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College-Related Stress and Substance Use: Experiences of Honors and Non-Honors

Students

By Melanie Fischer

An Undergraduate Thesis Submission in Partial Fulfillment

Of the requirements for the

Midway Honors Program

Honors College

College of Clinical and Rehabilitative Health Sciences

East Tennessee State University

Dr. Meredith K. Ginley, Thesis Mentor

Dr. Aubrey R. Dueweke, Second Reader

Abstract

Although there is a wealth of research knowledge related to risk behavior engagement of the general student population, there is less specifically reported about honors students. To address this gap in research, non-honors and honors students were surveyed to determine possible differences in risk behavior engagement. Students were recruited through the East Tennessee State University psychology subject pool and via direct email messages to an honors student-specific listserv. We hypothesized that honors students would have differences in terms of GPA and number of credit hours, endorse more substance use and have more perceived stress compared to non-honors students. The survey sample was majority non-honors students (90.5%; $n = 383$), with 9.5% ($n = 40$) honors undergraduate students. After conducting chi-square tests of independence and independent t-tests we determined that there were no significant differences in substance use, life events, or emotional dysregulation between groups. However, upon analyzing demographic information honors students reported significantly higher GPAs ($M = 3.77$, $SD = 0.32$) than non-honors students ($M = 3.53$, $SD = 0.53$), $t(404) = -2.72$, $p = .007$. Additionally, honors students reported a higher number of credit hours than non-honors students, $t(403) = -4.26$, $p < .001$, with non-honors students taking an average of 14.67 ($SD = 2.63$) credit hours and honors students an average of 16.53 ($SD = 1.81$) credit hours. No other significant demographic differences were observed. Our findings did not show significant differences within populations, but rather, that honors students likely encounter stress and engage in risk behaviors just as much as non-honors students.

College-Related Stress and Substance Use: Experiences of Honors and Non-Honors Students

College student populations have been extensively studied to explore how substance use correlates to stress levels and academics. However, most of the previous literature examines college students in general, or has highlighted only certain student populations within colleges, such as Greek Life students, student athletes, and students in religious groups (McCabe et al., 2018; Reardon & Creado, 2014; Ord, 2016). Less research has focused on students specifically classified as high academic performers, or involved in merit-based academic programs, such as an honors program. Though there is limited research collected specifically on honors students, one can draw possible hypotheses from previous studies that these students could have just as much risk as non-honors students (McCabe et al., 2018; Reardon & Creado, 2014; Ord, 2016; Lee, 2021) These previous studies focused on different student populations (e.g., religious students, athletes, Greek life) within the college environment and found that there was substance use among the groups (McCabe et al., 2018; Reardon & Creado, 2014; Ord, 2016; Lee, 2021). These studies warrant further investigation into other college groups, such as honors students. It is likely that these students were included in previous studies, but investigation of these students as a group is limited. Increased academic demands, strivings for perfectionism, and the personal pressures honors students place upon themselves may present possible unique correlates of substance use engagement or non-engagement in honors students that warrant further research.

The College Experience

College is an important stepping point for individuals to start exploring their values, social groups, interests, and academics. Students become immersed in new social environments that expose them to various academic stressors (Misra & Castillo, 2004). Additionally, since

college is considered a new environment for most students, it can be challenging for them to adapt. This challenge is correlated to the added stress and changes many students undergo (Misra & Castillo, 2004). Students who are trying to uphold the balance of transitioning to a new environment and maintaining high-achieving grades may search for outlets to manage stress (LaBrie et al., 2012). Moreover, to alleviate this distress, students may begin engaging in activities that are either additive to their college achievements (e.g., participation in student organizations and clubs) or primarily intended for distraction (e.g., binge drinking).

During the college experience, students begin to learn how to maintain a healthy balance between peers, family, academics, and other commitments (Misra & Castillo, 2004). According to Winerman (2017), nearly 60% of students who seek out counseling reported that their stresses in the college environment were related to academics, family, relationships, anxiety, and depression. Even with these added stressors, college students are expected to keep a balance with deadlines and maintain performance. These academic expectations and the need to perform may come from students being pressured to succeed in their environment (Curran & Hill 2017). Students feel the need to achieve at a high level with peers because they feel the internalized pressure of their environment (Curran & Hill 2017). Students in a college honors program have the potential to feel even more pressure academically and socially due to the environmental pressures for high academic performance. Findings from Curran and Hill (2017) suggest that students within an honors program may experience more stress in college than non-honors students.

