

**Stress vs. Academic Performance of College Students**

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**Abstract**

Stress is a universal emotion, felt by many but highly associated in college students. It is the body's way of responding to a form of demand and there are endless amounts of causes that are correlated with this universal emotion. In this literature review, we will be examining four factors of stress: work related, interpersonal relationships, academic intensity, and goals/motivation and its relation to academic performance. Multiple studies have been conducted in regards to these factors using participants from all over the world to analyze how stress is affecting students in university. By evaluating these articles and putting it all under one roof, we will be able to obtain the most information to create a source of prevention/ intervention for students to minimize the amount of stress they can experience during school.

## **Introduction**

Applying to a university is one of the biggest steps in a student's life when transitioning from secondary school. It is the stepping stone for a student's life that will pave the way for their future.

What may seemingly be an exciting new chapter for a student's life, studies show that students experience high amounts of stress during this time. According to American Psychological Association, 45 percent of college students seek counselling due to stress, while 28 percent do so because of academic performance. As reported by the Nation College Assessment conducted by the American College Health Association, 91.50% from 66,887 undergraduates reported average to above average of stress in their life on campus daily; within a year, 63.20% felt sad and 54.70% had experienced overwhelming anxiety (Duan, W. *Qual Life Res* (2016) 25: 2879). These studies indicate that a majority of college students are stressed and it undoubtedly affects the lives of students in their academic performance.

In this literature review, we aim to study four factors of stressors of college students, including work while studying, interpersonal relationships, academic intensity and goals/ motivation students have and how these stressors can affect their academic performance. Through objective analysis, we hope that this literature review can serve two purposes: to present a perspective from different fields on studies that will give an insight to understanding the reasons on students being stressed; and more importantly, to raise awareness on the decreasing stress levels of college students.

## **Methodology**

For the literature review on stress vs academic performance of college students, our group divided the topic into four different areas, including interpersonal relationships, course intensity, work pressure and goal and careers.

For the interpersonal relationships section, we were able to find four papers in total. With two researches on the relation between interpersonal relationships and stress, and two researches on how stress inflicted by relationship issues will affect academic performance. Before studying the papers, we did a swift study on the authors and the journals that published these papers and we believed these

papers are trustworthy and suitable for the purpose of reviewing the relationship between interpersonal relationships, stress and academic performance.

To obtain these studies from the internet, CCNY library one-search and academic search complete were used in the first place. Nevertheless, after setting an age bracket of 2016 to 2018 and type in the keywords, the result was being narrowed down to only twenty and most of them did not seem to fit the topic. Google scholar happened to be a more effective search engine as it was able to gather studies comparable to the searching keywords from different sources which render me a much broader variety of result. The search terms “family relationships, stress and academic performance in college students”, “interpersonal relationship and academic performance” were initially employed. However, after the first try it was spotted that simultaneously searching for all three key elements of the topic was not operative as there aren’t adequate studies that included all of them. So, the searching terms were modified and become “family relationships and stress of college students”, “interpersonal relationships and stress of college students” and “interpersonal stress and academic performance of college students”. After reading numerous abstracts and searching for full text versions of the articles, four studies were obtained and were found suitable for writing this review.

For the work pressure section, we found four articles suitable for relation. One article discusses the relationship between working and academic performance in general. Another article analyzes the academic performance and working outcomes of the European country Malta. The next article measures the outcomes and experiences of former outreach workers hired by SNAP outreach project in a university paid standing. The last article found discusses if grant aid can change work behaviors among college students.

We did not find these articles through CCNY academic one search and scopus database. While going through the academic one search, we used keywords like “academic performance”, “working”, and “college students” in both databases to simplify the topic and research. Nothing interesting or related to academic performance of working students came up. We then decided to try an alternative route: Google Scholar. With Google Scholar we used the same keywords and found more than a million searches. We simplified the years to 2016-2018 of the recent articles. With this,

ten articles were found and these four articles were proven to be interesting and more related to the subtopic: work pressure.

While searching numerous sites for articles relating to the topic of the intensity of school, we were mostly looking for how the stress caused by this could place a burden on a student's academic performance. We started browsing by going to the CCNY library one search, and looked for how intensity of school could hurt academic performance. We did not want too many articles so we decided to cut the article publication date to the late 2 years. However, we were still not able to find anything, we were looking for so we decided to switch to Google Scholar. We searched the same thing, yet we could not find anything so we switched our search to 'how academic stress affects academic performance'. This is where we started finding articles. We picked eight and cut four of them because they just were not up to par. The articles we found gave us a variety of studies in different areas based on different students. For example, one article is on Canadian dental students while another is about Malaysian university students. To see if these articles agree even though it is done with a different demographic, will be interesting.

### **Interpersonal relationship**

Enrolling into college is a new chapter in life to most adolescents who are just entering their early adulthood. Experiencing vast change in learning and also social environment as long as the embarkment of a new stage in life, college students could experience a new mode of social interaction from not only their peers but also their family. Therefore, we believe that interpersonal relationships of college students could be a field that is worth studying on the stress of college students and to see if it would affect the academic performance of college students. We have found four researches in total in this area, two of them investigate the relationship between interpersonal relationships and stress and the other two papers cover all three aspects of our topic, including interpersonal relationships, stress and academic performance.

The journal *Teaching and Learning in Nursing* released an article in 2017, titled *Relationship Issues Among College Nursing Students: Associations With Stress, Coping, Sleep, and Mental Disorders* which aim to study the relationship between the four elements that state clearly in the title to relationship issues of college students. The study begins with an introduction which stated that

mental disorder is a serious problem as one quarter of college students in the States have reported suffering from mental disorder. The introduction continues by pointing out stress and its coping strategy are also significant factors that affect students in college. To finish off the introduction, the authors stated their purposes of conducting this study and one of them fits the purpose of this literature review which is study of the relationship between interpersonal relationships and stress of college students. The articles then progress into the method part. This study collected data from 242 nursing students at a public university in USA. The Perceived Stress Scale was used to evaluate the level of stress that the participant think they experience, and the Coping Strategies Inventory Short Form was used to determine the coping style on how participant deal with stressful events. To evaluate the relationship issue, a five-point scale was adopted to see how often a student ran into relationship issues. The data collected was then analyze with multivariate linear regression models with 95% confidence intervals. The result shows that “more than 70% of the students reported at least one kind of relationship issues happening at least once a month” and “the number of relationship issues reported by nursing students were significantly associated with perceived stress ( $F=17.4$ ,  $p<.01$ ) and emotion disengagement coping ( $F=5.84$ ,  $p<.01$ )” (Zhang, Chernaik, &Hallet, 2017). In the discussion part, the authors concluded that in their study, various type of relationship issues were reported ranging from, romantic, parents, friends, roommates to professors. Also, relationships issue was shown to be a notable reason of stress in nursing students and therefore need extra attention from the institution. The authors proposed two possible reason for this correlation, one being the prevalence dating violence and the other one being adverse interpersonal relationships were reported to bring about detrimental physical health symptoms and could possibly leads to mental stress. Also, disengagement coping strategy will result in negative consequences and develop stress in students.

