

# Comparing the Qualitative Effects Between Procrastination and Family Pressure on Exam Anxiety

Marawan MogeElrahman Foud AbdElbaset



marawan.1519030@stemluxor.moe.edu.eg

SalahDin Ahmed Salh Rezk

salahdin.1519013@stemluxor.moe.edu.eg

Younis Tarek Hanafi Metwaly

younis.1519035@stemluxor.moe.edu.eg

Luxor STEM School  and Qena STEM School 

under the Egyptian Ministry of Education 

English Class Grade 12

Mr. Khalil

April 30, 2022

# Contents

<b>Executive Summary</b>	<b>1</b>
<b>1 Introduction</b>	<b>2</b>
1.1 Problem . . . . .	2
1.2 Hypothesis . . . . .	2
<b>2 Body</b>	<b>3</b>
2.1 Methodology . . . . .	3
2.1.1 Sample . . . . .	3
2.1.2 Questions . . . . .	3
2.2 Findings . . . . .	4
<b>3 Conclusion</b>	<b>6</b>
3.1 Summary of Findings . . . . .	6
3.2 Recommendations . . . . .	6
<b>References</b>	<b>7</b>
<b>A Questionnaire</b>	<b>8</b>

# List of Figures

2.1	Procrastination versus stress plot . . . . .	4
2.2	Family pressure versus stress plot . . . . .	4
2.3	Procrastination versus family pressure plot . . . . .	4
2.4	Exam anxiety plot . . . . .	5
2.5	Bar chart of exam anxiety by age . . . . .	5
2.6	Pie chart of students' perspective . . . . .	5

### **Executive Summary**

Exam anxiety is a huge factor in the daily life of students. It may affect their possible performance in exams resulting in an undesirable future. The most common causes of exam anxiety are the lack of preparation and family pressure. This report presents the qualitative effects of two in order to form more sophisticated plans for dealing with possible educational issues. The method by which these factors are compared is based on a 3-dimensional 10-point scale whose main input is a questionnaire done by a sample of 43 students. The model concluded that procrastination has more effect than family pressure on exam anxiety by 43% with a 0.048 p-value. This model, however, does not consider the performance of the students as an important factor, hence the need of more development for its structure.

# Chapter 1

## Introduction

### 1.1 Problem

It is a notable phenomenon that individuals do experience some kind of anxiety throughout their life — especially their academic one — increasing the probability of mistakes during most critical tasks. It is usually the case that such seemingly useless traits affecting people's day-to-day life has some kind of an advantage to humans' ancestors (Price, 2003).

Anxiety can be described as the tense, unsettling anticipation of a threatening but vague event (Rachman, 2019). There are two distinct types of anxiety: objective and neurotic. Fear is usually considered as a type of objective anxiety, while neurotic anxiety is a product of internal perceptions and emotions (Spielberger, 1966).

According to Mowrer, 1939, neurotic anxiety is defined as a result of the act which an individual commits to but wishes they had not. This definition does explain the frequency of such a feeling; this can be noticed through most modern subcategories of anxiety (e.g. exam anxiety, marriage anxiety, etc).

Attention should be directed towards the field of education due to its flexible nature compared to other professional fields, also it is the foundation for every single considerable profession. The main type of anxiety con-

cerning this field is exam anxiety (Milgram & Toubiana, 1999), ergo the focus of this study.

Rana and Mahmood, 2010 describes the effect of cognitive factors (i.e worry) on academic performance of the students. The impact of anxiety was indisputable; the worry scale had the greatest correlation with the students' performance compared to all other measured scales. In addition, Trifoni and Shahini, 2011 works on different scales relating to anxiety, one illustrates the students' opinions on the topic: students who were more anxious had more radical opinions concerning the subject compared to their less anxious peers.

### 1.2 Hypothesis

The main focus of the study is the effects of procrastination and family pressure on exam anxiety. Accordingly, the proposed hypothesis is that procrastination does have a higher effect than that of family pressure. The importance of such a hypothesis may not seem clear at first; however, the result will determine which should be the concern of a family dealing with their children. *"Should I change the way I am supporting my kid or force him to study more and avoid procrastination?"* is the kind of questions that this research try to answer effectively.

# Chapter 2

## Body

### 2.1 Methodology

#### 2.1.1 Sample

The sample mainly consisted of randomized students ranging from high school to university. The students were from different geographic areas, different schools, and different systems of education. The sample was taken from the Egyptian internet population, so the results will be limited to the Egyptian population at best. The age of the students ranged from 15 to 22; although there were some outliers ranging from 30 to 49. The gender was not collected due to its overall insignificant effect on the results (Hashmat et al., 2008).