The need to produce exceptional work may create particularly stressful and emotionally challenging situations for honors students, testing students' abilities to consistently regulate their negative emotions (Stellern et al., 2023). Emotional regulation is defined as being able to

appropriately express and process emotions (Stellern et al., 2023). A meta-analysis found that individuals who engage in substance use appear to have greater difficulties in emotion regulation, including managing and processing negative emotions (Stellern et al., 2023). When individuals cannot process their emotions healthily, they may begin to engage in substance abuse (Stellern et al., 2023). For example, a study by Böke and colleagues (2019) found that higher stress levels were associated with college students' reports of using substance to cope. Students with emotion regulation difficulties who use substances to cope may experience greater consequences (Dvorak et al., 2014). Though Stellern and colleagues (2023) did not identify honors students directly within their studies, it does lay ground for the idea that honors students may potentially endorse similar behaviors as non-honors student and thus warrants further investigation of the honors student population.

Another aspect to consider when looking at an honors student population is the need for perfectionism while participating in certain academic college programs. Perfectionism can be defined as adhering to unrealistic standards and critical self-evaluation (Curran & Hill 2017). Honors students are involved in merit-based academic programs intended to challenge students. Students in these programs are expected to engage in activities that promote high academic achievement and success, such as academic conferences, undergraduate thesis research, and creative projects. These populations of students tend to be more eagerly inclined and experienced compared to non-honors students (Ahterberg, 2005). This eagerness may be due to the high academic expectations that are put on these students in the college environment. In a study examining college students for perfectionism and imposter syndrome, honors-affiliated students reported more feelings of imposter syndrome than non-honors students (Lee et al., 2021). Furthermore, honors students feel pressured to maintain socially prescribed perfectionism in their

environment (Lee et al., 2021). This research further reinforces the idea that honors students could possibly endorse specific characteristics and behaviors differently than non-honors students.

The need to constantly achieve can cause students to resort to unhealthy methods to keep a high academic status. For example, college students may start experimenting with cognitive enhancements or stimulants to cope academically. According to a study by Aikins (2019), 44.4% of college students reported using some type of cognitive performance drugs (e.g., Adderal, Ritalin). Additionally, the students in this study disclosed that they used cognitive drugs to help with their studying and overall academic success in college (Aikins et al., 2019). College students are susceptible to using drugs illicitly as they may feel an increase in competition in the college environment (Aikins et al., 2011). In another study by Iloabuchi and colleagues (2021), approximately 73% of college students reported that prescription drug use was an issue among peers. In addition, 51% of students reported using prescription drugs to enhance academic performance (Iloabuchi et al., 2021). The data from Iloabuchi and colleagues (2021) suggests that some students in college environments will participate in harmful behaviors to maintain academic expectations, for example a student misusing a prescription drug from a friend. The data from these studies did identify the general variables of college students, however they did not include honors students as a variable in the study thus highlighting the need to examine this under researched group of students (Aikins et al., 2011, Aikins et al., 2019, Iloabuchi et al., 2021).

Current Study

As noted in the previous section, college students experience significant stress due to the transition to college and the need for academic performance. Due to the increased environmental

pressures and perfectionism tendencies of honors students, they may exhibit greater substance use in response to stress. Given the lack of literature on college honors students, the present study sought to examine undergraduate honors and non-honors students in terms of GPA, credit hours, stress levels, life events, emotion dysregulation, and drug usage. The following specific research questions were proposed:

1. Are there differences between honors and non-honors student populations in terms of academic demographics, namely GPA and credit hours?
2. Do honors students perceive that they have more stress than non-honors students at ETSU?
3. Do honor students endorse more substance use than non-honors students?

It was hypothesized that the two student populations would differ in terms of GPA and number of credit hours. Additionally, it was predicted that honors students would be more prone to stress due to their high academic expectations and therefore, report higher levels of perceived stress than non-honors students. Furthermore, it was hypothesized that honors students would be more likely to report using substances than non-honors students.