A different study, however, have a slightly different view on how interpersonal relationships is affecting the life of college students in terms of stress. The research article, *Having the Time of Their Life: College Students Stress, Dating and Satisfaction with Life*, focuses on how students spend their time in social interaction and personal behaviors was related to dating, stress and life satisfaction. Unlike the traditional format of a research article, the authors start the paper by bring up some background information on the teenagers nowadays and quickly move on to define the key

terminology of the study. Social interactions which is most relevant to the topic of this literature review is said to occur via an array of media forms apart from face-to-face communication in this generation. As a result, a major way for college students nowadays to communicate and participate in social interaction is through their phones by calls or messages. The study adopts the family ecosystem framework as the theoretical framework to examine the relationships between students' personal characteristic, social interaction and personal behaviors to their relationship status, stress and life satisfaction (Coccia & Darling, 2016). Applying this framework to this study will be studying how the way students spend their time will interact with their sociophysical environments and then, how will it affect their dating and stress. The authors designed an online questionnaire and recruited respondents from a family course of undergraduate students. The survey asked questions on their family and health behaviors, demography, their dating status and how much time they spent on different activities. The final number of participants was 534. The result showed that apart from sleeping, students spend most of their time in social interaction. The participants reported themselves spending 4.93 hours texting, 4.41 hours on the phone and 2.84 hours on social networks. Also, stress was correlated to the usage of phone and texting. The analyzing model shows that life satisfaction which was largely affected by stress was inversely related to stress and texting, but positively related to enrolling in a romantic relationship. In the discussion section, the authors highlighted a few key findings and implication of the results. First, they stated that phone use was positively correlated to stress. Also, texting and social networking had negative overall effects in life satisfaction as the need of intimate interaction of individuals could not be fulfilled by feeling socially connected and supported when using this type of social interaction as a major channel of socializing. Moreover, the authors suggested, although without thorough investigation, that as students from this generation are more likely to shift their attention to games or texting on their phone while doing their homework and studying. Hence, their attention span is shorter, and the amounts of time spent on studying decreased as they are predominantly on their phone, but the academic demands is consistently high, therefore students are stressed.

Apart from normal social interaction or relationship issues of college students, there are also other types of interpersonal relationship incidents that have could affect students' level of stress and

hence, their academic performance. An article released by Critical Sociology, *Racism and the Experiences of Latina/o College Students at a PWI (Predominantly White Institutions)*, appears to give us a different perspective in viewing the effect of interpersonal relationships to stress and how it is going to affect academic performance. The study aims to understand “how Latina/o American college students understood racism and racial microaggression, and developed counter space to navigate the white milieu.” (Robertson, Bravo, & Chaney, 2016). The authors suggested the instances of racism was previously reported to dealt with by assimilation and working hard to achieve higher grade point average. This study use the method of case study to interview 23 Latina/o college separately on their experience of racism and racial aggression and how it contributes to their academia, 13 out of the 23 participants result was adopted in the studies after screening for response that fit the theme of the study. Result shows that students of color often report racial tension and macroaggression in PWI. Also, although the verbal and non-verbal form of racism and macroaggression were psychologically stressful, the participants generally did not report to being upset which show good cultural assimilation. One of the participants, Robert, reported that he once enrolled in one of the hardest class in his major where his classmates and even his professor doubted his ability to pass the course because of his ethnicity. To prove his own capability, Robert worked hard and shocked his peers and professors by passing the course and hires by one of the biggest accounting firm in the States. His experience proved that racism can act as a stressor, and at the time a determination to academic excellence.

Unlike the previous three studies that mainly focus on the interpersonal relationships which take place in school or between the students and their peers, the study going to be mentioned below focus on a slightly different aspect, parent-child relationship. The article, *Permissive parenting and mental health in college students: Mediating effects of academic entitlement*, has an objective to find out whether or not permissive parenting is one of the reasons for academic entitlement. Prior to explaining the setting and methods of the experiment, the authors begin the paper by providing backgrounds on an increasing rate of students encountering mental health difficulties and reports showing that students with caring parents are less likely to suffer from depression and academic problems in college. Therefore, the authors predict that permissive parenting would lead to students’

academic entitlement. Also, the key term, academic entitlement, was defined clearly in the introduction as a student believes that the authority owes them more than it should be and neglecting the need of their own effort in academic setting. It is known that academic entitlement is an impediment to students' academic success. 524 participants who enrolled in some psychology or education was recruited base on their willingness to enter the study. Participants were asked to fill out an online questionnaire which contain the Parental Authority Questionnaire (PAQ), the Academic Entitlement (AE) scale, the scales of Psychological Well-Being (PWB), the Center for Epidemiological Studies Depression Scale (CES-D) and the Perceived Stress Scale (PSS) (Barton & Hirsch, 2016). Result tells that "both males and females in our study, greater permissive parenting was associated with higher levels of academic entitlement" () and academic entitlement was related to perceived stress. The authors explained their results in the comment part, stating that permissive parenting has an effect on stress through academic entitlement. As student of high level of academic entitlement are more likely to have unreasonable expectation on an easier path and therefore encounter more stress as they face the reality but fail to cope with it effectively and blame others for their hit.

### **Goals and Motivation**

As once said by Confucius, "when it is obvious that the goal can not be reached, don't adjust the goals, adjust the action steps". Since primary school, teachers have been implementing an aim or a goal at the beginning of each day; students are then told what to do by educators and at the end of the day students leave with an accomplishment of learning something new. Being in university, a common question that arises in talks with family, friends, and educators is, "what do you plan on doing after you graduate?". Just hearing those few words can cause anxiety and stress. Surveys show that up to 50 percent of students entering college enroll as undecided. Students in university have to take certain steps and have the motivation to achieve their desired goals and aspirations. Four studies taken place in Italy, China, Korea and Indonesia will demonstrate that the lack motivation stresses students in university and it turn may lead to depression.

In a cross-cultural study taken place between Korea and Indonesia, researchers studied the career motivation of secondary students in science, technology, engineering, and mathematics (STEM). The purpose of this study was to understand the career motivation behind the students in STEM. Previous research that has been done on this topic took place in western cultures, which is why researchers wanted to see if there would be a difference in Asia. Choosing a country like Korea, which had one of the highest percentage of graduates in natural science and engineering, in 2013 was the second highest in Organization for Economic Cooperation and Development (OECD), and had 12.8% per employed population in 2013 in research & development; however, gender equality is not fully established in Korea, the numbers on woman participation is miniscule being that only 29% of female graduate in natural sciences and 17% participated in research & development. Compared to Indonesia that has less of a percentage of graduates in the sciences- half of them are females and 31% of females are involved in research & development (Shin, S., Rachmatullah, A., Roshayanti, F., Ha, M., & Lee, J. K., 2018). Furthermore, Korean students showed a low academic motivation for the sciences and the STEM fields are increasing. Based off past research, fourth grade Indonesian students did show a high liking to learn science and math, however, careers in STEM are not increasing which probably falls on the fault of the socio-economic status of the students in Indonesia. The researchers had a total of 2171 participants of which 44% were Indonesian, and of that 43% were male and 57% in the Korean sample. The research was analyzed by a 3-way ANOVA, and examined how gender and education level affected career motivation and the findings revealed significant interactions between countries and education level on STEM career motivation (Shin, S., Rachmatullah, A., Roshayanti, F., Ha, M., & Lee, J. K., 2018).

