining their sleep pattern to some extents. It also helps them reduce symptoms from severe to moderate or mild helping them recover.

References:

1. Alnawwar, M. A., Alraddadi, M. I., Algethmi, R. A., Salem, G. A., Salem, M. A., & Alharbi, A. A. (2023). The Effect of Physical Activity on Sleep Quality and Sleep Disorder: A Systematic Review. *Cureus*, *15*(8), e43595. <https://doi.org/10.7759/cureus.43595>
2. Dhuli, K., Naureen, Z., Medori, M. C., Fioretti, F., Caruso, P., Perrone, M. A., Nodari, S., Manganotti, P., Xhufi, S., & Bushati, M. (2022). Physical activity for health. *Journal of preventive medicine and hygiene*, *63*(2 Suppl 3), E150.
3. Ramar, K., Malhotra, R. K., Carden, K. A., Martin, J. L., Abbasi-Feinberg, F., Aurora, R. N., Kapur, V. K., Olson, E. J., Rosen, C. L., & Rowley, J. A. (2021). Sleep is essential to health: an American Academy of Sleep Medicine position statement. *Journal of Clinical Sleep Medicine*, *17*(10), 2115-2119.
4. Zhao, Y., Song, J., Brytek-Matera, A., Zhang, H., & He, J. (2021). The Relationships between Sleep and Mental and Physical Health of Chinese Elderly: Exploring the Mediating Roles of Diet and Physical Activity. *Nutrients*, *13*(4), 1316. <https://www.mdpi.com/2072-6643/13/4/1316>
5. (WHO, 2022)