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An Investigation into College Induced Stress & Coping Mechanisms and its Effect on Mental Health

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ABSTRACT

The objective of this study was to evaluate college induced stress reported by college students across the Republic of Ireland and identify the coping mechanisms used to deal with such stress. No previous studies regarding this topic had been published in the Republic of Ireland. The authors compiled and distributed a survey on stress throughout various Universities and Institutes of Higher Education across the Republic of Ireland. A total of 144 third level students were surveyed between the 19th of February to the 5th of March 2020. The most common daily stress ranking among both males and females was reported to be 7 out of 10 (with 10 being the highest level of stress, and 1 the least), and the prevailing stress coping mechanisms were: “listening to music” and “talking to others”. Most students believe stress has a negative impact on their mental health. The results obtained demonstrated that college students experience an alarmingly high level of stress daily, producing adverse effects on their diet, social lives, and mental health. This study provides a basis for further research with more refined questions as the insights gained from this process were absorbed.

KEYWORDS: College, stress, coping, mental health.

INTRODUCTION

Stress, and its impact on people, have been widely recognized in many books, journals, and articles. In 1983, a Time Magazine cover story referred to stress as the “Epidemic of the 80’s”, as if it were a disease (Time Magazine, 1983). Survey findings and a statement from the World Health Organization classifying stress as the “Health Epidemic of the 21st Century”, confirm the problem continues.

Stress has been defined as “*the physiological experience of significant life events, trauma, and chronic strain*” (Thoits, 2010). Life transitions such as moving away from home and going to college create opportunities for growth, change and adaptation to the individuation from one's family of origin (Hicks & Heastie, 2008). Such college-associated transitions are considered one of the most stressful times in a person's life (Arnett, 2000). College students are expected to manage a more difficult workload at a faster pace while adjusting to a new environment with minimal or no supervision (Ahead, 2007). College students undoubtedly experience a multitude of stressors including academic issues, financial concerns, problematic time management, and/or social strains (Showron *et al.*, 2004). The different ways males cope with these burdens over females is also of interest in this study. Common sources of additional pressures encountered

by females and males while studying are also issues to be reported, including students who work part-time versus those with no jobs.

Coping is the process of spending conscious effort and energy to solve personal and interpersonal problems (Weiten *et al.*, 2008). In the case of stress, coping mechanisms seek to master, minimise, or tolerate stress or stressors that occur in everyday life. A typical person will employ a mixture of many strategies when attempting to cope with stress.

A scarcity of published research regarding stress and the utilisation and effectiveness of various coping mechanisms among college students prompted this study. The major purpose of the study was to determine levels of self-reported stress experienced by college students along with an investigation of other factors that contributed to stress such as having a part-time job, together with any coping methods used by the students to combat feelings of stress. This survey highlighted the importance of finding stress relief for students of Higher Education across Ireland.

METHODOLOGY

Research design

The research question that was undertaken in this project involved analysing the stress experienced by college students. This was done by conducting a web-based survey through advertising this survey via various social media platforms. The website used for conducting the survey was 'GoogleDocs'. The survey consisted of both closed-ended quantitative questions and open-ended qualitative questions. The survey was launched on the 19th of February 2020 and ran through to 5th March 2020. The survey was completed before any mid-semester examinations took place in colleges across the Republic of Ireland.

Participants

Undergraduate university students in the Republic of Ireland participated in the study, from UCC, CIT, NUIG, UCD and UL. A final population of N=144 was obtained. Students taking part in the survey were made aware of the use of the data obtained and were given contact details if they encountered any issues.

Data extraction and analysis

The method of data collection used was primarily quantitative but with some open-ended qualitative data. The survey included both open-ended and closed-ended questions. When analyzing the quantitative data, the answers are easily comparable and statistical analysis is therefore easily conducted. Analyzing the close ended questions required the use of data handling in Microsoft Excel to produce graphs as in the results section. The major research questions were first analysed and the least common responses were filtered out. By then assessing the most common responses, a trending pattern was observed and categories such as male versus female, part time work or no part time work began to be constructed. Conclusions were drawn and represented in charts below.

Ethics

Prior to collecting the data, informed consent was given by each participant before answering questions on the survey. The data collected from the survey was kept anonymous, and information collected was not discussed with anyone other than the three authors to maintain confidentiality. There was exclusion of invalid results i.e. replicated responses or unfilled response boxes.