In a study conducted in Italy, researchers hypothesized that coping strategies, optimism, and personal characteristics are factors that influence first year college students and may in turn determine their life satisfaction. Transitioning from primary to secondary school can be quite difficult for some students and research show that gender also plays a role through this transition. By having coping resources, students can decrease their academic stress levels which will then improve their life satisfaction. The researchers randomly selected 320 students from six upper-level undergraduate classes, and at the end of the selection process, a total of 298 students continued to participate with

51% being female and was divided between two age groups: ages 18 to 23 years were young and mature students were classified from ages 27 to 37 (Cabras, C., & Mondo, M., 2017). The researchers used a tripartite model that includes three forms of coping strategies: problem-focused coping, emotion-focused coping, and avoidance- focused coping. To organize the data, researchers used 48-item instrument to measure the coping inventory for stressful situations (CISS); an eight item that is rated on 7-point Likert scale to measure achievability for future goals (AFGS); and a five items that assessed the respondent's satisfaction with more optimistic leading to a higher satisfaction with life. Using a multivariate analysis of variance (MANOVA), there was an effect between gender and age. Tests revealed that males used avoidance strategies more than women and were no gender difference in the mature group for the avoidance- coping, and no task- oriented and emotion- oriented for the younger group. On average, mature students used task- oriented coping strategies more than younger students, while younger students used to avoidance - coping strategies. The purpose of this study was to distinguish distinct coping strategies between age and gender. Task- oriented and avoidance coping techniques revealed greater life satisfaction opposed to emotion- oriented that equated to lower life satisfaction. This study reveals valuable information for teachers and counselors to guide students who need help with transition (Cabras, C., & Mondo, M., 2017). Maintaining a smooth transition and positive coping strategies will then result to life satisfaction and minimal stress amongst first year college students.

Motivation and transition in college students is also discussed in the article, *Motivation, health- related lifestyles and depression among university students: A longitudinal analysis*. Researchers wanted to examine the longitudinal relationship between motivation and depression while controlling for variance in socio-demographic factors such as: age and gender; lifestyle and substance abuse, smoking, alcohol consumption, and cannabis use; subjective family income and satisfaction with academic choice. Previous studies on protective motivational attitudes and depression, those with less optimism and lower expectations in respect to achievement have higher depression scores. Depression is also linked to high alcohol consumption, cannabis use, being overweight, financial stress, and low satisfaction with one's education. Studying these factors in relation to college students makes this study crucial and is highly relevant in Italian undergraduate students. The study in

completion of follow-up and questionnaires had a total of 228 students, with a mean age of 21.4 and 78% were women (Piumatti, G. ,2018). Researchers asked participants to write down their most personal goals in life, with the most reported goals being: study, work, and relationships/ starting a family. Participants were then asked three follow up questions rated on a Likert scale on importance, commitment, and confidence based off their goals. Depression scores were also gathered on Likert scale using a self report, *Patient Health Questionnaire*, that tapped on the DSM-IV diagnostic criteria. The data of the relationship between motivation and depression was analyzed through an autoregressive, cross- lagged model (Piumatti, G. ,2018). Results demonstrated a negative correlation between motivation and depression after the follow- up. The study suggests that young adults attending university that are highly motivated will be less likely to experience psychological distress. Based off the research, it is consistent with other studies that maintaining a goal in mind will better a students' mental health. This particular study differentiates from other studies because it is taking other variables into consideration. These findings provide in an insight on how to prevent distress and improve mental health by creating interventions to manage goals and how to achieve them for students in university.

A longitudinal study based in China demonstrate the intrinsic and extrinsic goals as moderators of stress and depressive symptoms. Students in their undergraduate degree face daily stressors including social competition, academic pressure that will place students at a high risk for developing negative effects. Researchers in this study theorize that depending on the type of goal a student has will be a determination of success and their mental health. Two sets of goals can be classified as intrinsic and extrinsic. Intrinsic set of goals are classified as satisfying one's relationships, personal growth, and community contribution. While extrinsic goals relate to fame, attractiveness, rewards and appraisals, and depending on the reactions of others. This study has been done before, however, with two major limitations: data was collected at two time points, initially and during the follow up; second the study has only been studied in western cultures. In this study, researchers will collect data every three months during a 12- month follow up and will be assessed in China. Total amount of participants was 472, with a mean age of 19.06, having 46% female. Assessments were taken place during free time after school, and consisted of three questionnaires: the

Center for Epidemiological Studies Depression Scale (CES-D) which measure for depressive symptoms, the revised Aspiration Index (AI-R) which measured for intrinsic and extrinsic goals, and the General, Academic, and Social Hassles Scale for Students (GASHSS) that measured stress (Ling, Y., He, Y., Wei, Y., Cen, W., Zhou, Q., & Zhong, M.,2016). Results were consistent with the researchers' hypothesis that lower levels of intrinsic goals correlates with higher levels of depression with occurrences of stress. In addition, the study also provides an insight on goal- oriented behavior. In the case of failure, students who had intrinsic goals viewed failure as the "cup half full", they approached failure as a life lesson and how to grow from their mistake. Opposed to students with extrinsic goals, failure equates to a threat in their life. From this research, it is suggested that an intervention to promote intrinsic goals should be implemented to decrease the amount of stress a student feels which will in turn decrease the chances of having depression (Ling, Y., et. al,2016).

### **Academic Related Stress**

Academic stress is a serious issue among college students, it could have a serious impact on a students mental/physical health as well as their academic performance. Also higher education is very important currently, parents tell their children while growing up that you can be anything, College is a deciding factor for you. Could you handle the intensity of being the doctor you always wanted to be the intensity of becoming an engineer? There is also always those tests you take that are 30, 40, 50 percent of your grade that lies in one test. This information alone could harm a student studying and ultimately end up hurting his academic performance than those ambitions to become any career could get limited because that GPA is not high enough. Well what could be the reason for academic stress in the article about academic stress in Hispanic first-year student it says that some common factors could be the expectation you put on yourself to do well on a specific test or the fear of not doing good on that test could put your GPA you may lose one's scholarship etc. The worst part is in college freshmen, they are jumping into a whole new environment where it is all up to them to do most things even if their professor does not teach well they must teach themselves to pass the class. Especially if in high school they were eased through everything which could happen at certain high schools. This

could cause an extreme amount of stress if you feel hopeless for a course etc. Another big part is the amount of money you can spend to attend college but then fail a course which you might have to retake and spend money on it again. Also “According to the American College Health Association's 2006 survey of college students, 32% of the 97,357 students from whom data was collected reported academic stress as the reason for lowered grades or dropped courses (American College Health Association, 2007).” In addition to diminished performance, academic stress is noted as a threat to students' well-being, with excessive amounts of stress resulting in a variety of mental and physical health disorders” (Misra & Castillo, 2004; Stevenson & Harper, 2006).

