Implications of Chronodisruption on Physical and Mental Health in College Students
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Introduction
Chronodisruption (CD) is a chronic misalignment between biologically preferred sleep-wake schedules and schedules dictated by external demands. (1) College students are vulnerable to sleep problems and might experience CD due to their shifting circadian rhythms. (2) CD is associated with increased BMI and symptoms of depression and anxiety in college students. (3, 4)

Aims
1. Examine the relation between chronodisruption and college students’ age and place of residence.
2. Examine the relation between chronodisruption and depressive symptoms, anxiety symptoms, and body mass index (BMI).

Method
Participants
Undergraduate Students (n = 402) who were enrolled in a larger study about eating behavior and food marketing
- 80.5% female
- 59.4% White, 19% East Asian, 6.9% African American

Procedure
Participants completed a survey at Time 1, followed by a daily diary for up to seven days.
- Variables collected at Time 1:
  - Demographics including age and residence
  - BMI: Calculated using self-report height & weight
  - Anxiety Symptoms: DASS-21 (6)
  - Depressive Symptoms: CESD-10 (7)
  - Preferred Wake Time: One item from the Morningness-Eveningness Questionnaire (8)
- Variable collected with 7-Day Daily Diary:
  - Actual Daily Wake Time: “What time did you wake up this morning?”

Method, cont.
- Calculating degrees of chronodisruption:
- Degree = 2
  - Degree = 3
  - Degree = 1

Results
More than half of participants reported chronodisruption.

Degree of Chronodisruption ≥ 1
- 36%
- 64%

Linear regressions indicate that higher degrees of chronodisruption are associated with more depressive symptoms (F(1,395)=7.5), p<.01.

Discussion
- Depressive symptoms are associated with greater discrepancies between actual and preferred wake times.
- CD may exacerbate symptoms of depression.
- Symptoms of depression may affect individuals’ wake times (i.e., trouble sleeping).
- College students living with parents experience higher degrees of CD, possibly due to earlier weekday wake times.

Future Directions
- More research is needed to understand the importance of consistent wake times.
- Interventions that encourage students to adhere to consistent wake times may be associated with better mental health.

Results, cont.
ANOVAs indicated greater degrees of chronodisruption among students living with a parent or guardian compared to those living in residential halls (F(3,391)=3.5, p<.05).

Average Degree of Chronodisruption
- 1.5
- 1.07
- 0.87
- 0.5
- 0
- With Parent/Guardian
- Residence Hall

References