How does Academic Pressure Affect Adolescents’ Performance in school?

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ABSTRACT

In this study, we hope to determine the relationship between academic pressure and adolescents’ performance in Chinese and American public high schools. In order to collect data, we conducted a survey among 20 Chinese adolescents and 20 American adolescents. The survey is aimed to collect random information through ordinal and interval measurements to form data. We chose simple random sampling by going to streets and asked high school students we met to help us fill out our survey. What’s more, we interviewed 10 students who are either Chinese or American. Then, we used statistical methods to analyze this data and found the connection between academic pressure and adolescents’ performance, especially in the grade, the relationship with teachers or others, and extra curricula. However, it’s impossible for us to find more people to carry out our survey, so we plan to use snowball sampling which can help us to make estimates about the social network connecting the hidden population. Finally, the results show statistically significant relationships between academic pressure and adolescents’ performance.

BACKGROUND AND SIGNIFICANCE

Today, adolescents are under lots of academic pressure, and they are too young to release it in positive ways. We all know that negative attitudes toward pressure may cause many
problems such as mental health (anxiety disorder, mood disorder, eating disorder, etc.) and extreme behaviors (suicide, adolescent crime, etc.). So, it is good to study the relationship between academic pressure and adolescents’ performance which would help them adopt right attitude to deal with the stress in their study.

So far, we have found two sources. In the first resource, *Effects of Stress Inoculation Training on Anxiety, Stress, and Academic Performance among Adolescents*, the author explored that “High and low levels of school anxiety in students consistently differentiated between adaptive and maladaptive school behavior.” The study went on to find that “High anxious youths were found to engage in more problem behavior, were disliked by peers, had poorer self-concepts, and were lower in school achievement and school aptitude.” (Kiselica) It shows us that the more academic pressure there is, the worse behaviors adolescents have. The high levels of school anxiety will engage students in more problem behavior and lower achievement.

In another resource, *Social Work Students: Stress, Support and Well-Being* the author pointed out that “Stress is a complex phenomenon involving the process of interaction between a person and their environment, which is constantly changing. As a result of stress, psychological, behavioral and physical symptoms can occur, increasing dissatisfaction and anxiety, which may produce a variety of illness.” (Collins) That is why we choose this topic, worrying if adolescents treat pressure with negative attitude, they will suffer behavioral and physical symptoms and variety of illness including some serious mental health illnesses.
These two resources support the importance of our topic as well. The first resource shows the relationship between the level of school anxiety and students’ performance at school which is similar to our topic. The second resource tells us what exactly the stress is and what’s the influence or result of stress. Based on these resources, we would like to investigate further the relationship between academic pressure and adolescents’ performance in Chinese and American high schools.

**DESIGN**

We formulate a hypothesis that academic pressure will make an impact on adolescents’ performance, especially on academic success. For better illustration, we break down the academic performance to some indicators. The contents of academic pressure are various. They can be the rate of stress level, the hours that adolescents spend on their homework, adolescents’ sleeping problems, adolescents’ emotion about feeling tired or nervous, etc. However, it is challenging to measure academic performance since student performance is a product of socioeconomic, psychological and environmental factors. In order to figure out what adolescents’ academic performances are in school, we decide to use the short interview first, and we interviewed 5 Chinese adolescents and 5 American adolescents as well.

**Interview Questions are as following:**
1. Where do you think your academic pressure come from?

2. What kind of academic pressure do you have? Is it internal or external pressure?

3. How do you handle the pressure?

4. What can you do when you have pressure?

5. How does pressure affect your performance at school or in life?

From the 10 samples we collected, we got the main elements in academic performances of adolescents in school.

Graph 1: The Different kinds of Academic Performances of High Students in China
From both Graph 1 and Graph 2, we can see the first 3 elements are GPA, relationship with teachers and extracurricular. First performance is GPA. GPA is a summary statistic that represents a student's average performance in their studies over a stated period of time, such as one semester. It’s one indicator of adolescents’ performance. Moreover, academic achievement or performance is the extent to which a student, teacher or institution has achieved their short or long-term educational goals. In order to measure adolescents’ performance, we asked them what the relationship is between them and their teachers, how many time they raise their hands to ask or answer questions and how many extracurricular they have during the last semester.

Eight questions are presented in our research peer survey related to school pressure and adolescents' performance in school. We designed a survey to study the details about how GPA, relationship with teachers and extracurricular affect the adolescents’ performances. We collected 20 survey from Chinese students, and 20 survey from American students. Here is the survey.
1. How old are you?

2. Which grade are you in? ≥0

3. Last semester, how would you rate your stress level in school on a scale of 1 to 10?
   
   1 2 3 4 5 6 7 8 9 10

4. How many hours on average did you spend on homework per week last semester?

   0-5  6-10  11-15  16-20  21-25  over 25

5. On a scale of 0 to 4, What’s your GPA in school last semester?

6. On a scale of 1 to 10 (1 being very poor and 10 being very good), how good of a relationship did you have with your teachers last semester?

