Perceived Stress and Coping Styles between Mature and Non-Mature Undergraduate Students

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BA (Hons) in Psychology

National College of Ireland 2020

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Abstract

This current study explores the contrast in perceived stress levels and coping scores among two different student-groups, mature students and non-mature students. A sample of 102 students were collected through Snowball Sampling from different universities in Dublin, Ireland and were asked to complete an online questionnaire relating to their perceived stress and coping styles. There is a significant difference between the dependent variables, perceived stress and coping, and the independent variables, student-group, years of education and gender. The results of the statistical analyses of this study suggests that student-group is a significant predictor of perceived stress, however, it is not a significant predictor for coping. There has been little research relating to how student-group differs in perceived stress in undergraduate students, and the results of this research could be implemented for the benefit of students to aid the reduction of perceived stress.

Acknowledgements

First and foremost, I would like to thank my God Almighty for giving me the strength, ability and opportunity to undertake this research study and to persevere.

Secondly, I would like to thank all the participants who took part in this study. Thank you for taking the time to participate in my final year project, I would have not been able to complete this thesis without your participation.

I would like to express my gratitude to my supervisor, Dr. David Mothersill, along with the rest of staff members in National College of Ireland for their valuable guidance and help through every step of the process.

At last but not least, I am extremely grateful for my family and friends for their love, prayers and support. I wish to express my deepest gratitude to my mom, for her unconditional love and strength.

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Introduction

Stress is described as a dissonance between stressors from an individual's environment and circumstances and the individual's ability to fulfil these demands (Malach-Pines, & Keinan, 2007). According to the American College Health Association (ACHA, 2018), majority of undergraduate students are faced with different symptoms caused by stress such as exhaustion and feeling overwhelmed. A healthy amount of stress in college can benefit a student's learning (Cahir & Morris, 1991) and can help with the motivation of students to reach a certain goal.

On the other hand, high levels of stress paired with an individual's inability to handle their stressors can cause a negative impact on a student's academic performance (Khan & Kausar, 2013). This study also concluded that there is a difference in stress levels among junior and senior students. Stress is a serious problem among undergraduate students, and the difference of stress may differ among the different age groups in college institutions. Folkman & Moskowitz (2004) explains that coping is the response to stress and how an individual would handle stressful situations.

Students that are starting in academia straight after secondary school are considered to be called "non-mature students" or "traditional" students. The transition into adulthood along with the transition into college life and the development of an adult-like identity can be very stressful for young adolescents. MacKenzie et al., (2011) reported that 25% of adolescents facing this transition experience depression, anxiety and high levels of stress. This adjustment and change of environment, both physical and social, can cause nervousness and loneliness, and eventually a great deal of stress among undergraduate students (Ross et al., 1999).

There has been an increase in mature students that chose to become undergraduate students later on in life. According to Choy., (2002) and Kohler, Munz, & Trares., (2007), there has been an increase in adult students, first-generation students, females, part-time students and students with dependents. Due to this increase in numbers, there is a need to understand how their perceived stress and coping styles can impact older students. According to Henry et al., (2018), mature students have different physical, emotional, social and cognitive aspects as an older adult with many responsibilities.

Review of Literature

There has been a lot of research relating to the effects of stress on undergraduate students and which stressors would cause more stressful experience. However, there has not been a lot of studies examining perceived stress among mature and non-mature undergraduate students and how they would cope with stressors. Research on age differences in emotional responses to daily stress has produced inconsistent findings. Furthermore, the studies regarding age differences in undergraduate students regarding perceived stress, along with unique coping strategies, showed conflicting outcomes.

Students tend to experience different stressors such as continuous assignments and exams (Crandall et al., 1992), which differ from everyday stressors that they tend to experience stress differently than non-students. Undergraduate students are expected to experience stressful demands relating to the transition into college such as leading home for some pupils, becoming more independent and to be able to make their own decisions (Altmaier, 1983). There could be an overwhelming assimilation of academic material in a short period of time (Campbell & Svenson, 1992). Adolescents are vulnerable to the problems associated with stress as transitions occur at an individual and social level. According to Awino & Agolla., (2008); Deb et al., (2015), overcrowded lecture halls, semester grading system, inadequate resources and long hours can cause undergraduate stress. Part-time students experience different stressors relating to both work and academic life (Giancola, 2009).