Method

Participants

Using the ETSU psychology subject pool and direct email message to honors student listservs to recruit study participants, an undergraduate sample that was majority non-honors students (90.5%; $n = 383$) and 9.5% ($n = 40$) honors students was obtained. Participants in the study were between the ages of 18 and 51 years old ($M_{age} = 19.79$, $SD = 4.16$). Participants self-identified their gender as: 23.0% male, 73.5% female, 0.2% transgender, 3.3% genderqueer. Participants self-identified their race/ethnicity as: 88.2% White, 6.7% Black, 1.7% Asian, 0.2%

American Indian/Alaska Native, 0.2% Middle Eastern, 0.5% other, and 2.4% multi-ethnic. Additionally, 6.4% identified as Hispanic or Latino. Participants self-identified their sexual orientation as: 82.4% identified as heterosexual, 1.9% homosexual, 12.0% bisexual, 1.2% asexual, and 2.6% other. Concerning grade level, 63.8% were freshmen/1st year, 16.4% sophomores/2nd year, 11.0% juniors/3rd year, 7.2% seniors/4th year, and 1.6% seniors/5th year or more. Concerning job status, 51.9% of students reported working a part-time job during college, 40.9% reported not working, and 7.2% reported working full time. Notably, no honors students reported working full time, however, this difference was not significant ($\phi = 3.44, p = .18$). Additionally, participants reported an average GPA of 3.5 ($SD = .52$).

Of honors students involved in the present study, 22.2% were involved in the Global Citizen Scholars program, 19.4% were involved in the Midway Honors Scholars program, 19.4% were involved in the Honors in Discipline program, 25% were involved in the Changemaker program, and 13.9% were involved in the Fine/Performing Arts program. There were no significant differences between non-honors and honors students in regard to gender $\chi^2 (3, N=12) = 2.19, p = .41$, sexual orientation $\chi^2 (4, N= 42) = .12, p = 7.35$, race $\chi^2 (6, N=41) = 4.34, p = .63$, or ethnicity $\chi^2 (1, N=41) = .91, p = .35$. Expectedly, as many of the identified honors programs have a minimum credit hour requirement, non-honors participants were more likely to be 1st years $\chi^2 (4, N= 42) = 29.91, p < .001$.

Procedure

Prior to data collection, the proposed study was approved by the University Institutional Review Board. Participants were recruited through flyers on campus and SONA ads. To increase the opportunity to examine honors students, IRB approved emails were sent to students who were a part of an honors program by the Dean of the Honors College. Survey recruitment forms

detailed the purpose of the study and informed participants that the study would be collecting information on college students' behaviors. To be eligible for the current study, participants had to be an ETSU undergraduate student, at least 18 years of age, and be physically present in the United States. Consent for the study was obtained and recorded using the electronic data capture tools (REDCap.) If participants consented and met the eligibility requirements, they were directed to the survey questionnaire. Once students completed the survey, they were eligible to enter a drawing for a \$50 gift card. If students enrolled in the survey via SONA and completed it, they were awarded 1.5 SONA credits which translates to course credit or course extra credit depending on the course the student in enrolled in.

Materials

Demographics Questionnaire. The demographics questionnaire was composed of items that asked students for information pertaining to their gender, age, race, ethnicity, year in school, honors status, job status, GPA, and credit hours.

Honors Identification Scale. This 8-item scale was created by the investigators to identify and assess honors students in the survey. As part of the survey flow design, the scale was only given to the subset of participants who indicated an honors student status. The measure is structured as a Likert scale with options ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The scale assessed stress level perception (e.g., "As an honors student, I believe that my stress levels are higher compared to other students on campus.") and expectation/standards perception of honors students (e.g., "As an honors student, I believe that I am held to greater expectations/standards."). Higher scores indicated greater agreement for each statement.

Perceived Stress Scale (Cohen & Williamson 1988). This 10-item scale measured participants' stress levels in the past month. The scale uses the ranges of 0 (Never) to 4 (Very

often) to determine the frequency of stress levels. Reverse scoring is done on items 4, 5, 7 and 8 before calculating the total. Participants with scores between 0-13 are identified as having low stress levels, 14- 26 as moderate stress levels, and 27-40 as high perceived stress.