RESULTS

Participants Responses

In this survey, University students produced 134 valid responses (N=134) to the 25 questions asked. A total of 144 students submitted a response to the survey however ten students who participated in the survey submitted incomplete results or invalid answers resulting in their exclusion from the final population. Of these respondents were n= 94 female, and n=40 were male. The proportion of females and males who had a part time job was assessed with 24 out of the 40 males having a part time job and 72 of the 94 females having a part time job

The Welch's T Test for unequal variances was used to assess the female and male sample's means in relation to one another. As the Critical P one tail value is less than 0.05, the null hypothesis is analogously rejected which states that both samples have equal variances. The T critical value for a 95% confidence interval is 1.96. The statistic must exceed this for the null hypothesis to be rejected. Both the P and T critical one tail figures show significant evidence to reject the null hypothesis. The alternative hypothesis proves correct, which states that the means of the sample groups are not equal (variable).

Ranking of Self-Reported Daily Stress

All participants were asked to rank their daily stress levels on a scale from 1-10 where 10 was the highest stress level. The average stress level reported by both genders was 7; selected by 26.5% of females and 27.5% of males. Moreover, the female population reported to be more likely than males to report a higher level of stress with 9.5% selecting 9 on the scale, whereas 2.5% of males selected 9. Only 1.1% of the female population chose 1 on the scale whereas 7.5% of males chose 1.

The time at which this stress is predominantly experienced by the student was further assessed. Of the female students 50% experience stress prior to the examination period with 29.7% experiencing stress throughout the college year and 20.21% during examination periods.

When determining the time at which stress is experienced most by the male population, 60% of males experience stress in the timeframe prior to college examinations. 27.5% of males experience stress throughout the college year and 12.5% during exams.

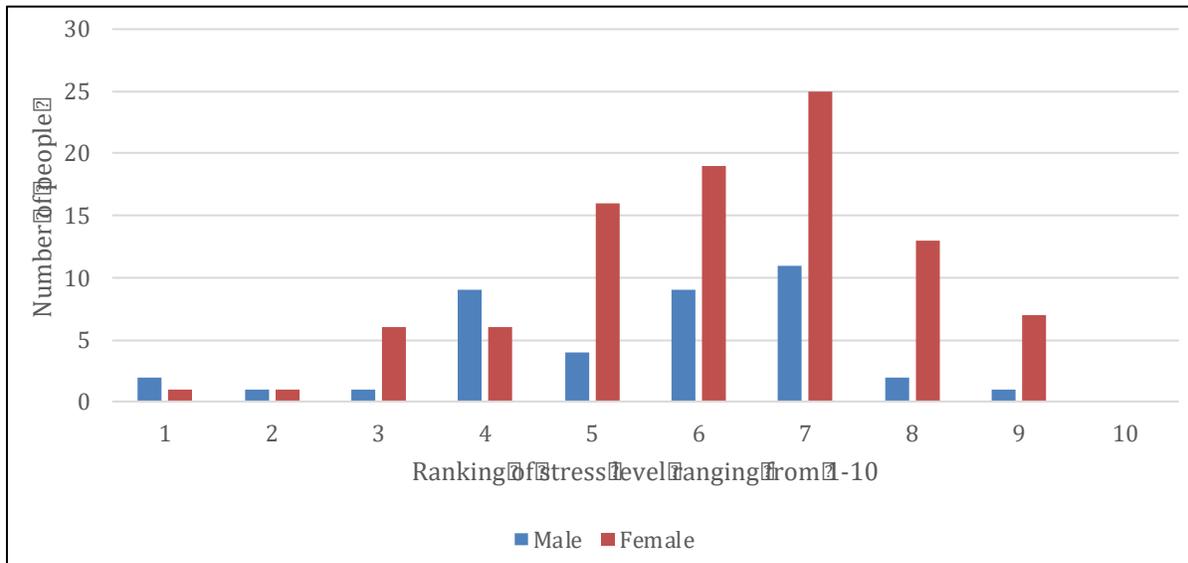


Figure 1: Ranking of stress levels that male and females reported on a scale of 1-10. This figure assesses the daily stress experienced by university students. The students were broken into two categories based on gender: male & female. They selected a level of stress on a scale of 1-10 that they reported to feel daily.