According to a study by Lachman, (1986), there are early studies conducted that investigated the differences in the age groups in universities. These studies suggest that older students tend to be more external in their locus of control than their younger

classmates. However, later studies showed mixed results. McCrae (1982) also suggest that this difference between the age groups in coping strategies among younger and older undergraduate pupils are purely due to the different types of problems that they face. The older an individual gets, they are exposed to a range of problems and issues, causing them to gather different methods of coping strategies to deal with these experiences.

Scott, Sliwinski, & Blanchard-Fields (2013) explored the age differences in emotional responses to daily stress and the role of timing, severity and global perceived stress. Charles (2010) produced a theory that shows the importance of when and how age could impact an individual's well-being. The results of this research suggest that adults that are older have less of a negative affect than their younger adults with stressors that have recently occurred. However, there seems to have no difference in age in the effect of the stress 3-6 hours after the exposure of the stressor.

Khan & Kausar (2013) investigated the effect of stress on students and their academic performance. The sample consisted of 150 students from different universities in Islamabad. The results of this study included that stress has a significant effect on a student's performance. This study used a Perceived Stress Scale (PSS) and found no significant difference between male and female university students but discovered significant difference between junior and senior students and in younger and older students. According to Trueman & Hartley (1996), older students showed more time management skills rather than the students that are younger, due to more time to learn different coping strategies to handle stress.

The study conducted by Giancola, Grawtich, & Borchert (2009) examined older,

mature students that are attending undergraduate classes and investigated how stress can affect older students. A sample of 386 students voluntarily completed a survey relating to how older students deal with stressors and stressful experiences. The findings of this research suggest that the amount of work stressors can impact an individual more than academic and personal stressors. According to a study by Morris, Brooks, & May (2003) found a difference between the coping styles of mature and non-mature students. Moreover, a study by Yum, Kember, & Siaw (2005) found that students that are older are able to cope and handle stressful experiences and negotiate demands in their family and social lives, but not their work life.

Edwards, Hershberger, Russell, & Markert (2001) conducted a study with 206 undergraduate students that included results that showed that there are significant correlations among positive social support, negative social exchange, life event stress and daily stress. There were also negative correlations between life events and hassles with poorer physical and overall psychological health. The study found mean differences in gender in the sample, but no difference in age in perceived stress and coping styles.

Jain & Shinghai (2017) reviewed several studies relating to stress in students. In this literature review, Dimitrov (2017) suggested that food, exercise, work and recreation are areas to focus to cope with academic stress. This study suggested that academic institutions are more interested in academic qualifications and obligations, rather than holistic development of students. Subramani & Kadhiravan (2017) shows that there is a relationship between stress and mental health. Moreover, Khan & Kausar (2013) conducted a study that shows results that suggests that academic performance

can be affected negatively with the exposure of stressors. There was a difference between junior and senior students in this study conducted.

This present study conducted is a partial replication of a study by Eisenbarth (2018) where coping strategies and perceived stress among undergraduate students and gender differences were analyzed. The aim of this study was to investigate differences in females and males in how stress is handled by undergraduate students. This study is used the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) to survey perceived student stress. The Brief COPE Inventory (Carver, 1997) was also used in this study to investigate how students handle with stressful situations. A recommendation for future research in Eisenbarth (2018) is to gather participants with a more varied backgrounds such as socio-economic status, older/ non-traditional students, etc.) to help differential use of coping strategies among undergraduate students.

Instead of investigating gender differences, the current study will examine age differences, perceived stress and coping strategies among mature and non-mature undergraduate students. According to Brougham et al (2009); Mirsa & McKean (2000), suggest that younger students tend to experience stressful than their older counterparts, due to the transition from secondary school to college.

Aims of this study

The aim of this study is to produce a research that will analyse perceived stress and coping styles among mature and non-mature undergraduate students. The purpose of this study was to address the contradiction in the literature relating to age differences in coping strategies, and studies relating to this topic produced inconsistent findings. There are also findings in regards to significant gender differences between undergraduate students in perceived stress and coping methods and probes the question whether the results are alike in different student groups. An objective of the study includes developing a greater understanding on stress among undergraduate students and to produce recommendations on future research based on the information accumulated in this study and the past studies already published relating to the topic of stress. The rationale of the study is to produce findings that will help students, as well as third level institutions to help reduce the impact of stress on a student's well-being, as an ordinate amount of stress can negatively impact a students' academic performance, along with their overall well-being (Khan & Kausar, 2013).