Life Events Scale (Brown 1989) This 36-item scale assessed the number of stressful life events a participant has experienced to measure stressor exposure. The scale used 1 = “yes” and 2 = “no” responses to determine if the event happened to the participants in the last year. Example life events included “The death of parent,” and “Major personal injury or illness”. The scores were calculated by adding up the total number of events endorsed for each question to determine the total score number.

Difficulties in Emotion Regulation Scale (Gratz & Roemer 2004). This 36-item scale measured participants’ emotional regulation. The scale is made up of six subscales: (1) nonacceptance of emotional responses, (2) difficulty engaging in goal-directed behavior, (3) impulse control difficulties, (4) lack of emotional awareness, (5) limited access to emotion regulation strategies, and (6) lack of emotional clarity. The response range was based on a 1= “almost never” and 5 = “almost always” scale to determine how frequently participants have issues related to regulating their emotions. The total for the scale was created by adding the 36 items together for a total emotion dysregulation score. Higher scores on the scale indicated more difficulty with managing emotions.

LEVEL 2 Substance Use Adult (American Psychiatric Association, 2016). The measure is from the NIDA-modified ASSIST version (National Institute on Drug Abuse, 2016). The version NIDA-modified ASSIST scale is used to identify risky substance use frequencies (National Institute on Drug Abuse, 2016). Additionally, the 10-item scale was used to identify participants’ usage of stimulants, painkillers, methamphetamine, inhalants, solvents, marijuana,

cocaine, crack, heroin, club drugs, sedatives, or tranquilizers. Participants endorsed whether they used each drug on their own, meaning without a doctor's prescription, in greater amounts, or longer than prescribed. The scale uses a Likert format of 1 = "being no use" and 5 = "being most days" within a two-week time frame. A total drug use score was calculated. Additionally, use within each substance was examined between honors and non-honors students. Higher scores indicated greater frequency of drug usage for participants.

Statistical Analysis

Analyses were conducted using SPSS version 28.0. Descriptive characteristics of participants (gender, ethnicity, sexuality, grade, work status, GPA) were calculated. Additionally, means and standard deviations of variables of interest for each population (non-honors and honors students) were calculated. Furthermore, chi-square tests of independence and independent t-tests were used to compare honors and non-honors students on the variables of interest.

Results

Hypothesis 1: Academic Demographics

Honors students reported significantly higher GPAs than non-honors students, $t(404) = -2.72, p = .007$. On average, non-honors students reported a GPA of $M = 3.53$ ($SD = 0.53$) and honors students reported a GPA of 3.77 ($SD = 0.32$). Honors students also endorsed taking a significantly higher number of credit hours than non-honors students, $t(403) = -4.26, p < .001$, with non-honors students taking an average of 14.67 ($SD = 2.63$) credit hours and honors students an average of 16.53 ($SD = 1.81$) credit hours.

Hypothesis 2: Stress

Regarding the Perceived Stress questionnaire, non-honors students reported a mean value of 30.74 ($SD = 6.85$) and honors students reported a mean value of 32.18 ($SD = 7.01$). No

significant difference was found between the two college groups, $t(411) = -1.25, p = .213$.

Concerning stressor exposure, as measured using the Life Events Scale, non-honors students endorsed an average of 9.50 ($SD = 4.74$) stressful events and honors students endorsed an average of 8.73 ($SD = 4.61$) stressful events. No significant difference was found between the two college groups in regards to exposure to stressful life events, $t(408) = 0.94, p = .346$.

Hypothesis 3: Substance Use

On average, non-honors students reported a score of 0.83 ($SD = 2.10$) on the LEVEL 2 Substance Use Adult measure, representing total drug use. Honors students reported an average score of 0.48 ($SD = 1.18$). No significant difference was found between the two college groups regarding total drug use, $t(386) = 0.94, p = .348$. For use of painkillers specifically, 6.8% of the non-honors group endorsed any use, compared to 6.1% of honors students. For stimulants, 4.2% of the non-honors group endorsed any use, compared to 0% of honors students. For marijuana, 21.5% of the non-honors group endorsed any use, compared to 15.2% of honors students. There was no significant difference in substance type.