Contribution of Part Time Work to Daily Stress

The most common stress ranking reported by the male population with a part-time job was 4 whilst males without a part-time job reported stress levels of 7. Among the females in the study no difference was reported in the daily stress level by those with a part-time job and those without, both indicated a stress level of 7.

The highest stress rating reported by a female with a part-time job was 9. The highest stress rating reported by a female without a part-time job was 9. The highest stress rating reported by male with a part-time job was 9 with the highest stress rating reported by male without a part-time job was 8.

The lowest stress rating reported by a female with a part-time job was 1 and the lowest stress rating reported by a female without a part-time job was 2. The lowest stress rating reported by male with a part-time job was 2 whilst the lowest stress rating reported by male without a part-time job was 1.

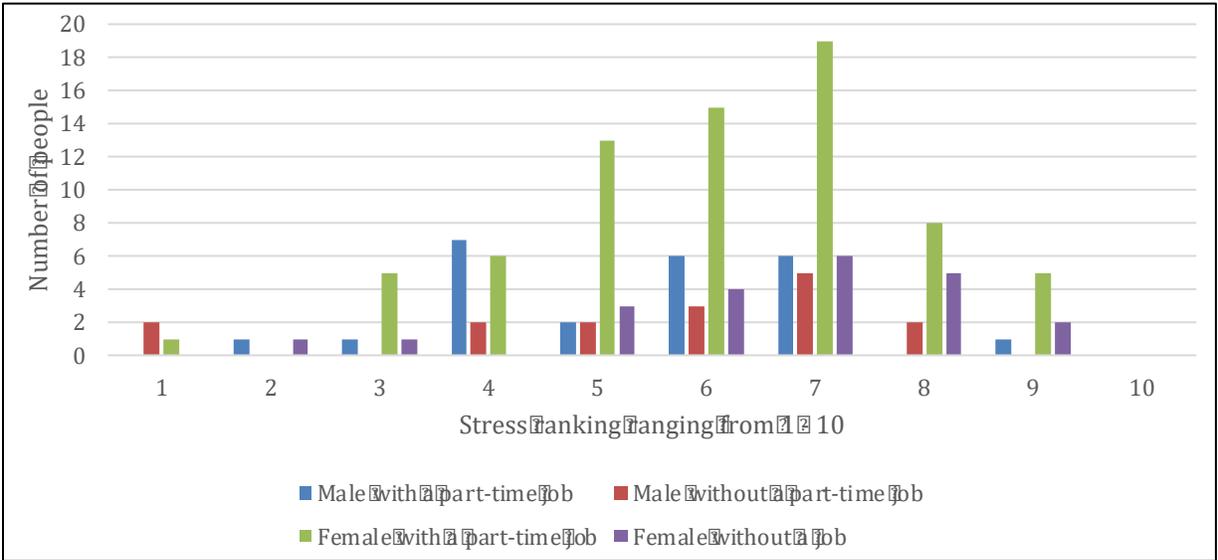


Figure 2: Level of stress reported by male and female genders who work part time and who do not work part time. All individuals selected a stress ranking (ranging from 1-10) that they believed to feel daily.

Self-Reported Stress Coping Mechanisms

Students selected coping mechanisms used for stress management to determine the most popular coping mechanisms. Multiple answers could be selected and an option of “other” text box was provided.

The most used coping mechanisms were talking to others, music, exercise and using technology e.g., mobile phones. The miscellaneous category reported the least common coping mechanisms and these included food, recreational drugs, mindfulness, prescription drugs, friends, dogs, socializing and nature.

Both genders selected the same preferred coping mechanisms with 60.6% of females selecting talking to others as their preferred coping mechanism and 58.5% choosing music. However, for males, 65% listen to music, and 60% cope with stress by talking to others.

When determining the effectiveness of the coping mechanism used it was established that 24.4% of females agreed their coping mechanisms were effective, 59.7% agreed that sometimes their mechanisms were effective, and 16% agreed their coping mechanism did not work or was ineffective for them. In comparison, just 45% of males trusted their chosen coping mechanism and 42.5% thought their coping mechanism was only sometimes effective.

The potential impact of stress on mental health was further analysed. Of the female population 46.8% selected ‘strongly agree’ and 42.5% selected ‘agree’ when asked if stress negatively impacts mental health. Among the males, 30% selected ‘strongly agree’ while 45% selected ‘agree’.