The null hypotheses of this study are:

1. There is no difference in perceived stress levels among the two different student groups.
2. There is no difference in coping scores among the two different student groups, mature and non-mature undergraduate students.

We suspect that there are significant differences in traditional and non-traditional students relating to perceived stress and how they handle this stress. Furthermore, we also expect younger students to have higher levels of perceived stress but have less

effective/ instrumental methods of dealing with stress than mature students as they have more experience in dealing with different stressors and have cultivated different strategies on how to cope with these stressful experiences. The dependent variables for both hypotheses are perceived stress and coping. The independent variables include student-group, years of education and gender.

Methods

Participants

Participants (*N*=102) were recruited through the use of Convenience Sampling and Snowball Sampling. Undergraduate students over the age of 18 years old were approached around the campus of National College of Ireland and asked to complete a short questionnaire. Furthermore, those who have completed the study are asked if they can pass the questionnaire to their friends, acquaintances and colleagues that possess the inclusion criteria. Participants were given options to answer, such as Males (*n*= 49) or Females (*n=53*), mature student (46.1%) or non-mature student (53.9%), and the amount of years of education they have had, 13 years (1%), 14 years (13.8%), 15 years (23.5%), 16 years (16.7%), 17 years (35.3%), 18 years (8.8%) and 22 years (1%).

Measures

This study used an online, self-report survey. The questionnaire first assessed demographic information such as student age group (18-24 years old (non-mature student) or 25+ years old (mature student)), gender and years of education.

Perceived Stress Scale (PSS: Cohen, Kamarck, & Mermelstein, 1983) was used as an instrument to measure which situations in one's life are appraised as stressful. The 10-item scale uses a 5-point Likert scale, ranging from "O" to "4". "0" = Never, "1" = Almost never, "2" =Sometimes, "3" = Fairly Often, "4" = Very Often. Items 4, 5,7 and 8 are reversely scored. The PSS was used to analyses the prevalence of how students perceive their lives as overwhelming and uncontrollable. The reliability of the PSS is .78 (Cohen, & Williamson, 1988), .89 (Roberti, Harrington, & Storch, 2006) and .83

(Gonzalez & Ladero, 2007). Brief COPE Inventory (BCI: Carver, 1977) was used to examine how participants react to stressful situations and how they deal with their stress. The BCI has 14 subscales and uses a Likert instrument. In the COPE inventory, participants answer each statement with a score from 1 to 4: 1= I usually don't do this at all, 2= I usually do this a little bit, 3= I usually do this a medium amount, 4= I usually do this a lot. This instrument was used to assess several types of coping methods such as active coping, seeking instrumental support, denial, venting of emotions, etc. Previous research has verified the reliability and validity of the BCI (Miyazaki, Bodenhorn, Zalaquett, Kok-Mun, 2008).

Procedure

Participants were asked to voluntarily complete the online questionnaire which is then passed onto the participants through a website link. An informed consent form and information about the study was first explained prior the actual questionnaire. Participants were required to agree to the terms and conditions of the study before continuing on with the study. Demographic information about the students, such as gender, student group (18-24 years old (non-mature student), 25+ years old (mature student)) and the number of years of education they have had were first collected. Participants were then asked to complete the Perceived Stress Scale (PSS) and Brief COPE Inventory (BCI). After the completion of this, they were given a brief summary of the study, along with information stating that their identities will be kept confidential and anonymous, therefore they cannot withdraw their answers after submitting them. The duration of the questionnaire was approximately 10 minutes.

Data Analyses

The Statistical Program for the Social Sciences (SPSS) was used to analyse data collected from this research. The results from the questionnaire were entered into a SPSS dataset, variables are then labelled and some variables are recoded as they are some variables that reversely coded. Descriptive statistics were used to ensure for accuracy in the data collected and the mean, median, standard deviation, range and significance of all the variables are viewed. To examine whether there is a relationship between the variables, Student-group and demographic variables of Years-of-Education and Gender, the following statistical tests were conducted. A Chi-square test was used to analyse the relationship between Student-Group and Gender. Furthermore, an independent t-test was used to examine whether the means of Years-of-Education differs between the two Student-Groups. A hierarchical multiple regression was used to examine whether variables such as student-group, years of education and gender explain a statistically significant amount of variable in the dependent variable of perceived stress. A separate multiple regression was used to examine how student-group predicts the dependent variable, coping, after controlling for years of education and gender. The variables, years of education and gender, were included in the model to control for the dependent variables. A bar chart was also used to analyse the difference in stress between the non-mature and mature students.

