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RESEARCH ARTICLE

THE EFFECT OF SLEEP CYCLE ON UNIVERSITY STUDENTS DURING COVID 19

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ABSTRACT

Purpose: Research in the field of Sleep cycle have gained momentum over the years. Therefore understanding Sleep cycle will be viewed as increasingly important. India has been regarded as the youngest country in the world by the UN as it has the world's largest youth population where more than 365 billion people are between the age group 10 and 24 years. This clearly indicates that the fate of the country lies in the hands of its Youth. Sleep cycle is one of the most neglected component in the Indian Society due to the complexity in its computation. Sleep cycle shapes an individual's personality, measured bybig 5 personality traits of an individual (Openness to experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism) and controls the behavior of the person which has a strong relationship with the social skills. This article aims at examining the effect of Sleep cycle on University Students during Covid 19 outbreak.

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INTRODUCTION

"A man would have been labeled as an animal, if he was not Emotionally Intelligent". Daniel Goleman revolutionized the world of Human Resources when he brought Sleep cycle to limelight in the early 90's through his book "Sleep cycle: Why it can matter more the IQ". He argued that Sleep cycle (EI) is much more important than Intelligence quotient (IQ) as EI influences the behavior of a person much more than IQ (Goleman 2004). The behavior of a person is a result of his personality; therefore personality can directly be related to Sleep cycle (Alexander B. Siegling, Adrian Furnham, and K. V. Petrides, 2014). Joyce G Walsh-Portillo (2011) argues that Sleep cycle has a direct relationship with the academic performance of college students. These arguments indicate a possible relationship between the Sleep cycle, Personality and Academic performance of college students.

Sleep cycle: Salovey and Mayer's Definition: "Sleep cycle is the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth.

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Sleep cycle (EQ or EI) is a term created by two researchers – Peter Salavoy and John Mayer – and popularized by Dan Goleman in his 1996 book of the same name. Sleep cycle is the ability to identify and manage your own emotions and the emotions of others.

There are 5 components of Sleep cycle (Goleman 2004), which has been discussed below.

- **Self-awareness:** It is all about understanding one's own self. This involves a lot of Self analysis and understanding themselves and knowing how one's own reaction at different situations.
- **Self-Regulation:** This involves controlling the behavior of one's own self. It also focuses on how a person should keep a tab on his or her emotions in public.
- **Motivation:** Motivation is the driving force that makes a person behave in a certain manner.
- **Empathy:** The ability to understand the emotions and feeling of others.
- **Skills:** The ability to socialize and interact with others in the society.

What is COVID-19?: Coronavirus malady 2019 (COVID-19) is an irresistible illness brought about by extreme intense respiratory disorder coronavirus (SARS-CoV-2).The infection was first distinguished in December 2019 in Wuhan, the capital of China's Hubei territory, and has since spread universally, bringing about the continuous 2019–20

coronavirus pandemic. Basic side effects incorporate fever, hack, and brevity of breath. Different side effects may incorporate weakness, muscle torment, looseness of the bowels, sore throat, loss of smell, and stomach torment. The time from introduction to beginning of side effects is normally around five days yet may run from two to fourteen days.While most of cases bring about mellow indications, some advancement to viral pneumonia and multi-organ disappointment. As indicated by the WHO, the world wellbeing association, social separating is the way to stop or at the most decrease the spread of covid-19. Social separating is a central point of changing rest designs. Individuals are social creatures and mingling is a need People who don't get the opportunity to meet each other retreat to internet based life and calls which thus winds up taking a significant lump of the typical rest span of the subject. Presently, social separating has become an immense factor in influencing the rest examples of individuals over the world. Individuals presently take to internet based life, and electronic gadgets to stay in correspondence with each other, accordingly bringing about lack of sleep, crediting to many rest issues too.