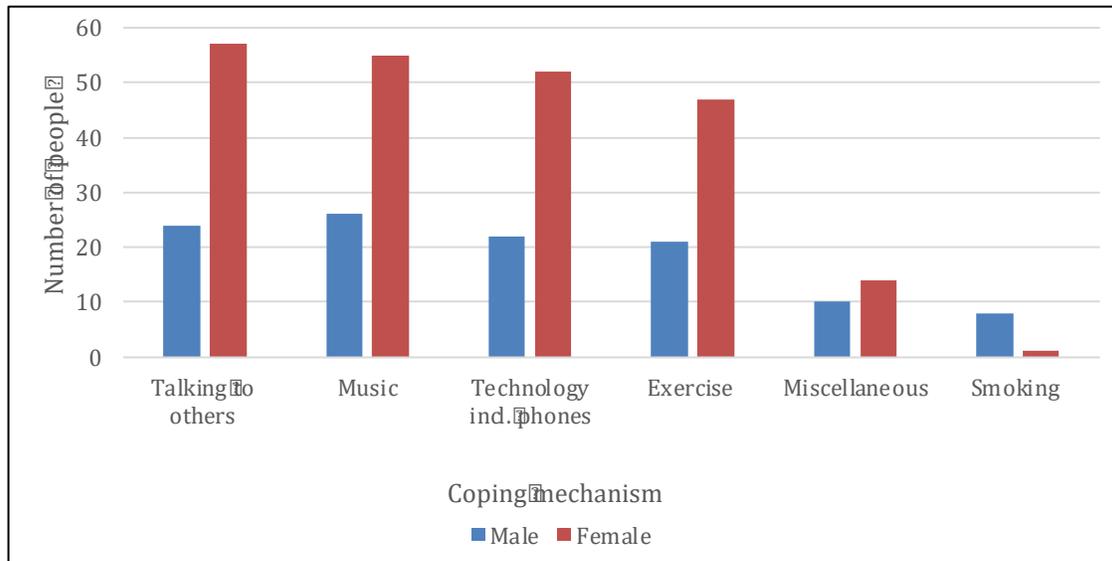


Figure 3: Reported coping mechanisms used by students. The miscellaneous categories include coping mechanisms that were reported at a lower rate than the other categories mentioned. These coping mechanisms included food, drugs, cooking, eating, medication, mindfulness, nature, friends, dogs, and alcohol.

DISCUSSION

The aim of this study was to determine the level of overall stress experienced by a college student, ascertain the cause of this stress, and establish the most used coping mechanism to deal with such stress. In table 1, the Welch's T Test for unequal variances was used to assess the female and male sample's means in relation to one another. The alternative hypothesis proves correct, which stated the means of the sample groups are not equal thus the null hypothesis is rejected. Therefore, the male and female population were assessed separately and compared against each other. The results showed that most students reported experiencing moderate to high levels of stress daily (figure 1). There was a greater response rate by females than males, as expected and supported by multiple studies conducted to show women are more likely to participate in surveys than men (Curtin, 2000; Singer, 2000). College, examinations, and time management were all contributing factors to the stress reported in the study (figure 2). Among the most used mechanisms to deal with such stress were listening to music and talking to others (figure 3). More stress is experienced in the period before examinations rather than throughout the college year. The Union of Students Ireland (USI) National report on Students Mental Health in Third Level Education assessed stress, anxiety, and depression prevalence in third level students, and their results corroborate those obtained in this study (Price. *et al.*, 2019).

Both males and females experience the same average daily stress, at a ranking of 7 (figure 1). Females were found to be more likely than males to report a higher level of stress. This finding has also been reported among the female population in a study which did not take university status into account but rather assessed the general female population (apa.org, 2020). A psychological study carried out has shown that females are socialised to be emotional, nonaggressive, nurturing, and obedient, whereas males are socialised to be unemotional, aggressive, achievement oriented, and self-reliant supporting the assumption that females experience greater emotional stress than males (May, 2017).

As average daily stress was being assessed in this survey, it was important to avoid conducting it at a time that is either highly stressful (approaching final exams) or not stressful at all (beginning of semester when workload is low) as outlined in methodology. The time chosen is a time that was perceived to be a neutral medium between highly stressful and stress-free to avoid skewing the results toward either bias. The time at which this stress is felt most was determined to be the period in which examinations are nearing. A study has shown that “stress levels increased significantly throughout the semester”, and showed that stress was experienced during the later weeks of the semester, indicating that examinations are a major cause of stress in students and may manifest into certain habits such as the inability to eat (Pitt *et al.*, 2018). The cause of such stress was determined to be examinations, time management and employment.