Results

A series of statistical tests were conducted to examine the relationship between the independent variable, Student-group, and each demographic variable, to ensure that these variables were not significantly related. First, a Chi-Square test was used to examine the relationship between Gender and Student-Group. Secondly, an independent samples t-test was used to examine whether the mean of Years of Education differed between student groups.

Chi-square test was used to investigate the relationship between Gender and Student-Group. The results of the test were that gender has a statistically significant relationship with Student-Group at $\chi^2 = 7.502$, $p < 0.05$. An independent samples t-test *(See Table 3)* was conducted to compare the years of education a student has between the two student groups, 18-24 years old (Non-mature students) and 25+ years old (Mature students). There was a significant difference in scores, with non-mature students (M= 1.05, SD= .229) scoring significantly lower than mature students (M= 1.57, SD= .500), t(100) = -6.925, p < .000, two-tailed. The magnitude of the differences in the means (mean difference = -.520, 95% CI: -.669- -.371) was small (Cohen's d = 1.34).

Hierarchical multiple regression was performed. The first model of the regression included gender and yeas of education as predictors. The second model contained gender, years of education and student-group as predictors. This model investigated the contribution of student-group to perceived stress, beyond the variation that has already been accounted for by the two demographic variables, gender and years of education.

Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. Additionally, the correlations amongst the predictor variables (gender, years of education and student-group) were examined and these are presented in Table 5. All correlations are negatively correlated ranging from -.280 to .271. This indicates that multicollinear was unlikely to be a problem. All variables were correlated with perceived stress scores which indicates that the data was suitable for multiple linear regression analysis.

In the first step of hierarchical multiple regression, the model contains Gender and Years of Education as predictor variables, due to the theoretical rationale for including these variables in the model and the Chi-Square and t-tests previously conducted were statistically significant at $p < 0.05$. The model was statistically significant $F (2, 99) = 4.268$, $p= .017$. This model explains 7.9% of variation in stress. The model improves prediction of stress compared to the amount of error in the model. The second model contains Gender, Years of Education and Student-Group as predictor variables. The model improves prediction of stress compared to the amount of error in the model (See *Table 6*, F= 4.525, p value of 0.005). The R Square Change for the second model is 0.042, so the second model accounts for an additional 4.2% of variation in stress, above and beyond the variation already accounted for by Gender and Years of Education. Student Group is a significant predictor (*See Table 7*, t= -2.172, p = 0.032).

Another hierarchical multiple regression was performed. The first model of the regression also included gender and yeas of education as predictors. The second model contained gender, years of education and student-group as predictors. This model investigated the contribution of student-group to coping styles, above and beyond the

variation that has already been accounted for by the two demographic variables, gender and years of education.

In the first step of the hierarchical multiple regression, two predictors were entered: Gender and Years of Education. This model was statistically significant F (2, 99) = 7.620, p < .001. After the entry of Gender and Years of Education, the introduction of Student-Group explained 15.2% variance in coping scores, after controlling for Gender, Years of Education and Student-Group, a change that was statistically significant (R^2 Change= .152; F (3, 98) = 5.846, p= .001). This regression model containing Gender, Years of Education, and Student-Group, improves predicting of Coping compared to the levels of inaccuracy of the model (*See Table 10).* However, Student-Group is not a significant predictor: t= -1.458, p= 0.148 *(See Table 11 for full details).* The correlation between perceived stress and student-group is a negative correlation (*See Table 4).* Similarly, the correlation between coping styles and student-group is also a negative correlation (*See Table 8).*

Due to two separate regression analyses, a Bonferroni correction was conducted on the results of these regressions to protect from Type 1 error. The original p-value (0.05) is divided by the number of statistical tests performed, which is two in this case. The new p-value is 0.025. According to Table 7, Student Group is a significant predictor of perceived stress at 0.05, but considering that there are two statistical tests performed, along with the Bonferroni Correction, Student Group itself is not a significant predictor at the more conservative threshold of 0.025.