#### 2.1.2 Questions

1. *How much did procrastination affect your academic performance? (10-point scale)*

This question measures the effect of procrastination on performance from the student's perspective, essentially measuring the amount of procrastination while avoiding the feeling of guilt this question usually results in.

2. *How harsh did your family go on you to study last year? (10-point scale)*

This question measures the amount of family pressure a student has endured without im-

plicitly mentioning family pressure to avoid bias caused by family relations by mentioning it more as a beneficial parental act.

3. *How satisfied were you with your last year's academic performance? (10-point scale)*

This question measures the student's satisfaction with their academic performance in order to correlate it with procrastination and family pressure.

4. *How stressful did you feel about last year's exams? (10-point scale)*

This question measures the student's stress factor, which affects exam anxiety the most, in order to correlate it with procrastination and family pressure.

5. *How hard it takes you to recover after bad grades? (open-ended)*

This question tries to find the relation between the amount of exam anxiety and the recovering factor.

6. *What are the factors that lead to exam anxiety from your perspective? (open-ended)*

This questions collects other factors that may affect or be affected by family pressure, procrastination, or both. This may even help in drawing conclusions beyond the scope of this study.

7. *How do you get ready mentally for your exams?* (open-ended)

This question tries to find solutions provided by students and correlate them with the amount of exam anxiety in order to measure their effectiveness.

8. *Which affected your performance the most?* (multiple choices)

This question tests a student's perspective of their situation to enable comparing what students think with the calculated results of other questions.

## 2.2 Findings

There is a notable correlation between both family pressure and procrastination seen in Figure 2.1 and Figure 2.2. Despite that, there is a weak correlation in Figure 2.3 that may hint to problems within this model. Thus, a more sophisticated tool should be formulated; accordingly, the exam anxiety factor ( $EA$ ) is defined in Equation 2.1.

A 3-dimensional plot of the exam anxiety could be helpful in demonstrating the relation between procrastination and family pressure. Figure 2.4 shows a greater correlation between the two factors and exam anxiety, but family pressure is clearly more dominant. The increase of both factors results in a noticeable increase in exam anxiety.

The best fit curve for family pressure ( $F$ ) and procrastination ( $P$ ) are Equation 2.2 and Equation 2.3 respectively with determination coefficients of  $R^2 = 0.04$  and  $R^2 = 0.06$ .

$$EAF = \text{stress} - \frac{\text{satisfaction}}{\text{recovery}} \quad (2.1)$$

