Do Chronotypes Influence Problematic Mobile Phone Use and Sleep Quality Among the Doctors? – a Cross-Sectional Study From India

Dr Prathyusha Gopalakrishnan[1], Dr Manjula Simiyon[2]*, Dr Manikandan Mani[1] and Professor Pradeep Thilakan[1]

[1]Pondicherry Institute of Medical Sciences, Pondicherry, India. and [2]Betsi Cadwaladr University Health Board, Wrexham, United Kingdom
*Presenting author.

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Aims. This study aimed to determine the prevalence of problematic mobile phone use and its association with the chronotypes among the doctors of a medical college hospital in Puducherry, India. It also aimed to assess the feasibility of the University of Rochester Modified CAGE Questionnaire as a brief screening tool for problematic mobile phone use.

Methods. This cross-sectional study was conducted at a tertiary care teaching hospital in South India. After obtaining the Institutional ethics committee approval, doctors including consultants, higher trainees, core-trainees, and junior doctors working in various departments were approached and requested to participate in the study. Those who agreed were provided with the participant information sheet and written informed consent was obtained. Part-A of the questionnaire contained requests for personal and professional details and part B had the following questionnaires to assess problematic mobile phone use, chronotypes, phantom ringing and vibration and, sleep quality.

- Problematic use of mobile phone scale (PUMP)
- Reduced Morningness Eveningness Questionnaire (r MEQ)
- Questionnaire for Phantom ringing and Phantom vibration
- The Pittsburgh Sleep Quality Index (PSQI)
- University of Rochester Modified CAGE Questionnaire
- Data were analysed using IBM SPSS Statistics for Windows, Version 20.0 (IBM Corp., Armonk, NY, USA). Nonparametric tests were used as the data were skewed. The data were summarized by frequencies and percentages for categorical variables and median and interquartile range for continuous variables. The chi-square test was used to find the association between two categorical variables. Kruskal Wallis test was used to compare the chronotype with the continuous variables such as CAGE total, PUMP, and PSQ score. Correlation between different continuous variables was studied by using Spearman rank correlations. Kappa statistics were used to evaluate the concordance between PUMP and the University of Rochester Modified CAGE questionnaire.

Results. Neither type (NT) was the most common chronotype (41.5%), followed by morning type (38%) and evening type (20%). Eight (5.6%) doctors had problematic mobile phone use, and 38(26.8%) had poor sleep quality. Evening chronotype (p-value- 0.002), being a female (p-value- 0.014), working in a clinical department (p-value 0.017) and experiencing phantom ringing (p-value- 0.001) had significant association with higher PUMP score. Even though females had a higher median PUMP score, problematic mobile phone use was more among males. University of Rochester Modified CAGE Questionnaire had a sensitivity of 81.73% (73–88.6%), and a specificity of 28.95% (15.4–45.9%).

Conclusion. Doctors should be aware of their mobile phone usage. This study has reiterated the predilection evening chronotype has for behavioral addictions and doctors of evening type should be extra cautious.

Association Between Executive Dysfunction and Relapse of Alcohol Dependence After Deaddiction Treatment – a Cross-Sectional Study From India

Dr Pavithra Ethirajan[1], Dr Manjula Simiyon[2]*, Dr Manikandan Mani[1], Dr Jiann Loo[2] and Professor Pradeep Thilakan[1]

[1]Pondicherry Institute of Medical Sciences, Pondicherry, India and [2]Betsi Cadwaladr University Health Board, Wrexham, United Kingdom
*Presenting author.

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Aims. To assess the association between executive dysfunction and the severity of alcohol dependence, age at first drink, and the number of deaddiction treatments in the past (indicating current relapse).

Methods. This cross-sectional study was carried out in the in-patient unit of the Department of Psychiatry of a tertiary care teaching hospital in South India. Institutional Ethics committee approval was obtained. 43 Adult patients who were diagnosed with alcohol dependence syndrome according to the International Classification of Diseases (ICD-10), admitted for deaddiction treatment, whose withdrawal symptoms were adequately treated, and who did not have a severe mental or physical illness were included in the study. The hospital has the policy to offer 21 days of inpatient treatment which comprises of detoxification, motivation enhancement therapy, group therapy, and family interventions. Only those patients previously treated in the same hospital were considered to maintain, homogeneity. After briefing the patients about the procedure, a participant information sheet was provided and informed consent was obtained. A semi-structured proforma was used to collect the demographic details and information regarding alcohol consumption. AUDIT (Alcohol Use Disorder Identification Test) Questionnaire was used to assess the severity of alcohol dependence. After familiarising the participants with the study and the procedure, their executive function was assessed using Frontal Assessment Battery (FAB).

Results. The mean age of the participants was 36(SD 7.8) years. The mean age of the first drink was 21 years (SD 6). The mean duration of alcohol dependence was 5.6(SD 3.6) years. The total number of de-addiction treatments was 2.2(SD 1.2). 58% at least had a middle school education, 30% were unemployed and 48.2% belonged to lower socioeconomic status. 72% were married and 60% had a family history of significant alcohol consumption. The average duration of total abstinence was 147.5(SD 74) days. 86% consumed spirits and 14% consumed arrack regularly. The mean score on the AUDIT scale was 26.8 (SD 7.3). The mean FAB score was 11.2(SD 4.2). 53.4% had a score of less than or equal to 12 indicating executive dysfunction. Age, (p-value-0.02) number of de-addiction treatments (p-value-0.014) and the AUDIT score (p-value-0.04) had statistically significant negative correlation with the FAB score. Age had a positive correlation with the number of de-addiction treatments

Conclusion. There is a bidirectional relationship between alcohol use and executive dysfunction. By establishing a significant association between executive dysfunction and the number of de-addiction treatments indicating relapses, this study reiterates the importance of assessing executive dysfunction among this population, to prevent relapses. It can be used as a high-risk indicator for relapse and adequate preventive measures should be in place while treating these patients.

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