Tables and Figures

Table 1

Descriptive statistics and reliability of all continuous variables

	Mean	Median	SD	Range	Cronbach's Alpha
Perceived Stress	2.450	2.60	.562	2.80	.855
Coping	2.384	2.29	.407	2.08	.815
Student Group	1.46	1.00	.501	1	
Years of Education	1.29	1.00	.458	1	
Gender	1.53	2.00	.502	1	

Table 2

Crosstabulation of Gender and Student-Group

Student-Group		Males	Females	χ^2	Significance
18-24 years old (Not mature student)	Count	19	36	7.502	.006
	Expected count	25.9	29.1		
25+ years old (Mature)	Count	29	18	7.502	.006
	Expected count	22.1	24.9		

Table 3

Independent samples t-test to examine the relationship between Student-Group and Years of Education

	F	Sig.	*t*	*df*	*Sig. (2-tailed)*	*Mean difference*	*Std. Error Difference*
Equal variances assumed	150.491	.000	-6.915	100	.000	-.520	.075
Equal variances not assumed			-6.915	63.305	.000	-.520	.079

Table 4

Correlation between total perceived stress, years of education, gender and student group

	1	**2**	**3**	**4**
1. Perceived Stress	1	-.112	.271*	-.280*
2. Years of education	-.112	1	-.124	.569**
3. Gender	.271*	-.124	1	-.271*
4. Student Group	-.280*	.569**	-.271*	1

Note. Statistical significance: *$p < .05$; **$p < .001$

Table 5

Hierarchical multiple regression model predicting perceived stress scores

	R	***R^2***	***β***	***B***	***SE***	**CI 95% (B)**
Model	.282	.079**				
Block 1						
Years of Education			-.079	-.097	.119	-.334 / .139
Gender			.261***	.292	.109	.076 / .508
Block 2	.349	.122*				
Years of Education			.061	.075	.141	-.206 / .355
Gender			.208*	.233	.110	.014 / .452
Student Group			-.258*	-.289	.133	-.554 / -.025

Note.; Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$; Dependent Variable= Perceived Stress

Table 6

ANOVA Table from regression predicting perceived stress scores

Model	Sum of squares	*df*	Mean Square	F	Sig.
1. Regression	2.530	2	1.265	4.268	.017
Residual	29.345	9	.296		
Total	31.875	101			
2. Regression	3.878	3	1293	4.525	.005
Residual	27.997	8	.286		
Total	31.875	101			

Table 7

Coefficients table from the Hierarchical Multiple Regression predicting perceived stress scores

			Correlations			*Collinearity Statistics*	
	t	*Sig.*	*Zero-order*	*Partial*	*Part*	*Tolerance*	*VIF*
1.(Constant)	8.634	.000					
Years of Education	-.815	.417	-.112	-.082	-.079	.985	1.016
Gender	2.693	.009	271	.259	.259	.985	1.016
2. (Constant)	8.751	.000					
Years of Education	.529	.598	-.112	.050	.050	.676	1.480
Gender	2.115	.037	.271	.200	.200	.925	1.081
Student Group	-2.172	.032	-.280	-.206	-.206	.636	1.573

Table 8

Correlation between total coping styles, years of education, gender and student group

	1	**2**	**3**	**4**
1. Coping Total	1	-.275*	.273*	-.313**
2. Years of education	-.275*	1	-.124**	.569**
3. Gender	.273*	-.124	1	-.271*
4. Student Group	-.313**	.569**	-.271*	1

Note. Statistical significance: *$p < .05$; **$p < .001$

Table 9

Hierarchical multiple regression model predicting coping scores

	R	***R^2***	***β***	***B***	***SE***	**CI 95% (B)**
Model	.365	.133***				
Block 1						
Years of Education			-.245**	.218	.084	2.021 / 2.708
Gender			.242**	.196	.076	.045/ .348
Block 2	.390	.152				
Student Group			-.152	-.152	.101	-.335 / .064
Years of Education			.208*	.168	.078	.013 / .324
Gender			-.170	-.138	.095	-.326 / .050

Note. N = 102; Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$; Depending variable: Coping

