Nightmare/bad dream distress was assessed using a 5-point Likert-type scale. Depressive and delusional symptoms were assessed using the Community Assessment of Psychic Experiences (CAPE) questionnaire. This instrument quantifies three aspects associated with the psychotic continuum: depressive, positive (delusional) and negative (anhedonia and others) symptoms. Somatic symptoms were assessed using the Somatic Symptom Scale-8 (SSS-8).

Results. A forward stepwise linear regression analysis revealed that nightmare/bad dream distress was associated with depressive symptoms CAPE score, somatic symptoms and positive/delusional symptoms CAPE score (F (3,1509)=67.87, p<.001, R^2_{adj}=.117).

Conclusions. Nightmare and bad dreams distress during the COVID-19 pandemic was most strongly associated with the depressive dimension of CAPE, followed by somatic symptoms and by delusional ideation. The relationship between nightmares and depressive symptoms was expected and is well-documented. However, this is the first study to date showing a relationship between delusional ideation and nightmare/bad dream distress outside of a clinical context, suggesting a potentially generalizable mechanism by which cognitive and perceptual distortions associated with mild levels of delusional thinking may contribute to a more global levels of psychological distress, which, in turn, may express itself in bad dreams and nightmares. This association can become even more prevalent in the context of a high stress situation such as a global pandemic. Lastly, a strong association between somatic symptoms and nightmare/bad dream distress lends further support to embodied theories of dream formation, highlighting the contribution of bodily experiences to dreamt emotions. This work provides further evidence for an interaction between psychological, environmental, and physiological stress reactivity in the development of dysphoric dreams.

DO LARKS AND OWLS FEEL BETTER AT THEIR OPTIMAL TIMES OF DAY? AN EXPLORATORY STUDY IN PRIMARY SCHOOL CHILDREN

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Introduction: In circadian rhythms research, synchrony effects regarding mood diurnal fluctuations (i.e., better mood at optimal, worse mood at suboptimal times of day) have been previously studied in adolescents and adults, with only a handful of studies finding evidence of chronotype X time-of-day effects. At the same time, evidence regarding synchrony effects in children emotional states is lacking. This study investigated the interactive/synchrony effect of chronotype and time-of-day on school-aged children's emotional states daily fluctuations, in a naturalistic setting.

Materials and Methods: From an initial pool of 298 participants from the 3rd and 4th grades, aged from 7 to 11 years old, 134 Morning-type (M-type) and Evening-type (E-type) children were selected for subsequent statistical analysis (n=52 M-types; n=82 E-types; 53% girls, 47% boys, M =8.84 years-old, SD =.60). Parents/guardians filled the Children's Chronotype Questionnaire (CCTQ) to assess children's chronotype. In order to control sleep patterns, and psychopathological symptoms, parents/guardians also filled the Child Sleep-Waking Questionnaire (CSWQ) and the Strengths and Difficulties Questionnaire (SDQ). Students completed momentary emotional state measures [i.e., Faces Scale (FS), the State scale of the State-Trait Anxiety Inventory for Children (STAIC), and the Positive and Negative Affect Scale for Children (EAPNC)] on the first (9 a.m.) and last lesson (4 p.m.) of the school day, either on the same or in consecutive weekdays,

counterbalanced to avoid carry over effects. These interrelated measures were used to determine a composite measure of overall momentary emotional state.

Results: The results showed a statistically significant small to moderate interactive effect between chronotype and time-of-day on overall emotional state [F (1,127) = 4.83, p = .03, $\eta\rho2$ = .05]. If tested at their optimal time-of-day, M- and E-type children reported a better overall momentary emotional state (i.e., morning for M-types, afternoon for E-types) when compared to a suboptimal time-of-day (i.e., morning for E-types, afternoon for M-types). Main effects of chronotype and time-of-day were both non-significant. No significant associations were found between the composite measure of overall momentary emotional state, sleep patterns and psychopathological symptoms.

Conclusions: The present study have explored the influence of chronotype and time-of-day in primary school children's diurnal emotional experience in a real-life setting, and have identified the presence of a synchrony effect in M- and E-type school-aged children's overall emotional experience. Given the potential relevance of emotional states in subjective well-being, these emotional state fluctuations might differently impact M- and E-type children's daily functioning while engaging in school activities. Future research employing more assessment points and larger samples is needed.

DREAM EMOTION RECOGNITION THROUGH EEG NONLINEAR ANALYSIS

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Introduction: Dreams are exciting unknown experiences which happen every night and are full of emotional content. Emotion recognition during dreaming plays a crucial role in the diagnosis and treatment of psychological disorders such as post-trauma-stress-disorder (PTSD), depression, anxiety, etc. Dream content analysis is challenging since one should deal with long biological signal recordings and also subjective dream reports. This could be one of the most important reasons why researchers have not focused on this topic to a large extent which has consequently resulted in our knowledge about dreaming being limited.

Materials and Methods: In this study, a novel method is proposed to process high-density EEG signals in dreaming. Since the brain is assumed as a nonlinear non-stationary complex biological system, nonlinear methods should be utilized to extract reliable information. In the present study, we suggested a new approach to dream emotion recognition using complex networks. Our proposed complex network is reconstructed with regard to EEG phase space which reflects EEG dynamics appropriately and has been used in several previous studies. We used the graph theory and statistical features to quantitatively describe our proposed EEG complex network. Extracted features are selected using statistical analysis and the most significant ones are fed to our classification models where well-known classifiers have been employed. EEG signals during dreaming are classified into four emotional states according to the continuous model of emotions or in other words the arousal-valence plane of emotions.

Results: The classification performance (on average) was 82.69% (with a standard deviation of 3.57%). The most significant channels and brain regions in each emotional state are determined as frontal, occipital, and central lobes. Not only did our proposed complex network classify EEG signals into four emotional classes efficiently, but also it was able to describe different dynamics in other complex signals.

Conclusions: We managed to associate EEG dynamics with emotions in dreams. To the best of our knowledge, no study has employed computational neuroscientific methods to classify dream emotions. Our results suggest that the proposed method is quite effective and can be used in