In the study *Perceived causes of stress among a group of western Canadian dental students* It aims to discover the leading cause of stress among dental students at one Canadian university. The study starts off well with 111 participants yet 92 of them completed the survey as well as the demographic is random and includes men and women. This report is all based on the academic year of 2013-2014. The study introduces some information about dental students and how the task of being one causes a lot of stress. As well as introducing this the article decides to state a list of common stress-related symptoms that may lower one's academic performance leading to a drop in GPA. The study was done at the University of Saskatchewan, College of Dentistry. The study used “A Kruskal–Wallis test [9] was employed to determine significant differences between the year of study, gender, marital status, grade point average, ethnicity, and debt load and debt interest payment. The level of significance was set at  $p < 0.05$ .” (Alyssa Hayes, Jay N. Hoover, Chandima P. Karunanayake and Gerald S. Uswak). As well as “A modified version of the dental environmental stress (DES) questionnaire, and a 10-item Perceived Stress Scale questionnaire (PSS-10) were used”. (Alyssa Hayes, Jay N. Hoover, Chandima P. Karunanayake and Gerald S. Uswak). Which are effective instruments of measuring stress? Specifically, in table 1 is a comparison among the four years according to the data the statically significant data is communication with faculty/staff is an issue, time available for learning, fear of not being able to catch if falling behind in coursework and Lack of input into dental college decision-making. “The findings of this study are consistent with the literature, which states that financial and clinical workloads result in high-stress levels among dental students.” (Alyssa Hayes, Jay N. Hoover, Chandima P. Karunanayake and Gerald S. Uswak). Because

of the article states that dental educators must do more to fulfill their responsibilities to ensure students have the right mindset to understand the expectations resulting from the workloads.

Another article *Addressing the First Stressful Year of College: Could Peer Mentoring Be a Critical Strategy* the article introduces itself by stating only 61% of students from fall 2015 returned to the same institution in fall 2016 on average. Then goes on to say stress could be caused by nonacademic and academic factors. Resulting in a negative way in the student's academics. This article uses multiple studies to interpret the result of peer mentoring a how it could benefit the students versus not peer mentoring and how the differences between the both could be important. It shows in the studies that students that had peer mentoring in the first 10 weeks liked the university and felt welcomed while students who didn't receive peer mentoring felt like leaving the university in the first 10 weeks. This article concludes with peer mentoring it found a moderated amount of transitional stress on the perceived support having a positive effect on a student's stress leaving fewer factors of stress. While students at risk of transitional stress are at risk for academic failure or dropping out. This article was weaker than the others based on the research was not followed throughout fully and the researcher was not funded.

The next article *Coping Self-Efficacy and Academic Stress Among Hispanic First-Year College Students: The Moderating Role of Emotional Intelligence* starts off by doing a study on how coping self-efficiency could help maintain academic stress the study has 125 Hispanic first-year college students. Coping self-efficiency has to do with his or her ability to carry out coping strategies for a course of action to prevent stress. (Joshua C. Watson and April A. Watson, 2016, page 1). "The purpose of this study was to examine the relationship between the academic stress and coping self-efficacy of Hispanic students enrolled in their 1st year of college and the moderating role of EI in that relationship." (Joshua C. Watson and April A. Watson, 2016, page 1). The hypothesis is EI will moderate the relationship between first-year Hispanic's academic stress and their ability to deploy coping strategies. The study consisted of 57 men and 78 women all Hispanic. The individuals were instructed to complete 3 questionnaires while also using the academic stress scale (Khon & Frazier, 1986). The results of the study show in Figure 1 that there is a relationship between EI, academic stress and coping self-efficiency. As well as this directly supports the hypothesis that coping self-

efficiency reduces the amount of academic stress one has. There was a direct relationship where students who had a high coping self-efficiency had less stress than their colleagues who had a low coping self-efficiency reported high amounts of stress. One way to deal with this issue is for college counselors to show the way to students and teach coping self-efficiency techniques because academic stress will never go away but finding a way to deal with it will increase your overall academic performance and less stress-related symptoms. Limitations to the study the students volunteered for the study so that could have impacted the results, as well as all instruments of collecting data, were self-fill out questionnaires. Yet this study could impact future studies with a baseline with good results and study to help academic stress among first-year Hispanic students.

Another article is *Academic Stress and Self-Regulation among University Students in Malaysia: Mediator Role of Mindfulness* the study starts out by saying “Stress is a result of a wide range of issues, including test and exam burden, a demanding course, a different educational system, and thinking about future plans upon graduation”. (Nur Hamizah Hj Ramli, Masoumeh Alavi, Seyed Abolghasem Mehrinezhad and Atefeh Ahmadi, January 2018, page 1). For the study, a large sample size was used 384 undergraduates to be exact all from Klang Valley, Malaysia, the study used is the survey method. The survey is between students that are experiencing a high level of stress and a low level of stress. The survey is to test the relationship between academic stress, mindfulness, and self-regulation. The group of undergraduates has consisted of 94 females and 290 males as well as the age group consisting of individuals of 18-30. The results show that there is a significant negative relationship between academic stress and self-regulation. “Another finding demonstrated that higher levels of perceived stress restricted the students’ ability to utilize executive functioning skills, such as critical thinking strategies for complex action and overrides emotional responses from engaging in goal-directed behavior”. (Nur Hamizah Hj Ramli, Masoumeh Alavi, Seyed Abolghasem Mehrinezhad and Atefeh Ahmadi, January 2018, page 4). Also, there was a significant negative correlation between mindfulness and academic stress. Low mindfulness results in carelessness and inattention. Also, a high level of stress leads to a lower well-being. There is a significant relationship between mindfulness and self-regulation. Concluding that high levels of academic stress restricted students’ ability to use executive functioning skills such as lowering critical thinking ability. Also, low

mindfulness leads to an increased risk of substance abuse all resulting in negative effects toward academic performance and overall health. This study is exceptional because of the large sample as well as the quality in results and method.

All four of the studies were different yet three of them were very significant were one was not so much. Article 2 (*the First Stressful Year of College: Could Peer Mentoring Be a Critical Strategy*) was not very significant because of the limitations of not being funded. Where as article 4 (*Academic Stress and Self-Regulation among University Students in Malaysia: Mediator Role of Mindfulness*) was a very good study which has a large sample size and expands on how to deal with academic stress and the relationship with it which compares with article 3 (*Coping Self-Efficacy and Academic Stress Among Hispanic First-Year College Students*) which also gives ways to deal with academic stress as well as has a large sample size like article 4. While article 1 (*Perceived causes of stress among a group of western Canadian dental students*) is a bit different where it looks at a large amount of different things like financially, academically, clinically and socially. All four articles have some relation in terms of academic stress on academic performance. Factors of dealing with academic stress in the articles mention coping, mindfulness, and self regulation all techniques to understand the work received and lower the amount of stress resulting from their academics.

### **Relationship of Work, Stress and Academic Performance:**

Working while studying can be stressful and we can all relate to that. The articles below examine the relationship between working and academic performance of college students. Two articles go in depth about working while studying. The other two talk about work outcomes from either getting a grant or work experience at university.

The first article titled, *Overworked? An Observation of the Relationship Between Student Employment and Academic Performance*, informed the growing trend of student employment, reasons why so and conducted a survey to analyze the relationship of working while studying at a small college in southern Arkansas (Logan, J., Hughes, T., Brian, L., 2016). The reasons for student

employment they list in the introduction: higher cost of college, rise of student loan debt, increase in travel from college to work and work to college. Then the authors reference other studies to validate the reasons and include statistics from a national survey conducted in 2009 and 2012 statistics from National Center for Education. They found from the study an approximate five percent difference between students that work on-campus to pay off educational expenses compared to other peers that work on-campus. In addition, more than half of undergraduate students ages 16-24 had jobs and females were more employed than males, considering whites were more employed than minorities (Logan, J., Hughes, T., Brian, L., 2016).

