

Correlates of Sleep Disturbance Among Peoples Living in Jeju Island, Korea

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Aims: Individuals dissatisfied with their sleep are more likely to seek medical help, to report daytime impairment functioning, and to be diagnosed with a sleep or a mental disorder. However, none of the previous studies has examined the relative importance of the various factors correlated to sleep disturbance. This study aims to investigate the prevalence of sleep disturbance and to find the associated factors contributing to sleep disturbance in the general population of Jeju Island, the largest island in the part of South Korea.

Methods: Seven hundred and thirteen people who consented to participate in this study and completed questionnaires were analysed. The questionnaires were used to assess the participants' sleep satisfaction and general characteristics (sex, age, marital status, occupation, monthly household income, self-perceived health, smoking, drinking status, etc.); in addition, for the clinical evaluation, depression was assessed through the Center for Epidemiologic Studies Depression Scale (CES-D) and social support through Functional Social Support Questionnaire (FSSQ). CES-D cutoff score of 21 was used to define depressive disorder. The collected data were analysed using t-test, chi-square test and logistic regression analysis according to data properties and the purpose of analysis.

Results: In 713 subjects, the mean age was 58.6 ± 17.3 years, and overall, 24.9% of the subjects reported having sleep disturbance. The prevalence of sleep disturbance was higher in women than in men (60.9% vs 39.1%, crude OR=1.49, 95% CI=1.05–2.12, $p=0.028$) and increased with age (crude OR=1.03, 95% CI=1.02–1.04, $p<0.001$). The multiple logistic regression analysis demonstrated that the associated factors for the sleep disturbance were age (adjusted OR=1.04, 95% CI=1.02–1.07, $p=0.001$), smoking (adjusted OR=2.54, 95% CI=1.33–4.86, $p=0.005$) and depressive symptoms (adjusted OR=6.08, 95% CI=3.47–10.64, $p<0.001$).

Conclusion: Sleep disturbance was related to increasing age, smoking, and more depressive symptoms. The sleep symptoms are often unresolved by treatment, and confer a greater risk of depression. Previous epidemiological studies have pointed out that sleep problem is a risk factor for depression. There is, therefore, a need for more successful management of sleep disturbance, in order to improve quality of life and reduce an important factor in depression.

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Examining the Association Between Adverse Parenting Behaviour and Anterior Pituitary Gland Volume Development

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Aims: Adverse parenting behaviours (APB) are considered to contribute to the risk of depression and other psychopathologies in young people via changes in the development of the neuroendocrine stress response, particularly of the hypothalamus-pituitary-adrenal (HPA) axis. Anterior pituitary gland volume (aPGV) is emerging as a more stable biomarker of HPA axis dysregulation in comparison to cortisol measures. Although enlarged aPGV is generally understood as being reflective of chronic HPA axis hyperactivation in response to prolonged stress, there is little research that has explored the APB-aPGV relationship. Notably, there are inconsistent findings regarding longitudinal associations between APB and measures of HPA axis function (including aPGV), and it remains unclear whether exposure to APB may result in: 1) accelerated or 2) attenuated HPA axis function during childhood and adolescence. This study aims to investigate the cross-sectional and longitudinal associations between APB and aPGV in late childhood to early adolescence, in the largest sample that has been used to date.

Methods: Participants comprised 268 children and early adolescents from the community, who participated in longitudinal brain imaging and parenting assessments over two waves (in 8–13-year-old children). aPGV was calculated from T1-weighted Magnetic Resonance Imaging (MRI) scans of the children. APB was measured through two parent-report questionnaires. Exploratory factor analysis was used to reduce the subscales of the questionnaire to a three-factor structure; the factors were named neglect, low levels of positive parenting, and maladaptive discipline. Multiple linear regression was used to investigate cross-sectional associations between APB and aPGV, and linear mixed modelling was used to examine longitudinal associations between APB and aPGV.

Results: Neglect was positively associated with greater aPGV both cross-sectionally at baseline and across ages 8–13. Age did not moderate the association between neglect and aPGV longitudinally, which was stable over time. Other parenting variables were not significantly associated with aPGV changes.

Conclusion: Our findings suggest a crucial role for the experience of neglect in the development of the HPA axis during late childhood and early adolescence, supporting theories of HPA axis hyperactivation. The effect of neglect on aPGV was stable across age, suggesting that neglect may lead to advanced aPGV development, with accelerated development potentially occurring earlier in childhood. Further research that investigates the APB-aPGV relationship in a broader age range (i.e., covering the period between early childhood and late adolescence) is needed to understand developmental trajectories of aPGV in the context of APB.