Contrary to past research which has indicated that longer working hours such as those experienced by fulltime employed students, have a detrimental effect on students’ feelings of anxiety, stress, and self-efficacy (Betzold, 2013; Elling & Elling, 2000; García-Vargas *et al.*, 2016), the results obtained in this study contradict this assumption. The most common stress rankings reported by male populations with and without part-time jobs were 4 and 7 respectively. However, the most common stress ranking in the female populations was 7, regardless of whether they had a part-time job. Therefore, it cannot be assumed that a part-time job has an increasing negative impact on the level of stress experienced by college students (figure 1).

Other causes of stress during the college year were assessed via open-ended questions. Difficulties with time management was identified as a major stressor by 37.2% of females and 20% of males. Workload and deadlines were indicated by 17% of females and 32.5% as causes of stress. Therefore, the cause of stress in students may be a combination of stressors rather than a single stressor.

Music has previously been reported to impact the psychobiological system positively (Thoma *et al.*, 2013). Thus, the findings that one of the most used mechanisms used to manage stress was listening to music was not unexpected (figure 3, 57.9%). Researchers at Stanford University have said that “*listening to music seems to be able to change brain functioning to the same extent as medication*” (Saarman, 2006). Furthermore, research has shown that music with a strong beat stimulates the brain, causing brainwaves to resonate in time with the rhythm. Slow beats encourage slow brainwaves, associated with hypnotic or meditative states, while faster beats encourage more alert and concentrated thinking (Saarman, 2006). Ozbay proposed that “*Social support may moderate genetic and environmental vulnerabilities and confer resilience to stress*” (Ozbay, *et al.*, 2007). Talking to others was determined to be another key coping mechanism among the student population (figure 3). This may be due to the effect that talking to others has on the bodily system in reducing stress. Social connections have been reported to be important in successful stress management strategies (Apa.org, 2020). A study conducted at USC Marshall school of Business determined that specific interaction with someone who genuinely understands your emotion and response and is ideally experiencing it at the same time, will provide measurable relief from stress (Townsend, 2013).

It was noted that 37.8% of females and 30% of the males reported they “*do not cope well with stress*” when reporting coping mechanisms in figure 3. The absence of an appropriate coping mechanism in this population may contribute to further negative impacts of stress on the health of the individual. This finding was reflected by most of the student respondents agreeing that stress has a negative impact on their mental health. Almost 12,000 students sought counselling in the last academic year according to data compiled by Psychological Counsellors in Higher Education Ireland (PCHEI). Anxiety accounted for half of all such referrals last year, while there has been a sharp increase in the cases of self-harm (up from 5 to 11 per cent) and identity issues (from 8 to 14 per cent) in recent years. Of the students taking part in the survey 42.5% suggested that universities should “*incorporate mental health information in lectures towards exam time*” and that faculty departments should “*communicate*” amongst each other. Other suggestions included “*stress management workshops should be held throughout the year*”, “*more tutorials*” and “*improve the counselling service*”.

CONCLUSION

It can be concluded from this study that university students experience an alarmingly high level of daily stress, reflected by an average ranking of 7 of out 10 for both males and females. When taking a part-time job into consideration, it was surprising that stress levels remained unchanged and that this did not seem to be factor contributing to increased stress. The suggestion that people do not react in the same manner when face with similar stressors was justified as a variety of coping mechanisms were selected by the students, of which talking to others, music, technology, and exercise prevailed in both males and females. In addition, it is universally agreed that elevated levels of stress have a negative impact on student mental health. As there has been an absence of Irish studies conducted to assess these parameters, the results of this study may provide a basis for further research into stress tolerance among third level students and provide information to colleges for implementation of resources that could help resolve these stress levels experienced by students.

It is possible that subjective interpretation of the stress scale from 1-10 could be misunderstood. One student may perceive a particular ranking to be highly stressful, whereas another student may perceive the same ranking to be less stressful. If re-conducting this survey, an additional question could be included determining the perception of the ranking scale. In addition, the survey could be carried out at different times of the year to quantitatively determine the exact period that is most stressful in the college year rather than the qualitative analysis that took place in this single survey.

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All authors contributed equally to this work.

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