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Anisms are more pronounced in intact female rats than in male rats. Immobilization stress significantly reduced the adaptive mechanisms and consequently, leads to an increase of emotional background. After 10 days of EMS, the number of crossed squares increased in immobilized rats of both sexes, Therefore, EMS suppressed fear reactions, which is manifested by an increase in the number of crossed squares and entering the center. After gonadectomy, the number of crossed squares did not change compared to control rats in the open field. This rate decreased after immobilization stress (P<0.01) and EMS. In gonadectomized rats the grooming duration was longer in female rats compared to males. The grooming duration was not recorded against the background of the EMS in female and male gonadectomized rats.

**Conclusion.** The adaptive mechanisms are more pronounced in intact female rats than in male rats. The effects of EMS on the motivational-emotional behavior of rats is associated with the involvement of peripheral sex hormones. Without Peripheral sex hormones effects of EMS on the behavioral activity of rats, is minimal.

**Conflict of interest**

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**P.0338**

**Chronotype and area-specific deficits in mental health**

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**Background:** The COVID-19 pandemic has caused a palpable rise in mental health conditions, including greater anxiety, depression and stress. There have been many suggested driving factors for this rise, from unemployment to exposure to negative news. However, during the pandemic there have been both a rise in drug consumption and a shift to a later chronotype. Chronotype is a measure of the timing of an individual’s behavioural patterns, with early and late chronotypes being more colloquially known as ‘early larks’ and ‘night owls’ respectively. Later chronotypes have often been associated with increased drug consumption and there have not yet been investigations into the influence of these factors on the rise of mental ill-health during the COVID-19 pandemic.

**Objectives:** We aimed to investigate the effect of chronotype on mental health in the general public. The Munich Chronotype Questionnaire (MCTQ) was used to assess the chronotype of each participant. The 21-item Depression Anxiety Stress Scale (DASS21) was used to assess mental health. As it is known that drug consumption increases with later chronotype, we then assessed whether increased drug consumption was responsible for these relationships. We used the Alcohol Use Disorders Identification Test (AUDIT), Revised Cannabis Use Disorders Identification Test (CUDIT-R) and the Fagerström Test for Nicotine Dependence (FTND) to quantify alcohol, cannabis and tobacco use respectively. We hypothesised that a later chronotype would be associated with poorer mental health and that total drug consumption would mediate this relationship.

**Methods:** This was a cross-sectional study in the Cambridge county area (N=209), with data collection being completed using an online survey. The MCTQ gathers data regarding sleep timing throughout the week, allowing us to generate a mid-sleep time which has been validated as an indicator of chronotype. The DASS21 with its individual subscales allowed us to generate scores for depression, anxiety, stress and overall mental health. We then completed multiple regression analysis to investigate the associations between chronotype and these mental health measures. Mediation pathway analysis was used to examine whether total drug consumption was responsible for the significant associations. Total drug consumption was calculated by summing the scores from the AUDIT, CUDIT-R and the FTND.

**Results:** Multivariate regression analyses revealed that chronotype was significantly associated with overall mental health score ($\beta=0.16$, $p=0.022$) and anxiety ($\beta=0.18$, $p=0.009$). Chronotype was not significantly associated with depression or stress. Causal mediation analysis showed that overall drug consumption mediated both relationships.

**Conclusion:** The association between later chronotype and poorer mental health is driven by increased anxiety rather than depression or stress. However, these relationships can be explained by the increased drug consumption that occurs in these late chronotypes. These results can inform counselling and future treatments for late chronotypes that focus on reducing their drug consumption. The evidence that anxiety drives the relationship with mental health will also allow healthcare professionals to screen for anxious symptoms to identify those that require interventions more effectively.

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**Therapeutic equivalence of fabomotizole extended and immediate release forms**

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