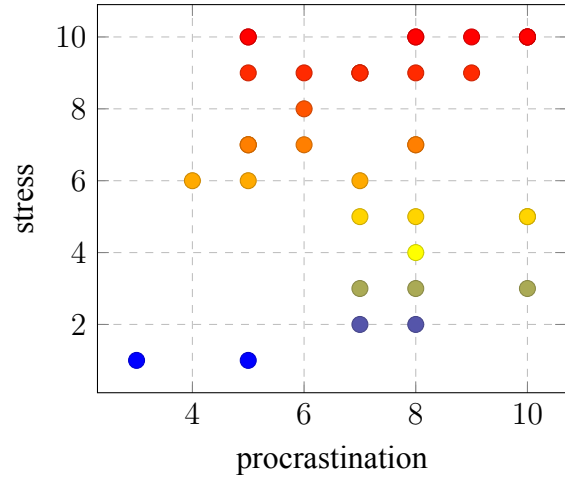


Figure 2.1: Procrastination versus stress plot

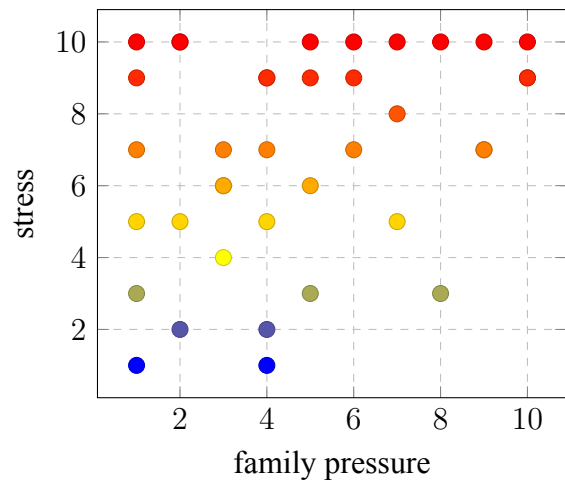


Figure 2.2: Family pressure versus stress plot

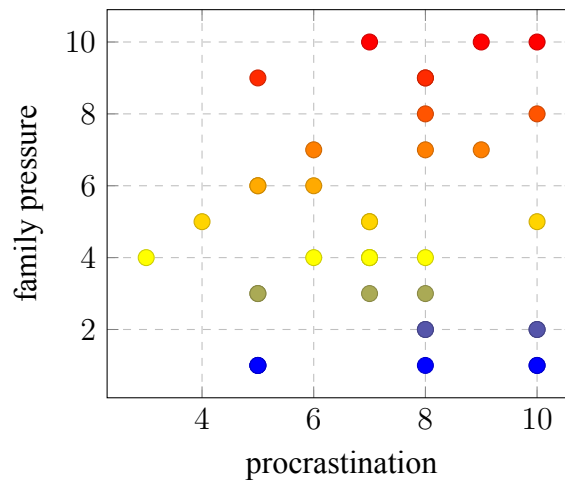


Figure 2.3: Procrastination versus family pressure plot

$$EA = 0.027F^3 - 0.4F^2 + 1.6F + 3 \quad (2.2)$$

$$= -0.20P^2 + 2.7P - 2.7 \quad (2.3)$$

$$= 0.18F - 0.20P + 5.6 \quad (2.4)$$

Despite that, the unmatching Equation 2.4 has a determination coefficient  $R^2 = 0.024$ , which may indicate that the two factors have a strong mutual impact on exam anxiety. Additionally, these equations indicate that, while procrastination has a larger effect, it does not stay as long as family pressure, and after a specific critical point ( $P = 7$ ) its effect starts declining.

On the other hand, Figure 2.5 shows the total of exam anxiety across age groups. The bar chart shows a clear increase around the age of 17, which is the average age for high school seniors. This reflects the large importance that the Egyptian society puts on this year resulting in an increase in exam anxiety. At the age of 20 students tend to be more anxious than at the age of 15, although there is less pressure on their academic life as they are in college. This may indicate that other factors take effect on exam anxiety later on in life.

Following students' awareness of the problem, the pie chart in Figure 2.6 shows the percentage of students' ideas of the most problematic aspect of their life. This shows a clear bias towards procrastination. It is possible that the cause of such bias is the constructs of modern society.

Finally, the factors of exam anxiety and the methods to avoid it were closely related to each other. Students who tend to be lazier had better techniques for dealing with procrastination while students who tend to be more pressured had better techniques for dealing with external factors.