The article has a section for "Related Literature" in which the authors pick literature from previous studies to support their main hypothesis: "We anticipate finding a negative and significant correlation between hours worked by an individual student and that student's cumulative grade point average (GPA)." (Logan, J., Hughes, T., Brian, L., 2016). One such study they refer to the most is the study conducted by Astin (1984), who introduced the "*Involvement Theory*": students employed on campus for 15 hours or less are more likely to succeed in college due to greater involvement in campus events, with faculty and with staff. Several studies also support the study by Astin and one such study is by Cramer and Kulm (2006), the authors note.

In collecting the data, only 317 out of the 380 response surveys from students were "usable" and analyzed the differences between students employed on campus and students in campus, including measuring campus involvement (Logan, J., Hughes, T., Brian, L., 2016). The authors mention the CSEQ, (College Student Experience Questionnaire) survey used to gather information which collected responses from freshman, sophomores, juniors and seniors. Majority were from the ages of 20-24. The CSEQ measured the student's cumulative GPA using an equation which computed three student characteristics: demographics, campus, employment ((Logan, J., Hughes, T., Brian, L., 2016). The authors anticipate many events will happen based on these characteristics. Demographics measured gender, ethnicity, age and classifications (freshman, sophomore, junior or senior). Based on the studies the authors picked, they expect to see a positive correlation of academic performance for female students than male students. The authors believe that Caucasian students will score better GPA than minority students. The authors expect to see a positive correlation for

nontraditional students age 30 or higher. They also expect to seniors and juniors to have higher GPAs than freshman and sophomores because of their time management skills, social skills and better understanding work and school. The second characteristic-campus- involves campus housing, distance walked to campus and full/part time employment in college (Logan, J., Hughes, T., Brian, L., 2016). Based on the “*Involvement Theory*” by Astin, the authors expect there is a positive correlation for students who live and work on-campus and a negative correlation for students who live and work off campus. Also, the authors believe full time students will perform better in their academics. The last characteristic used to measure GPA is employment which includes if the student is employed or unemployed. The authors also tie in the location of the job- whether off campus or on campus-and the numbers of hours students work (full time or part-time). Again, they base their expectations of finding a negative relationship of students employed off campus rather than on campus. The authors believe if there is an increase in number of hours worked, then there will be a decrease in academic performance. Inversely, they believe if there is a decrease in number of hours worked, then there will be an increase in academic performance. All these expectations are based on the literature findings.

However, the authors believe there are limitations to their data due to answers on surveys being recorded incorrectly, due to student error. They report that they used only one semester of recorded data because they didn’t want to limit freshman from the study. But this one semester limits the social changes that may occur. Also, the independent variables do not attempt to cause the dependent variable because this study is unclear. It just shows correlations among the variables. The authors believe including student characteristics for how student employment can relate to job placement in the real world, after graduation is optimal for strong correlation between employment and academic success.

In this same article, there is no heading for discussion, but only results, which may leave the reader confused. Results are mentioned within the heading labeled “Results” but, discussed to interpret the correlations between the data found in that same section. Results were based on statistical method of analysis using “least ordinary squares” which measured more than one independent variable (employment, campus, demographics) and one dependent variable (GPA) (Logan, J., Hughes, T., Brian, L., 2016). The authors found that under demographic characteristics, “the coefficient on

gender was negative and significant” so that supported the findings of being a positive correlation for female students rather than male students as found in related studies. The authors noted that the coefficient on Caucasians is positive and significant, so Caucasians scored 0.42 higher on their GPAs than minority students, supporting related literature. Also, the authors note the coefficient on Junior/Senior is positive and significant and shows that juniors and seniors scored 0.143 higher on their GPAs than freshman and sophomores.

The authors estimated employment on campus and off-campus and found that there was a negative relationship between off campus on academic performance. They felt that the off-campus variable was "too aggregated" meaning its didn't provide enough detail to account for the support of hours worked. So, they separated off campus employment to off campus employment under 20 hours per week and off campus employment over 20 hours per week. After this, they found that students working off campus have a 0.246 lower GPA than other students. The first equation used strongly showed that working off campus declined academic performance GPA-wise. So, to further their approach, the authors used a second equation that incorporated the initial demographics and campus characteristics but disaggregated the off-campus employment characteristic. So off-campus characteristics broke further down to freshman and sophomore working less than 20 hours per week and freshman and sophomore working over 20 hours. The same resulted for juniors and seniors. With the addition of equation 2, new findings resulted. The authors note that freshman and sophomores who worked for more than 20 hours scored 0.552 lower than other juniors and seniors. The authors base this finding on experience encountered with juniors and seniors. This means juniors and seniors have more experience over skills like managing time, schoolwork, social life and work. These skills, the authors say, are still being learned by freshman and sophomores. Plus, most juniors and seniors are involved in internships which they say will positively correlate with work experience and academic performance.

The authors provide a conclusion. Some factors that can influence academic performance based on GPA are ethnicity and gender from demographic characteristics. There was no evidence of benefits to living on campus compared to off campus. Lower GPA is shown when students work 20 or more hours off campus compared to students who work less hours. Evidence suggests freshman and

sophomore that work 20 or more hours off campus are highly disadvantaged. That is why they should refrain from working more than 20 hours a week. They may start to work in their junior and senior year of college because as freshman and sophomore now, they are still developing skills and experience.

The second article, *Student Employment as a Model for Experiential Learning*, also conducted a survey, mentioned the increased growth of student employment using similar studies especially from the National Center for Education Statistics and reported that most expenses went towards educational expenses (Fede, J., Gorman, K., Cimini, M., 2018). This article also supports some results found in the previous article study conducted. For instance, the previous study concluded that lower GPA is shown when students work 20 or more hours off campus compared to students who work less hours. This article discusses some related studies found in the previous article. One such study discussed that full time and off-campus jobs can lower GPA for those working for financial reasons than for career goals. Another study discussed working for long hours can lower levels of social engagement, academic performance while on-campus employment promotes positive academic success, deepen campus connections and degree attainment. All these related studies are discussed in the introduction.

In the introduction, the authors state there has been a drive for advanced education in order to provide a whole college experience. They say that GPA, developing transferable skills like communication, achieving your degree, exploring careers, training on the job and actively engaging in societal concerns are all attained by experiential learning. The authors define experiential learning as acquiring the experience of learning on the job while being emotionally and physically engaged in society. In experiential learning, you are able to review your mistakes and learn from them with help from manager (Fede, J., Gorman, K., Cimini, M., 2018). This learning can lead to positive academic performance including the development of a wide range of skills such as teamwork or social skills. Unfortunately, many students may not partake in experiential type of learning because they need to work for pay (Fede, J., Gorman, K., Cimini, M., 2018).

This article analyzed if university employment can help achieve academic success—specifically the experiences learned by former SNAP workers when they worked at university. The

authors hypothesize: placing student outreach workers in the real world in which they are to engage with the community and solve real world problems while still experiencing the feel of an on-campus job setting, will allow them to learn transferable skills and develop them. They dedicate a section explaining the SNAP program at University of Rhode Island which allows students to work for the university department (Hunger Center) with a focus on education and community engagement.