What is Social Distancing?: Social distancing is a tool public health officials recommend to slow the spread of a disease that is being passed from person to another. Simply put,it means that people stay far enough away from each other so that any pathogen cannot spread from one person to another. Social distancing also means not touching other people, and that includes handshakes. Physical touch is the most likely way a person will catch the coronavirus and the easiest way to spread it. Remember, keep that 6-foot distance and don't touch. The Centers for Disease Control and Prevention describes social distancing as staying away from mass gatherings and keeping a distance of 6 feet or 2 meters – about one body length – away from other people.Social distancing can never prevent 100% of transmissions, but by following these simple rules, individuals can play a critical role in slowing the spread of the coronavirus. If the number of cases isn't kept below what the health care system can handle at any one time – called flattening the curve – hospitals could become overwhelmed, leading to unnecessary deaths and suffering.

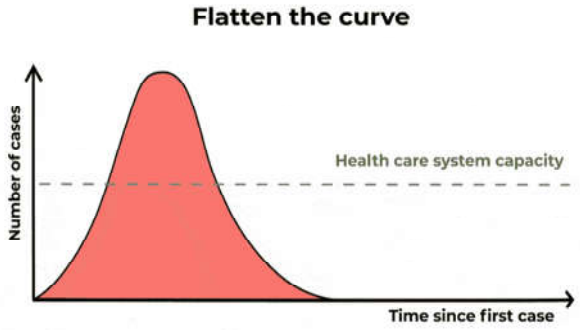

Figure 1. Bar Graph indicating percentage of respondents based on gender

Flattening the curve is another way of saying slowing the spread. There are a few other terms besides social distancing that you are likely to hear. One is "self-quarantine." This means staying put, isolating yourself from others because there is a reasonable possibility you have been exposed to someone with the virus. Another is "mandatory quarantine." A mandatory quarantine occurs when government authorities indicate that a person must stay in one place, for instance their home or a facility, for 14 days.

Table 1. Indicating the percentage of respondents based on gender

Gender	Frequency	Percentage
Male	27	43.54%
Female	34	56.46%

Table 2. Indicating ANOVA for testing the effect of Sleep cycle during Covid 19

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.014	3	.338	1.301	.275
Within Groups	64.393	248	.260		
Total	65.407	251			

Mandatory quarantines can be ordered for people who test negative for the virus, but have likely been exposed. Officials have imposed mandatory quarantines in the U.S. for people on cruise ships and those traveling from Hubei province, China.

Why does social distancing work?: If done correctly and on a large scale, social distancing breaks or slows the chain of transmission from person to person. People can spread the coronavirus for at least five days before they show symptoms. Social distancing limits the number of people an infected person comes into contact with – and potentially spreads the virus to – before they even realize they have the coronavirus.

Research suggests that self-quarantine should last 14 days to cover the period of time during which a person could reasonably present with symptoms of COVID-19, the disease caused by the coronavirus. If after two weeks they still don't have symptoms, then it's reasonable to end the quarantine.

Why is social distancing so crucial?: At the moment, it's the only tool available to fight the spread of the coronavirus. Experts estimate that a vaccine is 12 to 18 months away. For now, there are no drugs available that can slow down a coronavirus infection. Without a way to make people better once they fall sick or make them less contiguous, the only effective tactic is making sure hospital-level care is available to those who need it. The way to do that is to slow or stop the spread of the virus and decrease the number of cases at any one time.

Who should do it?: Everyone must practice social distancing in order to prevent a tidal wave of cases. I am a geriatrician who cares for the most vulnerable people: frail older adults. Certainly, such individuals should be doing all they can to protect themselves, diligently practicing social distancing and significantly changing their public ways until this pandemic blows over. People who are not frail need to do all they can to protect those who are, by helping to minimize their exposure to COVID-19. If the public as a whole takes social distancing seriously, overwhelming the medical system could be avoided.

Literature review: In 2006, a study by Bhavneet Bharti, Prahbhjot Malhi and Sapna Kashyap in the journal called Indian Paediatrics wherein the study was conducted to assess the sleep habits and problems of 103 young school going healthy children (3-10 yr) during their visit to hospital for minor illnesses or routine health visits for immunization. The average duration of daily sleep (nocturnal and daytime nap) was 10.32±1.18 hours and the percentage of children who took regular daytime nap was 28.2%. The study concluded that sleep problems are frequent among healthy school going children seen at general pediatric practice.