Table 10

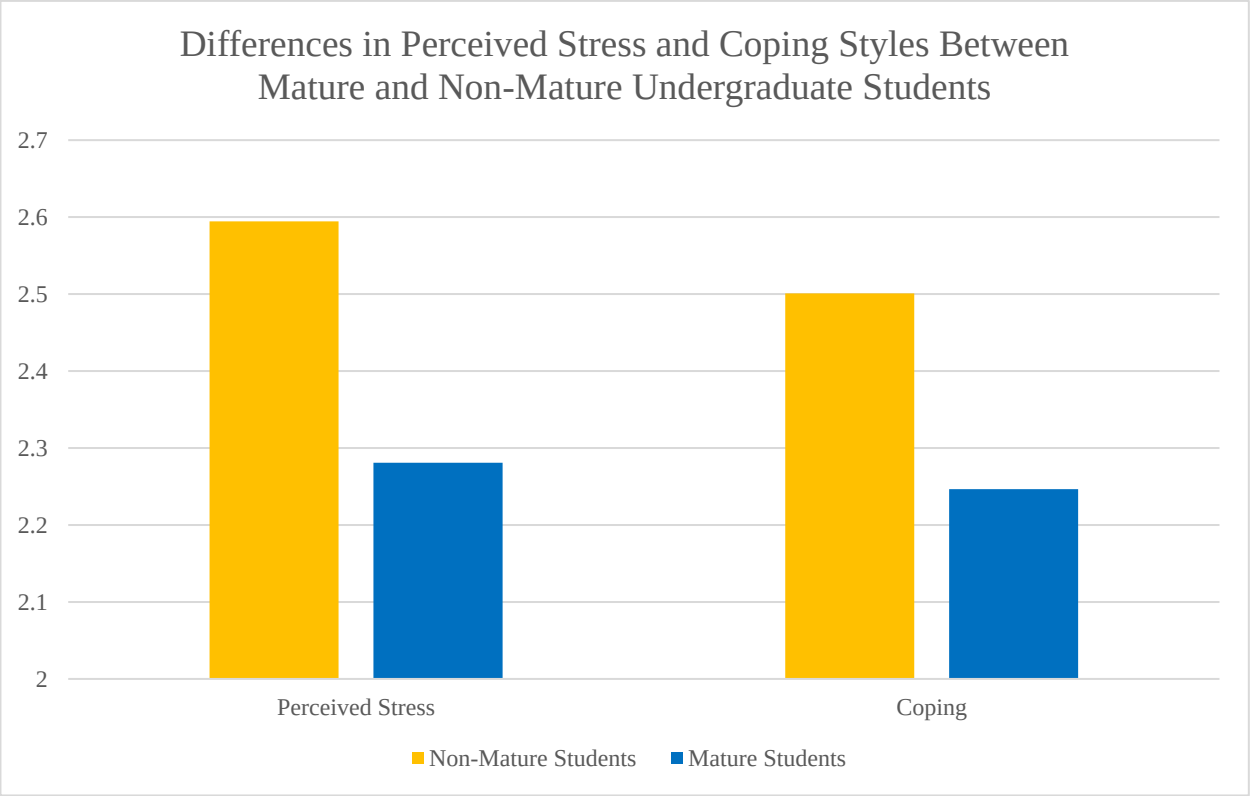
ANOVA Table from regression model predicting coping scores

Model	Sum of squares	*df*	Mean Square	F	Sig.
1. Regression	2.230	2	1.115	7.620	.001
Residual	14.486	99	.146		
Total	16.716	101			
2. Regression	2.538	3	.846	5.846	.001
Residual	14.179	98	.145		
Total	16.716	101			

Table 11

Coefficients table from the Hierarchical Multiple Regression predicting coping scores

			Correlations			*Collinearity Statistics*	
	t	*Sig.*	*Zero-order*	*Partial*	*Part*	*Tolerance*	*VIF*
1.(Constant)	13.648	.000					
Years of Education	-2.597	.011	-.275	-.253	-.243	.985	1.016
Gender	2.569	.012	.273	.250	.240	.985	1.016
2.(Constant)	12.723	.000					
Years of Education	-1.347	.181	-.275	-.135	-.125	.676	1.480
Gender	2.146	.034	.273	.212	.200	.925	1.081
Student Group	-1.458	.148	-.313	-.146	-.136	.636	1.573


Differences in Perceived Stress and Coping Styles Between Mature and Non-Mature Undergraduate Students
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2
Perceived Stress
Coping
Non-Mature Students
Mature Students

Bar Chart 1

Discussion

The overall aim of this study was to investigate perceived stress and coping styles among mature and non-graduate undergraduate students. There has been a lot of research relating to how stress effects undergraduate students but there has been very little research on analyzing the difference between different student groups, such as mature and non-mature students, along with how they cope with stressors. Past research relating to perceived stress among the different student groups have produced inconsistent findings. For example, according to Lachlan (1986), early studies suggest that older students tend to have an externa locus of control compared to younger students. However, later studies showed mixed results. Eisenbarth (2018) analyzed gender differences among undergraduate students in perceived stress and coping styles. Similarly, this study also investigated perceived stress and coping among undergraduate students but investigated different student-groups, mature and non-mature students.