To perform the methods, the Hunger Center (HC) needed to contact former workers who worked at least one semester at HC as interns, outreach workers or office workers during their undergraduate study. The authors note that 114 out of the 150-contact information was found. Out of the 114, eighty-nine confirmed their contact and a survey was sent to them. 70 individuals opened the survey, but 59 answered all the questions completely. A total of 59 surveys were considered and responses were analyzed to examine the experiences of former workers. The survey measured 4 markers: "Traditional" success markers, Transferable skill development, Civic engagement and Societal values and attitudes. For "Traditional" success markers, the following were measured to keep track of academic success while in college and after college: exact GPA, if currently employed, if former students would take post-secondary classes, when they graduated (N/A for still enrolled) (Fede, J., Gorman, K., Cimini, M., 2018). The second marker, transferable skills, are skills that are required for basic workplace. Former workers were asked to rate 19 transferable skills they enhanced at while working at the Hunger Center (Fede, J., Gorman, K., Cimini, M., 2018). Each time a worker reported a skill they didn't use, that was used to measure if HC allowed the option to shape that skill into their workforce, the authors claim. The survey also measured the skills they improved and advanced on. They were asked to explain any experiences and/or people that made the skill noticeable. The third indicator, civic engagement, involved participation in societal affairs. Former workers were asked about different civic behaviors like advocacy participation. Having greater civic engagement means to involve oneself in current events, contribute to charity, advocate for important causes which is what the study is measuring in these students (Fede, J., Gorman, K., Cimini, M., 2018). The fourth indicator, societal values and attitudes was measured using a survey. "NSSE Global Perspectives-Cognitive and Social Topical module", or the National Survey of Student Engagement, assessed the social values of the workers by letting them rate 10 statements from 1 being

strongly disagree to 5 being strongly agree (Fede, J., Gorman, K., Cimini, M., 2018). Then they were asked to note which value statements they found important and how they relate to their experience at HC. The sample was compared to NSSE senior population of U.S. colleges to calculate the differences between the former workers and NSSE senior norms, using a t-test. Statistics measured “frequencies, percentages, and mean values” and “were used in the primary analytic method” (Fede, Gorman and Cimini, 113).

In terms of traditional success marker, the authors report 73% former workers had a higher GPA score than 3.01. As for graduation, 52 stated that they already graduated while they were in the study and only 7 were still enrolled in college (Fede, J., Gorman, K., Cimini, M., 2018). Only 93 percent of workers, the authors state were employed and over half took post-secondary classes during the time of this experiment. In terms of transferable skills development, all skills were utilized by at least some of the workers. Majority of the skills were used by 90 percent of students. Least reported was “being punctual” (Fede, J., Gorman, K., Cimini, M., 2018). Former students stated they improved on some skills. Most believed they learned or advanced on communication, explaining information clearly and emphasizing well. In terms of civic engagement indicators, most former students exhibited civic behaviors such as voting. About seventy one percent of workers signed online petitions. About 39-29% of former workers met or contacted with government officials (Fede, J., Gorman, K., Cimini, M., 2018). Those who contacted government officials discussed topics of importance such as homelessness or marriage animals’ rights. The authors state only 3 students state they work in advocacy programs now. About twenty four percent of students contributed some goods, time and money to charity, the authors note. When workers were asked to rate their recent knowledge about current events, most replied they were well informed about national news and least informed about sports. Most common resources utilized were social media and online sources. In terms of societal values and attitudes, former workers have strong social norms and values especially in statements like “I consider different perspectives when evaluating problems”(Fede, J., Gorman, K., Cimini, M., 2018). They were least likely to support statements like “I don’t have the opportunity to make a difference in society” (Fede, J., Gorman, K., Cimini, M., 2018). When statement norms were compared with NSSE norms from college seniors across U.S., Hunger Center’ “workers scores were

significantly different on six of the eight items" (Fede, J., Gorman, K., Cimini, M., 2018). HC workers stated that they believe "considering different perspectives both when evaluating problems" also "before drawing conclusions" (Fede, J., Gorman, K., Cimini, M., 2018). Workers scored low on 2 statements: "I rely primary on authorities to determine what is true in the world" and "I rarely question what I have been taught about the world around me" (Fede, J., Gorman, K., Cimini, M., 2018). The authors reported twenty-three students that described the statements that were really important to them while at HC. Majority reported "I consciously behave in terms of making a difference" (Fede, J., Gorman, K., Cimini, M., 2018). One worker described this value mentioned in the previous sentence as important because "feeding a family can be the difference between life and death-that's pretty powerful" (Fede, J., Gorman, K., Cimini, M., 2018).

The goal of this study was to see if university employment would provide success and development to former students while they engage within the community while measuring four indicators: societal values and attitudes, transferable skill development, civic engagement and societal attitudes traditional success markers. Students reported high levels of civic engagement, social values and attitudes, community values and those community values influenced their growth. For traditional markers, the worker's GPA, graduation rate, employment and graduate school enrollment were higher, especially the graduation rate and GPA compared to their peers. This, according to the authors, indicates that university employment can increase college success. For transferable skill development, workers learned or improved on a range of skills that were important for job success. Some skills workers approved on getting trained at HC include: "managing time and schedules" and "explaining information clearly" (Fede, J., Gorman, K., Cimini, M., 2018). For civic engagement and societal attitudes, former students were more civically engaged than typical young college students. The comparison of former students with NSSE seniors genuinely illustrated values, norms and civic engagement scores that were significantly different for workers which is encouraging since universities, workplaces and society are looking for them (Fede, J., Gorman, K., Cimini, M., 2018). Talents of critical thinking, questioning and seeking information will benefit the workplace and society, the authors note.

From this, the authors conclude that university paid positions with high community engagement may develop transferable skills in students which can benefit the workplace. If we have greater implications of this employment behavior between colleges and community workplace, then it “may benefit the university, community, and students” (Fede, J., Gorman, K., Cimini, M., 2018).

The next article, *Working for College: The Causal Impacts of Financial Grants on Undergraduate Employment, Educational Evaluation and Policy Analysis*, examined if offering WSG (Wisconsin Scholars Grant) to a randomized group of low-income students from Wisconsin will help them change their work behaviors which include: working less extensively, working less overnight and in the mornings (Benson, J., Goldrick-Rab, S., Broton, K, 2016). This article is similar to the other two articles as it discussed similar literature findings. Such findings include: working for long hours can reduce academic performance therefore interrupt studies, on-campus employment can promote college success to related career. Mostly, low-income work more to gain work experience, money, explore careers or to cover college costs. The authors of this article hypothesize: Grant aid does reduce work based on the quasi-experimental findings of DesJardins and colleagues who found that offering high achieving minority students the "Gates Millennial Scholarship", reduced their work hours by 32 min per week, per 1000-dollar scholarship aid.