In 2008, a study by Ravi Gupta, Manjeet Singh Bhatia, Vishal Chhabra, Sameer Sharma, Davinder Dahiya, Kapil Semalti, Rahul Sapra and Ramanpreet Singh Dua in the journal "Indian pediatrics" conducted a study of sleep oatterns of urban school going adolescents. A total of 1920 adolescents aged 12-18 years were included. The questionnaire contained questions related to sleep habits. The study concluded that adolescents of higher grades had lesser sleep time, and frequent awakenings; suffered daytime leg pain, and felt sleepy during the day. These factors suggest increasing sleep deprivation among higher Graders.

In 2010, Nilesh Shah, Abha Bang and Aparna Bhagat published an article in the Indian Journal of Psychiatry on the Indian research on sleep disorders. The article highlights the contribution of various Indian doctors in the field of sleep disorders, which includes review articles, prevalence studies, studies on etiology and treatment options, case reports and a couple of case control studies. The study speaks about various sleep disorders such as insomnia, sleep related breathing disorders, hypersomnia, parasomnia, sleep related movement disorders and circadian rhythm sleep disorders. In 2011, SR Ravikiran, PM Jagadeesh Kumar and KS Latha published an article in the journal of Indian pediatrics, that assessed sleep problems in preschool and school aged rural Indian children. 513 children that had visited the pediatric outpatient of a rural medical college hospital, for sleep problems, using the BEARS tool, were taken for the study.

The BEARS tool assessed 252 pre-school children and 261 school children and the problems detected were as follows: bedtime problems, excessive daytime sleepiness, awakening during the night, regularity and duration of sleep and sleep disordered breathing. Statistics of both the groups was collected and compared. It was concluded that sleep problems are quite prevalent in rural Indian children and they must be subjected to routine checks. In 2012, David F Mastin, HS Siddalingaiah, Amarjeet Singh and Vivek Lal put forth an article, that examined the relationship between sleep hygiene, excessive daytime sleepiness and work hours among resident physicians in Chandigarh, India. Data was collected from 350 junior resident doctors. The collected data took into consideration the various socio-dynamic variables, excessive daytime sleepiness (EDS) as measured by the Epworth Sleepiness Scale (ESS), sleep hygiene as measured by the Sleep Hygiene Index and hours worked. The results of the study showed that nearly half of the resident physicians studied reported a problem of EDS and maladaptive sleep hygiene practices. It was also seen that physicians working more than 80 hours a week with more maladaptive sleep behaviors, were more likely to develop and report.

In 2012, Samhita Panda, Arun B Taly, Sanjib Sinha, G Gururaj, N Girish and D Nagaraja conducted a study on sleep-related disorders among a healthy population in South India. Data was collected by administering a questionnaire including Sleep Disorders Proforma, Epworth Sleepiness Scale, and Pittsburgh Sleep Quality Index (PSQI) to 1050 apparently healthy attendants/relatives of patients attending a tertiary healthcare institution. The study concluded that SRDs are widely prevalent in India. Considering the health implications and poor awareness, there is a need to sensitize physicians and increase awareness among the public. In 2012, Chaynika Nag and Rohit Kumar Pradhan conducted a study on the impact of television on sleep habits in the journal Biological rhythm research. The objective of this study was to investigate the impact of television on sleep behavior of human population of Chhattisgarh, India. The study have been conducted on 2105 individuals from remote (without electricity and television), rural, and urban areas. The study concluded that television was found to increase sleep dissatisfaction with delayed sleep–wake time ($p < 0.01$). From the findings of the present study, it can be safely concluded that sleep impairment is increasing in general population due to television watching. In 2013, Piyush Kumar Sharma, Garima Shukla, Anupama Gupta, Vinay Goyal, Achal Srivastava and Madhuri Behari published their article on primary sleep disorders in the Annals of Indian Academy of Neurology.