   1 2 3 4 5 6 7 8 9 10

7. Last semester, how many times a week on average did you raise your hand to be a volunteer or ask a question in class?

   0-5  6-10  11-15  over 15

8. How many extracurriculars were you involved in last semester?

   1 2 3 4 5  over 5

In our hypothesis, more academic pressure stimulates some students work harder, which will lead to academic success. However, if under high academic pressure, some students might give up. We use questionnaire survey to measure how much academic pressure the adolescents have by asking them what their stress level is, how many hours they spend on homework, whether they have sleeping problems and if they always feel tired or nervous, etc. For the
indicators of academic success, we use the same method or interview participants about what their GPA is, how many extra curricula they have, how’s their relationship with teachers or other students, etc.

**DISCUSSION & CONCLUSION**

- GPA & Stress Level

Graph 3: The Relationship between Study Hour and GPA in China
Graph 4: The Relationship between Study Hour and GPA in America

As we can see from Graph 3 and Graph 4, with the study hours rising up, the GPA of Chinese students is becoming higher. In America, the students who have a high GPA will also work for a long period. Most of the students will work for 16 to 20 hours per week. But in China, students will always work for over 25 hours per week. It is probably because the more exercise the students have done, the more familiar with questions they are. So it’s easier for them to answering the questions. But there are also some high-achiever students both in China and in America who work only for a short time.
Graph 5: The Relationship between Stress Level and GPA in both China and America

The students from the United States mostly have higher stress level and get good GPA, while the Chinese students have lower stress level and get a little bit worse grades. This consequence is different from our original opinion which is Chinese students should have much more stress, because of too much homework. The true fact is that the high stress level can inspire students to work hard to get good grades or better performance in school. From Graph 3 and Graph 4, we know when adolescents study in longer time, they will have more pressure, and their grade also improved a lot. However, there are some special examples showing on the table that a few students who have pretty low stress level can still get good grades which means low
stress level may lead to a better performance. It is probably because they are genius, or they love learning which would not bring them any pressure.

- Relationship with Teachers & Stress Level

**Graph 6: The Relationship between Answering and Asking Question on Class and Relationship with Teachers in China**
Graph 7: The Relationship between Answering and Asking Question on Class and Relationship with Teachers in America

Graph 8: The Relationship between GPA and Relationship with Teachers in Both China and America

The students from the United States are much more willing to answer teachers’ questions and ask teachers questions while Chinese students are more quiet and do not want to answer teachers’ questions. Moreover, the students who have higher stress levels are not active to have communication with teachers. The American students are more active during the class but Chinese students are inactive. For the relationship with teachers and stress level, we know that
Chinese students, compared with the American students, have lower stress level and relationship with teachers gradually decrease while the stress level increase. The reason is when adolescents have a close relationship with teachers, they would like to answer and ask lots of questions, so if they have a really good relationship with their teachers, they will have a good mood and mood will affect their stress level: good mood will cause less stress, bad mood will cause more stress. Different scale of the stress level may explain this, for Chinese students, the highest stress level is 7 and for American students the highest stress level is 10. So for both of Chinese students and American students, the higher the stress level is, the better relationship with teachers they have which is also the better performances in school.

- Extracurricular & Stress Level

Graph 9: The Relationship between Stress Level and Extracurricular in China
Graph 10: The Relationship between Stress Level and Extracurricular in America

Graph 11: The Relationship between Stress Level and Extracurricular in Both China and America
In Graph 11, most of Chinese students do not have as much pressure as American students. Even though there is difference in data between the two samples, Chinese students and American students share some common things. From Graph 9, when adolescents have higher stress level, their number of extracurricular is increased accordingly. In addition, American adolescents have more extracurricular when they have more stress level. According to our research, the reason of this phenomenon is that more and more stress is motivating adolescents to finish everything quickly and better. They could improve themselves and have more different experience. Therefore, from our graphs and data, when adolescents have more stress, they will have more extracurriculars.

**EXECUTION**

In the process of doing the research, even we have tried our best, there are still some limitations. For instance, because the time is limited, the information we have got is rather restricted. Moreover, we cannot make sure weather the data we collected are objective, because what the adolescents think they are doesn’t mean what they really are. And, we couldn’t find the evidence to check what they write is true or not true, and it will influence our findings to some extent. For our team, we think the biggest challenge is analyzing the data and finding the relationship between the factors we have surveyed. Sometimes because of some other factors, the relationship between academic pressure and adolescents’ performance is not very obvious, but
we still believe our survey can really show something and we just need to make the things known to more.
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