A randomized experimental study by the Fund for Wisconsin Scholars picked 1,200 students based on administrative records as students were assigned lottery tickets for selection of the WSG. For the control group, eligible participants were blocked to account for the huge sample of nonwhites participating (total= 1,800) (Benson, J., Goldrick-Rab, S., Broton, K, 2016). More of these students from the control group attended racially and ethnically diverse colleges. The study tried to measure if giving grant aid to low income families change student's work behavior. The study measure the impact of those who work off campus or work extensively, the number of hours worked off campus/ on campus and if the grant given will affect the time of day a student worked (Benson, J., Goldrick-Rab, S., Broton, K, 2016). The study also measures if factors like demographic characteristics, family background and type of institution influence work behaviors. The Fund for Wisconsin Scholars prescribe an analytical survey in fall 2009 to 1,438 students in their second year of college who also completed at least one work behavior question, note the authors. Then they gave the 2009 survey to

1,879 eligible WSG students and found that the differences of outcomes between the control and treatment group are caused by the WSG offer. The authors observed that in the analytic sample, students were mostly first-time enrolled, young female, dependent on their parents, and economically advantaged. The surveys given measured if the students in the last week had a job and where they worked and for how many hours for both on and off campus. Also, the survey asked if students worked extensively for more than 20 hours and to indicate the time intervals they work (Benson, J., Goldrick-Rab, S., Broton, K, 2016). The authors used an equation to measure variables to differentiate students eligible for WSG. These variables include: total hours worked off and on campus and hours worked in previous week (Benson, J., Goldrick-Rab, S., Broton, K, 2016). Individual level baseline control variables include: first time college enrollment, marital status, adjusted gross income, investment income, financial dependency status, expected family contribution (Benson, J., Goldrick-Rab, S., Broton, K, 2016). Other variables are used to calculate working off campus, working certain times during the day and working extensively (Benson, J., Goldrick-Rab, S., Broton, K, 2016). To measure individual level characteristics the variables, include: family income, previous work behavior, demographic characteristics, first generation college status (Benson, J., Goldrick-Rab, S., Broton, K, 2016). These variables that measure individual level characteristics are called interaction terms and are estimated in the second equation they created.

The authors found half of the control group work mostly on campus for about 10.03 hours and spend 1.74 hours on campus. In the control group, 3 in 10 students work extensively compared to 1 in 4 nationally working 20 or more hours (Benson, J., Goldrick-Rab, S., Broton, K, 2016). The authors found that 71.81% of students work more during noon to 6pm. They report that more than 50 percent of students work in the morning (8am-noon) or evening (6pm-10pm). Less students worked overnight and late-night, 14.26% and 16.44% respectively (Benson, J., Goldrick-Rab, S., Broton, K, 2016). Most importantly, the authors report students are 5.88 percentage points less likely to work when offered WSG. The work hours reduced to 1.69 hours for students with WSG (Benson, J., Goldrick-Rab, S., Broton, K, 2016). The number of hours worked on campus decreased by 0.33 hour, the authors note. Students that worked off campus decreased work hours by 1.3 (Benson, J., Goldrick-Rab, S., Broton, K, 2016). The grant reduced the number of hours worked extensively (20+) by 5.17

percentage points (Benson, J., Goldrick-Rab, S., Broton, K, 2016). Students offered WSG were 7.67 percentage points less likely to work in the mornings and 6.40 percentage points less likely to work overnight, the authors reveal. 35% percent of first-generation college students in the control group worked extensively relative to 24.01% first generation students who received aid. 25.61% of students that have parents that went to college in the control group work more than 20 hours (Benson, J., Goldrick-Rab, S., Broton, K, 2016). 25.44% of students that have parents that went to college in the treatment group work more than 20 hours (Benson, J., Goldrick-Rab, S., Broton, K, 2016). The authors note, first generation college students in the control group were predicted to work 11.53 hours off- campus compared to the experimental students who are predicted to work 8.42 hours off- campus. Students with college educated parents in the control group are predicted to work 8.81 hours off campus compared to students in the treatment group who are predicted to work 8.51 hours off campus (Benson, J., Goldrick-Rab, S., Broton, K, 2016). Men and women given the WSG were less likely to work overnight, the authors report. For 4-year college students, WSG has reduced work-time during the afternoons for about 70.29% students compared to 74.48% students without the WSG (Benson, J., Goldrick-Rab, S., Broton, K, 2016). For 2-year college students, WSG has convinced 80.04% of students to work between noon and 6pm compared to 67.81% with the WSG (Benson, J., Goldrick-Rab, S., Broton, K, 2016).

One limitation the authors state is the study sample because the study was only representative of full time, traditional college students from low-income families from Wisconsin rather than nationally. They state that the estimates based on the survey do not “cleanly” talk about the “exogenous variation” which describes the variation that does not impact the causal relationship of the other variables (the “lottery design”). So instead, the authors want to approach to a “non-random compliance” analysis which would heavily influence their results.

For this article, the discussion and conclusion are combined since there is no clear heading labeled “Conclusion”. The authors discuss and conclude that using this study helped determine that grant aid given does persuade change in work behaviors. Students with the grant aid worked less hours and less extensively. Experimental students worked less extensively, reduced hours worked off campus and changed the time of intervals and day they worked. A small number worked overnight or during the

morning which gave them a greater time to sleep or take classes. WSG also improved student's academic performance by allowing them to graduate on time with bachelors for 4-year college students. Some students could not use the grant because they took out a large loan which affected the grant to be included in their financial aid bundle. This the authors claim, limited the student's ability to have more money, so they could work less hours. The authors finally conclude that grant aid is needed to promote higher academic achievement.

The last article, *Studying and Working-Hurdle or Springboard? Widening Access to Higher Education for Working Students in Malta*, discusses and spreads awareness about the adversary's nontraditional students (around age 24) encounter in higher education in Malta and in 28 other European countries (Fenech, C., Raykov, M., 2017). In short, the article goes in depth to whether or not combining work with study is an obstacle or opportunity for Malta students. It also discusses some policy measures that should be taken in order to address these challenges. (Fenech, C., Raykov, M., 2017). This article is similar in relation to the previous three articles, because it cites similar literature studies conducted in the past. The article informs that paid work reduces the amount of time studying, working while studying has a limited impact on academic outcomes. The authors state the main reason for working is to resolve financial issues rather than to achieve work experience. Unlike the other articles, this one finds past studies that links work and study to stress levels and mental health (Miller et al. 2008) but does not explain or state how it relates to academic and work performance.

In the introduction, the authors talk about the importance of increasing higher education to develop economic countries and social development of people and meet labor market demands. To meet the demands, one of the important things to do is achieving education for all including those who continue to pursue higher education and those who stopped midway due to financial issues such as supporting family (Fenech, C., Raykov, M., 2017). The authors state Malta is an example of such a country where labor market and education are in demand. With low-income families without a higher educational background, working is relevant and common and so the article talks about the challenge/findings measured to higher education for these underrepresented groups (Fenech, C., Raykov, M., 2017).

An online survey was performed in Malta called the "2016 EUROSTUDENT" which had a sample size of 1,423 participants (Fenech, C., Raykov, M., 2017). The survey gathered information about the challenges and experiences working students faced in higher education. Another data called the "EUROSTAT data" measured the social and economic conditions of students living in 28 different European countries including Malta (Fenech, C., Raykov, M., 2017). It was used as a secondary source to compare the findings of the 2016 survey. Social and economic indicators were measured. One such social indicator measured was educational attainment, which just measures the level of education achieved especially for represented students with high educational background and underrepresented students with low educational background (Fenech, C., Raykov, M., 2017). Such economic factors, the authors note, measure unemployment/employment rates in Malta and in the 28 European countries, and income rates in Malta.