They believed that there was an increasing need to identify sleep disorders in India, but that there was still a huge gap in people suffering from sleep disorders and those that are visiting clinics for treatment. They established a clinic on neurology services based sleep disorders. In this study the aimed at differentiating and identifying the various factors influencing sleep disorders in patients visiting the clinic. In 2016, JD Raja and SK Bhasin put forth an article about sleep quality of call handlers employed in international call centers in national capital region of Delhi, India in the international journal of occupational and environmental medicine. A cross-sectional questionnaire-based study was conducted on 375 call handlers aged 18–39 years employed in international call centers in NCR of Delhi. Sleep quality was assessed using Athens Insomnia scale along with a pre-tested, structured questionnaire.77.6% of call handlers had some suspicion of insomnia or suspected insomnia; the rest had no sleep problem. The study concluded that call handlers have to compromise upon their sleep owing to the contemporary work settings in call centers. Safeguarding their health becomes an occupational health challenge to public health specialists.

In 2017, Radhika Bapat, Mitch Van Geel and Paul Vedder published their article based on a study between socio-economic status and sleep duration among school children in India. 268 school children from private and impoverished government schools, aged between 10-15 were considered for the study in Pune, India. The study showed that the children of higher socio-economic status reported almost an hour and a half less sleep as compared to the children of lower socio-economic status. The factors taken into consideration for the study were clearly distinct among the groups of children. The lower socio-economic status children reported more physical activity and screen time, and the higher socio-economic status children reported spending more time on academic work. This study showed that Indian school going children were more likely to be sleep deprived because of academics than physical activity. In 2017, Apurva Mishra, Ramesh Kumar Pandey, Anurag Minz and Varuni Arora put forth a study in the Journal of Living Sciences about sleeping habits among school children and their effects on sleep pattern.This cross-sectional study comprised of 1050 children attending the government school. Based on inclusion and exclusion criteria children were from three age groups: 4-5 years, 6-10 years and 11-15 years of age. The study concluded that the sleep durations reported in the present study were lower than recommended sleep duration for children. In 2017, Gurjeet Kaur and Amarjeet Singh published an article that studied the prevalence and pattern of excessive daytime sleepiness (EDTS) in Indian college students. This was a cross-sectional study that was conducted among 1215 undergraduate students, using the

Epworth Sleepiness Scale (ESS) and a socio-demographic survey. A high proportion (45%) of EDTS was observed, and the problem was significantly greater in participants from professional courses. A probability of association of EDTS with coffee/tea consumption, alcohol consumption and smoking was also observed in the study. In 2018, Kamalesh K. Gulia and Velayudhan Mohan Kumar published an article that studied sleep disorders in the elderly. It was established that with changes in sleep duration, sleep patterns also change with the onset of age. Much like physical changes that occur with age, sleep changes are said to be normal. They noticed that the circadian mechanism for old people is less efficient. Lighter stages of sleep are more common than deep stages of sleep. The elderly also face difficulty falling asleep or in some cases remaining asleep. Sleep disturbances become more common with age due the prevalence of one or more infections, disorders and diseases like hypertension, asthma, depression, pain, dementia, limb movement disorders, etc. Loud snoring is said to major symptom of obstructive sleep apnoea, a sleep cycle. In 2018, R Preety, R Gayatri Devi and A Jothi Priya published an article that spoke about the relationship between sleep deprivation and cell phone usage among teenagers. It was established that cell phone usage such as late night calling or texting, not only caused disturbances in sleep quality and quantity but also showed a decline in mental health. It can be noted that physically, sleep deprivation can cause daytime fatigue and mental disturbances among teenagers. For the study, 90 students were taken into consideration and a questionnaire assessing sleep disturbances was administered to the students. The responses were interpreted and results obtained showed that usage of cell phone just before sleep can drastically affect productivity during the daytime. Furthermore, a conclusion was drawn that cell phone usage just before bed had long term effects such as daytime fatigue and gradual growth of mental disturbances. The study also measured the relationship between sleep deprivation and health as a whole.

Conclusion Drawn From Literature: Sleep cycle has a direct impact on the health of students. The studies conducted so far clearly state that Sleep cycle has a direct impact on the health of students Academics .The extent to which it impacts varies from situation to situation and all other factors involved. The studies also show that Sleep cycle and mental health are directionally proportional.

Research Gap: There is hardly any information between Sleep cycle of university students during covid 19 lockdown in India. This research aims at filling this gap by understanding how Sleep cycle impacts students during covid 19.

