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GENDER DIFFERENCES IN THE RELATION TO SEASONAL PATTERNS TO MOOD CHANGES IN COLLEGE STUDENTS

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Undergraduate Senior Thesis

BACKGROUND INFORMATION

- Previous research has indicated that abrupt weather changes are stressors and negatively affect people’s emotional state (Spasova, 2010).
- Mood sensitivity emerges during winter months rather than spring months in individuals.
- Individuals felt more lethargic, lonely and moody during winter months.
- Those who are severely impacted by seasons are clinically diagnosed with Seasonal Affective Disorder (SAD) in the DSM-V (APA, 2013).
- Women have a significant higher prevalence rate of SAD than men and overall mood fluctuation throughout the seasons of the year (Chotai et al., 2003).
- Researchers found that mood and behavior patterns clearly depend on specific seasons of the year in college students (Rohan & Sigmon, 2000).
- College-aged participants felt worst, gained more weight, sleeping patterns increased and socialized less during winter months.
- In the summer time, college-aged participants well-being increased, patterns increased and socialized less during winter months.
- Individuals felt more lethargic, lonely and moody during winter months in individuals.
- Mood sensitivity emerges during winter months rather than spring months in individuals.

HYPOTHESES

- I hypothesize that women will have a higher Global Seasonality Score (GSS) than men.
- I hypothesize that college-aged women experience more seasonal fluctuations in mood, socialization, sleep, eating patterns and weight gain than men do.

RESULTS

- Two independent samples t-tests demonstrated no significant differences between the two groups.
- Positive scores indicate better mood fluctuations and negative scores indicate worse mood fluctuations.

- Table 1. No gender difference in Global Seasonality Scale (GSS) ($t(42) = -.541, p < .05$)

- Table 2. No gender difference in mood fluctuations between Summer and Winter. Supplementary Analyses.

- Table 3. Paired-Samples $t$ test; Significant findings in individuals mood fluctuations between Summer and Winter.

DISCUSSION

- There is a body of work dedicated to the study of how weather impacts our overall moods and how it is associated to gender differences.
- However, most recent studies have not closely examined college-aged students in the U.S. as their population.
- The results of the current study do not support a gender difference in seasonality.
- This outcome was the result of limitation in this specific experiment and not a confirmation that the hypotheses are false.
- Lack of participation of college students from other more “seasonal states” with more adverse seasonal patterns.
- Californians may not categorize December as part of the traditional fall season, unlike other states.
- Statistically, women are more prone to have diagnoses of SAD and depression (Young et al., 2008).
- Sunlight and darkness impact the levels of neurotransmitters and hormones in our brain (ex: melatonin and serotonin levels) (Roecklein & Rohan, 2005).
- Individuals may have over-reported or under-reported their symptoms.

OTHER DISCOVERIES

- Supplementary Analyses were ran with the intent to draw more conclusions about the data collected:
  - 50% Sleep the most in the month January
  - 62% Feel their best in June
  - 60% Feel their best in July
  - 54% Eat the most in December
  - 54% Socialize the most in July
  - 47% Gain the most weight in December
  - 45% Eat the most in November

FUTURE RESEARCH

- A 12-month longitudinal study that analyzes participants’ reported feelings during each month of the year (Mollin, Meierup, Scheike, Dam, 1996).
- Future research on gender differences in relation to seasonality who attend college with more severe seasons other than just CA.
- Future research might help understand why onset mood disorders are developed in college-age students (Henriques, 2014).