There is no clear distinction separating the results and discussion as there is no labeled section. The authors find that higher education in preceding years was limited and accessible to small populations. Compared to Malta and the EU-28, Malta showed high rates of education achievement than males, the authors note. According to the EUROSTAT survey, there is an increase of students with lower educational attainment in Malta compared to other European countries. In Malta, families with high educational attainment are overrepresented as having higher education than families that attained upper secondary education (high school education) (Fenech, C., Raykov, M., 2017). The authors find it concerning that the underrepresentation of students from low income families with lower education are not able to meet the demands of labor market, especially when the results show higher education leads to higher income. In addition, the authors found that further action needs to be taken to increase completion of post-secondary education and beyond based on the EUROSTAT 2016, which shows a drop of early leavers from education (33.0-19.6%), even though it's well-off compared to EU-28. The authors discovered since Malta has low unemployment rate and a strong labor market, it draws students to work and employment rate has boosted gradually since then. EU-28 on the other hand, has not changed in employment rate. According to the data, young people are likely to work because of strong labor market and low employment rates, it is therefore hard for them to get back to education because they work (Fenech, C., Raykov, M., 2017). The authors find that labor

market entry takes place after finishing post-secondary education and when enrolled in the first stage of higher education. Based on the EUROSTUDENT survey, about 39.0% students work full time while studying compared to 13.5% that work part-time, and this is accurate with the past EUROSTAT data (Fenech, C., Raykov, M., 2017). Mostly older students (age: 30 and older) work while studying (80.6%) and less likely profit from higher education (Fenech, C., Raykov, M., 2017). The authors also found that increase of work hours may be due parent's limited help to provide support, connecting working due to financial problems. They find that Malta students work to pay off living costs, work experience is less valued rivalled to money and work is done to support families.

As for the discussion, the EUROSTUDENT survey is consistent with related studies the authors found for older students that tend to work mostly while they study. They also discuss that students working for higher education (Masters) and have a job work more often. This is further linked to "the fact that students with a delay of more than 2 years between attaining the entry qualification for higher education and eventually entering higher education are more likely to be enrolled in short-cycle programmes" and work while studying (Fenech, C., Raykov, M., 2017). The authors discuss of providing more flexible study programs where students are able to balance work and study life especially for those who left education and want to continue. This would benefit an increase of nontraditional students in educational achievement, the authors say. The authors discuss that students that work with increasing time have more work commitments than students that don't work at all. This results in time taken away to study and as well as free time and relaxation for students, authors claim. The authors discuss that based on the fact that students working more hours are mostly in "part-time programmes", suggests that students opt for flexible study programs that fit to their needs in terms of work and study life. The authors discuss which strategies to implement to lessen stress, health levels and improve educational experience for these students.

The authors conclude that EUROSTAT data and the 2016 data are in check with each other because it finds that students from Malta are older, from low-educational settings and lack financial aid. The lack of financial aid enables these students to work to support themselves and their families. This contributes to overload of work and study allowing students to opt for flexibility study programs which encourage their work and study combo. These flexible programs are common and may

encourage students who left education to pursue education (Fenech, C., Raykov, M., 2017). This would allow for increase in educational attainment for Malta students especially those underrepresented (Fenech, C., Raykov, M., 2017). Those underrepresented would mostly partake in study programs that are related to their field of work (Fenech, C., Raykov, M., 2017). This, the authors claim, will increase positive work outcomes particularly for labor market needs. The authors discuss that students with overload of work need more time for personal studies, especially those working twenty hours or more. Since most work for financial aid, strategies should be implemented such as increasing flexibility of programs to better suit the combination of work and study and employers should motivate student employees to continue their studies (Fenech, C., Raykov, M., 2017). One thing the authors note employers can do is to provide “paid study leav[es]” to support students. Providing governmental grants can also be another option, the authors state. All of these strategies can help underrepresented students that work to return to pursue higher education and therefore improve the educational achievement rate and meet labor market skills employers want.

## **Conclusion**

In the papers presented above, we were able to further divide the sub-theme of our topic into some more specific areas. For example, in the interpersonal relationship section, we found researches on both peer relationships and family relationships so that we can understand the topic in a more comprehensive way. Also, we are able to use studies that are successful in building links between our respective sub-theme to stress and to academic performance. Although not every single article is able to include and study all three of the elements as it is not that common that a lot of researches that precisely contain all the content that we are looking for, we are still able to find some of the papers that have all of them and some at least cover two of those key elements. Some of our papers certainly cannot give us a clear causation of how stress is formed by what action or activity, but these papers definitely give us an insight into the relationship of stress and the potential stressors as a clear correlation was shown in most of the papers we found. The papers we achieved undoubtedly contribute to the future study and research in relative field as they provided a stepping stone by contributing relevant data and new direction in discovering potential stressors and even formulating

ways to help relief college students' stress. For instance, the result of the paper, *Relationship Issues Among College Nursing Students: Associations With Stress, Coping, Sleep, and Mental Disorders*, could possibly suggest effective ways that students can adopt when facing stress as coping strategy was found to be related to stress level. In addition, some of our papers use case study as the research method. In the paper, *Racism and the Experiences of Latina/o College Students at a PWI (Predominantly White Institutions)*, case studies on 13 participants are being evaluate. As stress and and even formulating ways to help relief college students' stress. For instance, the result of the paper, *Relationship Issues Among College Nursing Students: Associations With Stress, Coping, Sleep, and Mental Disorders*, could possibly suggest effective ways that students can adopt when facing stress as coping strategy was found to be related to stress level. In addition, some of our papers use case study as the research method. In the paper, *Racism and the Experiences of Latina/o College Students at a PWI (Predominantly White Institutions)*, case studies on 13 participants are being evaluate. As stress and interpersonal relationship experience are often some subjective feelings and opinion that cannot be measured solely by scale or questionnaire, case studies can give us a more all-round understanding to the topic.

However, limitations and weakness can still be observed in these studies. First, the generalizability of some of the findings is not that great. Because of the restriction of resource and time, it is very hard to recruit and perform a research experiment or data collection on a group of participants that can fully represent the entire population. For example, in the paper, *Relationship Issues Among College Nursing Students: Associations With Stress, Coping, Sleep, and Mental Disorders*, the participant group is constituted of nursing students from a single school. It is possible that the result generated is only applicable to nursing students or students from that particular school, but not to general college students. Second, it is the relationship drawn in the result. As we have mentioned above, most of the relationships that were built on our papers are correlation but not causation, it is inappropriate to say that the papers successfully identify the stressors as not causation is being proved to exist. Nevertheless, our topic is designated to be closer to a social science field where the settings and conditions of experiments or researches are extremely difficult to control completely as the phenomena or situations that was shown interested in and studied upon are usually

naturally occurred and is nearly impossible to be isolated alone into a highly controlled experimental environment to be studied. In this case, it is very difficult to isolate students into a research environment and study the reason of them being stressed as the stressors are things that students encountered in life and these experience cannot be placed in an experimental setting. However, there is still a study in the work part that can draw a causation relationship between grant aid, work hours, academic performance which is the study that offered the WSG to low-income students. Third, some but not all the papers mention stress relating specifically to our sub-theme and academic performance. For example, one of the article in the work part, *Studying and Working-Hurdle or Springboard? Widening Access to Higher Education for Working Students in Malta*, (Miller et al. 2008) study. The Malta article does not explain or state how it relates to academic and work performance. Rest of the articles don't mention stress as a definite factor for affecting work and academic performance. Based on what all the articles talk about, they mention financial aid as one of the reasons for working. The authors of all the articles could have correlated stress with work and academic performance because students work to pay off loans, cost of college and transportation. If they mentioned this correlation, it would relate to both stress, work performance and academic performance. In terms of the causation of studies, only the study that offered the WSG to low-income students showed that the relationship between grant aid, work hours and academic performance as cause-effect. Also not to forget one main reason a study could not perform up to par is lack of funding, this could impact the experimenters greatly affecting the overall study's results.

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