According to Khan & Kausar (2013), students' academic performance can be negatively impacted with the exposure of stressors. The results of the study suggested that there is a difference between younger and older students among perceived stress. Mirsa & McKean (2000); Brougham et al (2009) conducted studies that suggest that younger students tend to have a more stressful, academic experience than their older counterparts, due to the transition from secondary school to college. The correlation between perceived stress and student group is a negative correlation (*See Table 4*), suggesting that as one variable increases, the other variable decreases. As student-group increases, perceived stress decreases, which suggests that the student-group has a significant relationship with perceived stress. Mature Students experienced lower levels

of perceived stress compared to their younger counterparts, according to this present study. Thus, the null hypothesis can be rejected due to these results.

Furthermore, according to Morris, Brooks, & May (2003), there is a significant difference in coping styles between mature and non-mature students. Older students are able to cope and handle stressful experiences (Yum, Kember & Siaw (2005)). According to McCrae (1982), there is a difference between age groups in coping strategies due to the different problems that each age groups face. Mature students are exposed to a range of different issues, which would cause them to cultivate different coping styles to deal with the stressors.

The results of the hierarchical multiple regression show that student-group itself is a significant predictor of coping styles at 0.05, but due to the Bonferroni correction performed, student-group itself is not a significant predictor, because p= 0.032, at the more conservative threshold of 0.025. Moreover, there was also a negative correlation between coping styles and student group (*See Table 8).* As student-group increases and coping styles decreases. The mature students group had low coping styles compared to the non-mature student group. As the p-value is not statistically significant, the null hypothesis for hypothesis two regarding coping styles cannot be rejected.

Limitations and Recommendations of this study

There are limitations in this study that could be addressed in future research. First, the sampling method used in this study is snowballing sampling to collect data from participants. This type of sampling is a chain referral, where a participant would share the study with other people. A limitation of this method of sampling is that the researcher would have very little control over the sampling method, while have to rely mainly on the previous subjects that took part in the study. A sampling bias is also limitation of this research, as initial subjects tend to nominate people that they know well. It is highly possible that subjects share the similar or same traits and characteristics, it is possible that the sample collected with only obtain is only a small subgroup of the entire population. In future research, it would be useful to use random sampling, which allows participants to have an equal chance of being selected, eliminating sampling bias and collect a greater number of participants, if there is a longer time length for the research.

Secondly, the sample is limited to universities in Dublin, Ireland. Due to similar diversity in students' places of origin, the possible cluster effect by university should be considered, therefore generalizability to the rest of the student-body population. However, the sample size (n= 102) of the study is generally a large sample size, comparable to the samples from previous studies such as Giancola, Grawtich, & Borchert (2009) *n=159,* and Khan & Kausar (2013) *n=150.*

Another limitation of this study is that the participants only had two options on the questionnaire to choose which student-group they are part of, students ranging in age between 18-24 and students above the age of 25 years old, to improve the usability

of the online questionnaire. For future research, it is a recommendation from the results of this research to collect the ages of the participants.

Implications

The findings of this research could be used to help students, along with university administers and counsellors to gather more information about perceived stress among different student groups in third level institutions. The results of this research project can be used to help lessen the impact of perceived stress on students, as different approaches can be implemented to different people, due to their current age and life experiences. Findings from this study may help college-health personnel to implement better programs to assist different student group to cope with stress and to help reduce stress levels to avoid a negative effect on their academic performance, as suggested by past studies (Khan & Kausar, 2013). For example, third level institutions need to be aware of the differences in student groups in regards to perceived stress and coping, in order to offer appropriate aid and intervention services for the student.

Conclusion

The objective in this study was to examine a correlation between student-group and perceived stress, along with whether there is a correlation between student-group and coping styles. Another aim was to examine the difference between the two student-groups. The data of the results showed negative correlations between student-group and perceived stress, suggesting that mature students have lower levels of perceived stress than younger students. Furthermore, the correlation between student-group and coping styles is also negative, which shows that mature students had lower scores of coping compared to the non-mature students. An abundance of stress is considered to have a large negative impact on students' academic performance and their overall wellbeing. This research aims to distinguish the difference among the different student-groups, to aid students and university administrators to effectively handle perceived stress levels, while taking their student status (whether they are a mature student or a non-mature student) in consideration.