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The Attitude and Knowledge of General Practitioners and Nurses Towards Severe Mental Illness in the Primary Care Facilities of the Seychelles Islands

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Aims: People with severe mental illness have a reduced life expectancy of 15–20 years compared with the general population. The current literature shows this vulnerable population are 2 to 3

times increased risk of dying from cardiovascular disease, 2 to 6 times more likely to die from respiratory disease, and an increased risk of chronic viral infections such as HIV and hepatitis C. Patient, medication, and healthcare system factors influence the morbidity and mortality of people with severe mental illness. Stigma and discrimination by healthcare workers is a key contributing factor. We conducted this novel study in the Seychelles Islands with the aim of assessing the attitude and mental health knowledge of general practitioners and nurses towards severe mental illness in all 16 government primary healthcare facilities. We also aimed to explore the association of attitude and knowledge variables with socio-demographic characteristics and compare the attitude and knowledge between the two groups. We hypothesized that the greater the knowledge and understanding of severe mental illness the more positive and supportive the attitude would be.

Methods: A probability-stratified sampling technique was utilised to recruit 42 doctors and 97 nurses. The exposure variables were the sociodemographic characteristics. The outcome variables were attitude which was measured using the Mental Illness: Clinician's Attitude Scale (MICA) and knowledge which was measured using the Mental Knowledge Schedule (MAKS). Chi-square test was used to examine the association between the sociodemographic characteristics with the attitude and knowledge variables. The threshold of significance was set at $p < 0.05$.

Results: 24 doctors and 64 nurses participated in the study with a response rate of 57.1% and 66% respectively. 66.7% ($n=16$) of the doctors were expatriates and 93.8% ($n=64$) of nurses were Seychellois ($n=64$, 93.8%). 54.69% ($n=35$) of the nurses had high knowledge and 58% ($n=14$) of the doctors had positive attitude. Male practitioners were more inclined to have a better knowledge of mental health. Doctors with postgraduate qualification had more positive mental health attitude. No statistically significant association was found between attitude and mental health knowledge in the participants.

Conclusion: The study has shown that half of the primary health workers had inadequate mental health knowledge and half of them had negative mental health attitude. Primary health workers lack training in the area of mental health. The key intervention is training in mental health. Additionally, recommendation may be made to revise the orientation programme for doctors and nurses entering the healthcare system in Seychelles.

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Tobacco Use in Schizophrenia: A Literature Review

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Aims: Schizophrenia is a mental illness with chronic course and varied outcomes, characterized by positive, negative, affective and cognitive symptoms along with aggression. Tobacco use is notably more prevalent in individuals with schizophrenia, often accompanied by severe dependence, compared with the general population. This literature review aims to explore the neurobiological mechanisms underlying tobacco use in schizophrenia, as well as potential treatment options and their associated benefits to the individual.

Methods: A comprehensive search was conducted on PubMed using the keywords “Tobacco use” and “Schizophrenia”.

Information from Free Full-text articles, including systematic reviews, meta-analyses, clinical trials, randomized controlled trials, review articles and books and documents published within the last 10 years were included, and studies published in languages other than English were excluded.

Results: The prevalence of tobacco use in patients with schizophrenia is 45–88% compared with less than 16% of general population. Nicotine acts via Nicotinic Acetylcholine Receptors (nAChRs) modulating the release of neurotransmitters. It helps improve the connectivity between salience network and other brain regions such as ventrolateral prefrontal cortex and superior parietal lobule, amongst others, which are deficient in schizophrenia.

The self-medication hypothesis suggests that tobacco reduces cognitive deficits. It also reduces extrapyramidal symptoms by inducing cytochrome P450 1A2, interacting with nAChRs in the ventral tegmental area, and inhibiting monoamine oxidase enzymes, which helps counteract dopamine reduction caused by antipsychotics.

The addiction vulnerability hypothesis suggests that genetic, neurobiological, and environmental factors in schizophrenia also increase susceptibility to tobacco use. Animal model studies also suggest that developmental limbic abnormalities which are seen in schizophrenia could also alter behaviour associated with drug use.

From a prognostic point of view, tobacco use in schizophrenia significantly increases the risk of cardiovascular diseases, shortening lifespan by up to 25 years, and raises the likelihood of metabolic syndrome. Pharmacotherapies like varenicline, bupropion (sustained release), nicotine replacement therapies (NRT), and combinations of bupropion and NRT have shown some success. Electronic cigarettes, along with psychological approaches like Acceptance and Commitment Therapy, Mindfulness, and Contingency Management (both digital and in-person), show promise. Neuromodulation via transcranial magnetic stimulation has shown some promise with limited results.

Conclusion: It is seen that tobacco use in schizophrenia is influenced by genetic, neurobiological, and cognitive factors, with nicotine causing long-term health risks and decreased effectiveness of treatment, hence proper understanding is essential for adequate patient care.

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Epigenomics and Schizophrenia: A Literature Review

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Aims: Schizophrenia is a severe mental illness, characterized by positive, negative, cognitive, affective symptoms with aggression, marked by disrupted structural and functional brain connectivity, as evidenced by neuroimaging, neurophysiological and neuropathological studies. Recent epigenetic research highlights the role of deoxyribonucleic acid (DNA) methylation, histone modifications, and non-coding ribonucleic acid (RNA) amongst others in mediating both genetic predisposition and environmental influences on gene expression as seen in schizophrenia.

Methods: A comprehensive search was conducted on PubMed using the keywords “schizophrenia” and “epigenomics”. Information from