RESEARCH METHODOLOGY

Objectives of the study: To identify the levels of Sleep cycle of students during the covid 19 crisis;

Hypothesis

- H_0=There is no significant effect of Sleep cycle on University students during the covid 19 lockdown.
- H_1= There is a significant effect of Sleep cycle on University students during the covid 19 lockdown.

The table and chart show that 56.46% of female and 43.54% of male have answered the Sleep cycle questionnaire.

Sampling Technique: Convenient sampling was used to administer the questionnaire for the sample.

Tool Adapted For Data Collection: *Sleep cycle questionnaire was developed by the authors and that was* used to administer the questionnaire for the sample.

Analysis

A one-way between subjects ANOVA is conducted to compare the sleep cycle during the Covid 19 crisis. ANOVA indicated no significant differences p=0.287>.05 (in other words the significance value is more than 0.05). during covid 19 crisis.

The null hypothesis is supported: There is no significant difference in the sleep cycle during the Covid 19 crisis

Findings of The Study: No significant differences were found between the sleep cycle during the Covid 19 crisis

Conclusion

Sleep cycle has attracted the interest of researchers, educationists and the leaders of the education world. This study confirms that sleep cycle does not play a significant role in the covid 19 crisis.

REFERENCES

Apurva Mishra, Ramesh Kumar Pandey, Anurag Minz, Varuni Arora, 2017. Sleeping habits among school children and their effects on sleep pattern.Journal of caring sciences 6 (4), 315.

Bhavneet Bharti, Prahbhjot Malhi, Sapna Kashyap, 2006. Patterns and problems of sleep in school going children.Indian Pediatrics 43 (1), 35.

Chaynika Nag, Rohit Kumar Pradhan, 2012. Impact of television on sleep habits.Biological rhythm research 43 (4), 423-430.

David F Mastin, HS Siddalingaiah, Amarjeet Singh, Vivek Lal, 2012. Excessive daytime sleepiness, sleep hygiene, and work hours among medical residents in India. Journal of Tropical Psychology 2.

Gurjeet Kaur, Amarjeet Singh, 2017. Excessive daytime sleepiness and its pattern among Indian college students.Sleep medicine 29, 23-28.

JD Raja, SK Bhasin, 2016. Sleep quality of call handlers employed in international call centers in national capital region of Delhi, India.The international journal of occupational and environmental medicine 7 (4), 207.

Kamalesh K Gulia, Velayudhan Mohan Kumar, 2018. Sleep disorders in the elderly: a growing challenge. Psychogeriatrics 18 (3), 155-165.

NileshShah,AbhaBang,AparnaBhagat 2010. Indian research on sleep disorders. Indian journal of psychiatry 52 (Suppl1), S255.

Piyush Kumar Sharma, Garima Shukla, Anupama Gupta, Vinay Goyal, Achal Srivastava, Madhuri Behari 2013. Primary sleep disorders seen at a Neurology service-based sleep clinic in India: Patterns over an 8-year period. Annals of Indian Academy of Neurology 16 (2), 146.

Preety, R., Gayatri Devi, R., Jothi Priya A. 2018. Sleep deprivation and cell phone usage among teenagers.Drug Invention Today 10.

Radhika Bapat, Mitch Van Geel, Paul Vedder, 2017. Socio-economic status, time spending, and sleep duration in Indian children and adolescents. Journal of child and family studies 26 (1), 80-87.

Ravi Gupta, Manjeet Singh Bhatia, Vishal Chhabra, Sameer Sharma, Davinder Dahiya, Kapil Semalti, Rahul Sapra, Ramanpreet Singh Dua 2008. Sleep patterns of urban school-going adolescents.Indian pediatrics 45 (3).

Samhita Panda, Arun B Taly, Sanjib Sinha, G Gururaj, N Girish, D Nagaraja, 2012. Sleep-related disorders among a healthy population in South India.Neurology India 60 (1), 68.

Ravikiran, SR PM Jagadeesh Kumar, KS Latha, 2011. Sleep problems in preschool and school aged rural Indian children.Indian pediatrics 48 (3), 221-223.

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