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Appendices

Terms and Conditions of the Study

My name is Jelani Aruelo and I am a final year student doing Psychology. I invite you to participate in this study as it is part of my final year project. This research aims to investigate perceived stress levels between students in different age groups and the coping styles within those groups. You will be asked to fill in demographics such as gender, age, and school year, along with questions about perceived stress you have experienced as a student and how you are able to cope with these stressors.

This questionnaire is estimated to take around 15 minutes to complete. Please take your time in reading the questions. You are able to withdraw from the research during the survey. However, once you have submitted all of your answers, you are not able to withdraw your information from the study as all participants will be unidentifiable.

You must be 18 years old and over to participate in this study. All information and data collected from this study will be strictly confidential. This survey will be kept anonymous. The data collected will be kept in a password protected software and the researcher will be the only one to have access the data.

All the data from this study will be disseminated and presented as part of my final year project. Data will be stored for 5 years and then destroyed, in accordance with the NCI policy.

In the case that this questionnaire would cause distress, here listed are contact information to different services that would be able to assist you.

NiteLine- Student Listening Service (01) 883 5400 or www.niteline.ie

NCI Students Services studentservices@ncirl.ie

For further queries, contact the researcher:

Jelani Aruelo,

x17328551@student.ncirl.ie

Do you give informed consent to participate in this study?

○Yes ○ No

Section A

Gender

○ Female

○ Male

Student-Group

○ 18-24 years old

○ 25+ years old

Years of Education

How many years of education have you completed?

Note: Primary school= 8 years, Junior Certificate= 11 years, Leaving Certificate= 14 years, Undergraduate Certificate= 17 or 18 years (depending on whether it is a 3- or 4-year degree), Master's degree= 18, 19 or 20 years (depending on whether the undergraduate degree is a 3- or 4-year degree and whether the Master's degree is a 1 or 2 year degree), PhD= > 20 years.

_____

Section B

Perceived Stress Scale (Cohen et al, 1983)

For each question choose from the following alternations:

0= Never, 1= Almost Never, 2= Sometimes, 3= Fairly Often, 4= Very Often

In the last month, how often have you been upset because of something that happened unexpectedly?

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

In the last month, how often have you felt nervous and stressed?

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

In the last month, how often have you felt confident about your ability to handle personal problems?

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

In the last month, how often have you felt that things were going your way?

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

In the last month, how often have you found that you could not cope with all the things that you had to do?

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

In the last month, how often have you been able to control irritations in your life?

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

In the last month, how often have you felt that you were on top of things?

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

In the last month, how often have you been angered because of things that happened that were outside of your control?

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

Section C

Brief COPE Inventory (BCI: Carver, 1997). These items ask what you've been doing to cope with stress. Each item says something about a particular way of coping. Do not answer on the basis of whether it seems to be working or not- just whether or not you're doing it.

Please answer the following questions using these response choices:

1= I haven't been doing this at all

2= I've been doing this a little bit

3= I've been doing this a medium amount

4= I've been doing this a lot

I've been turning to work or other activities to take my mind off things

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been concentrating my efforts on doing something about the situation I'm in

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been saying to myself "this isn't real"

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been using alcohol or other drugs to make myself feel better

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been getting emotional support from others

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been giving up trying to deal with it

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been taking action to try to make the situation better

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been refusing to believing that it has happened

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been saying things to let my unpleasant feelings escape

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been getting help and advice from other people

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been trying to see it in a different light, to make it seem more positive

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been criticizing myself

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been trying to come up with a strategy about what to do

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been getting comfort and understanding from someone

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been looking for something good in what is happening

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been making jokes about it

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping or shopping

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been accepting the reality of the fact that it has happened

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been expressing my negative feelings

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been trying to find comfort in my religion or spiritual beliefs

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been learning to live with it

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been blaming myself for things that happened

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been praying or meditating

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

I've been making fun of the situation

	1	**2**	**3**	**4**	
Never	○	○	○	○	Very often

Thank you for participating!

You have completed the questionnaire and the data collected from this survey will be used as part of my final year dissertation. After you have submitted all of your data, you will be unable to withdraw your information from the study as all participants will be unidentifiable.

Data will be stored for 5 years and then destroyed, in accordance with NCI policy. This survey will be kept anonymous and the data collected will be securely protected in a password protected software. The researcher will be the only one to have access to the data.

In the case that this questionnaire has caused you distress, here listed are contact information to services that would be able to assist you.

NiteLine- Student Listening Service (01) 883 5400 or www.niteline.ie

NCI Students Services studentservices@ncirl.ie

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