Concerning emotion dysregulation, non-honors students reported a mean value of 24.85 ($SD = 1.30$) and honors students reported a mean value of 25.20 ($SD = 4.20$). No significant difference was found between the two college groups, $t(399) = -1.57, p = .118$,

Honors-Student Specific Questions

The (Table 1)

Table 1. Honors-Student Specific Questions

	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
I identify strongly as an honors student.	24.4%	51.2%	17.1%	4.9%	2.4%

As an honors student, I believe that my stress levels are higher compared to other students on campus.	12.8%	46.2%	20.5%	17.9%	2.6%
As an honors student, I believe that I am held to greater expectations/standards.	33.3%	51.3%	5.1%	7.7%	2.6%
As an honors student, I believe that I am better at masking or hiding personal problems from others.	20.0%	37.5%	17.5%	20.0%	5.0%
As an honors student, I believe that this us an unnoticed population when it comes to issues of adversity (i.e., mental health, substance use).	15.0%	47.5%	22.5%	15.0%	0%

The data collected from the specified questions did indicate that honors students do feel that they differ from non-honors students in aspects of stress, expectations, masking, and adversity (Table 1). The (Table 1) results were presented to further reflect the perceptions honors students feel in the college environment. Given the lack of research on this population, it is important to assess subjective report to better understand these students. For example, 59% of honors students agreed that their stress levels were higher compared to non-honors students. Additionally, 84.6% of honors students agreed that felt they were held to higher expectations and standards. In regard to masking 57.5% agreed that they are able to hide or mask their problems. Lastly 62.5% of honors students agreed that they are an unnoticed population with adversity. The finding from these results suggests that honors students do carry internalized pressure from their college environment.

Discussion

In our study we focused on examining the differences in academic variables, perceived stress, life stressors, and substance use between non-honors and honors students. There were no

significant differences reported for non-honors and honors students on the basis of gender, race, ethnicity, job status, or sexual orientation. However, there were significant differences in GPA and the number of credit hours honors students take compared to non-honors students, such that honors students had higher GPA and were enrolled in more credit hours. These findings support our first hypothesis that honor students and non-honor students would differ in terms of academic variables. For the second hypothesis we predicted that honors students would have more perceived stress compared to non-honors students. There were no significant differences in perceived stress levels between honors and non-honors students. Furthermore, our findings did not show significant differences in stressful life events between populations. However, in the honors specified questions asked only of honors students, the honors students largely did report that they felt that their stress levels were elevated compared to non-honors students. Although non-honors students reported similarly high perceived stress levels when in direct comparison to honors students, the finding from the honors identification scale (Table 1) supports the notion that honors students have the perception that they are more stressed in college.

For the third hypothesis, we theorized that honors students would endorse more substance use compared to non-honors students. Prior research has shown that college students sometimes use substances to maintain their academics (Aikins 2019). Upon analyzing the data there were no significant differences in substance use engagement for honors students. Additionally, there were no significant differences in emotional regulation for honors students. The finding that honors students engage in substance use and encounter emotional issues at a rate comparable to non-honors students suggests honors student status is likely not protective against these areas of potential concern.

Limitations

There was a technical issue with REDCap and SONA linking in our survey, in that initially, REDCap would not record survey responses from participants in the SONA sample pool (REDCap). This technical error went on for a period of two days, and the survey was taken offline until the issue was resolved. Due to this setback, some participants did not finish completing the survey. Consequently, we had to eliminate incomplete responses to ensure accuracy within our data. A total of 180 incomplete responses were removed. Additionally, another limitation we encountered was the size of our honors students sample set. We only had 40 participants who indicated that they were an honors student. With a bigger pool of honors student participants in the study there could have been more differences shown in the data compared to non-honors. More research is recommended in order to understand if honors students are more prone to certain behaviors than non-honors.

Conclusion

The college environment is composed of several populations that are more susceptible to substance use when exposed to stressors of the college environment (McCabe et al., 2018; Reardon & Creado, 2014; Ord, 2016; Lee, 2021). Furthermore, it is crucial to recognize that just because honors students can achieve highly in college does not mean they do not struggle just as much as non-honors students. Our findings did not indicate any significant differences in stress, life stressors, emotion regulation, or substance abuse between honors and non-honors students. Notably, however, honors students did tend to report perceptions that they are experiencing more stress than non-honors students. Efforts to improve the college student experience for honors students should consider targeting perceptions of stress and understanding why these students feel their adversity is unrecognized as a mechanism to improve the student experience for this hard-working and high-achieving population.

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