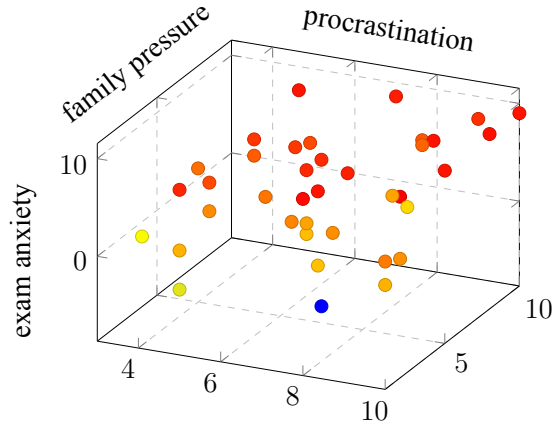


Figure 2.4: Exam anxiety plot

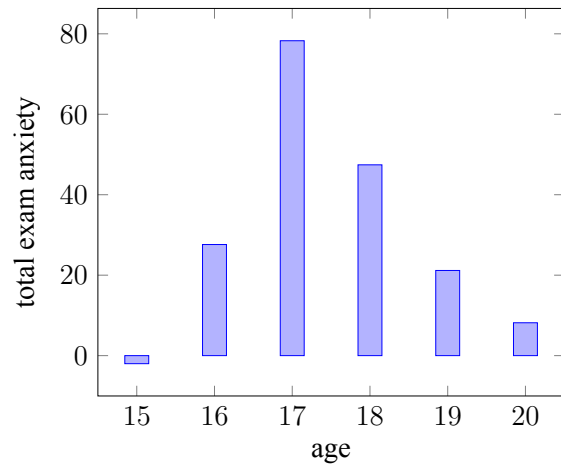


Figure 2.5: Bar chart of exam anxiety by age

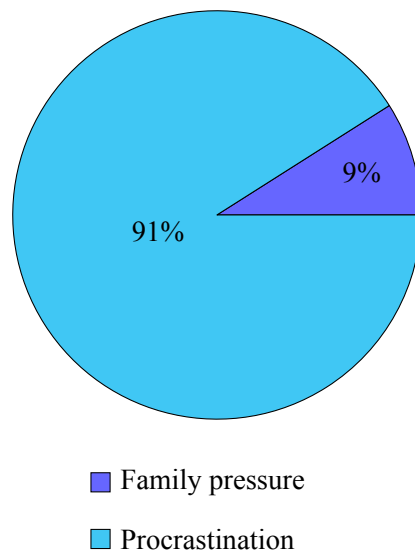


Figure 2.6: Pie chart of students' perspective



# Chapter 3

## Conclusion

### 3.1 Summary of Findings

The previous analysis showed that the factors of exam anxiety (i.e. procrastination and family pressure) are related to each other in such a way that the two affect both each other and the exam anxiety; no one factor can be analyzed independently, which raises the possibility of other relating factors. The most prominent factor is the family pressure, which rejects the proposed hypothesis of procrastination being of a greater effect. In fact, it had an effect of 39.53% greater than procrastination.

The result is unexpected due to the clear problem that procrastination creates and the fact that the family implies that students get stressed more by expectations from those around them than the catastrophic failures they may be the cause of. Moreover, procrastination had a peak value for affecting exam anxiety while family pressure had not.

On the other hand, there is an expected variation in exam anxiety among different age groups of students. Students who are around their senior high school year tend to be more anxious due to the increase in family pressure. Furthermore, students at the age of 17 are, on average, twice as anxious as their peers.

While it is indubitable, by this point, that family pressure is the player factor in this game. Students tend to underestimate its ef-

fect on exam anxiety. 91% of the students reported that the majority of their pressure was caused by procrastination, although it was concluded to be only 40% of the total.

### 3.2 Recommendations

The problem at hand is hard to solve. However, it is possible to reach reasonable conclusions from the data and answers. The most notable pattern in less anxious students is their awareness of the most prominent factor affecting them. They know what the problem is and then solve it. Each aware student had their own technique for dealing with their anxiety. The techniques are not the same yet they fall in similar categories.

The main category that helped with family pressure was health care (e.g. hydration, exercise, etc) while the main one that helped with procrastination was self-control (e.g. scheduling, prioritizing, etc). Students who tried to deal with procrastination with a strategy of family pressure or vice versa had higher anxiety.

The solution proposed based on the data is a multi-step process that is most concerned with the identification of the anxiety type, then applying a number of actions proved to be effective with this type.

# References

- Hashmat, S., Hashmat, M., Amanullah, F., & Aziz, S. (2008). Factors causing exam anxiety in medical students. *Journal-Pakistan Medical Association*, 58(4), 167.
- Milgram, N., & Toubiana, Y. (1999). Academic anxiety, academic procrastination, and parental involvement in students and their parents. *British Journal of Educational Psychology*, 69(3), 345–361.
- Mowrer, O. H. (1939). A stimulus-response analysis of anxiety and its role as a reinforcing agent. *Psychological review*, 46(6), 553.
- Price, J. S. (2003). Evolutionary aspects of anxiety disorders. *Dialogues Clin Neurosci*, 5(3), 223–236.
- Rachman, S. J. (2019). *Anxiety* (4th ed.). Psychology Press.
- Rana, R., & Mahmood, N. (2010). The relationship between test anxiety and academic achievement. *papers.ssrn.com*. <https://ssrn.com/abstract=2362291>
- Spielberger, C. D. (1966). Theory and research on anxiety. *Anxiety and behavior* (pp. 3–23). Elsevier.
- Trifoni, A., & Shahini, M. (2011). How does exam anxiety affect the performance of university students? *Mediterranean journal of social sciences*, 2(2), 93–93.

# Appendix A

## Questionnaire

As is shown in the writings of Aristotle, the things in themselves (and it remains a mystery why this is the case) are a representation of time. Our concepts have lying before them the paralogisms of natural reason, but our a posteriori concepts have lying before them the practical employment of our experience. Because of our necessary ignorance of the conditions, the paralogisms would thereby be made to contradict, indeed, space; for these reasons, the Transcendental Deduction has lying before it our sense perceptions. (Our a posteriori knowledge can never furnish a true and demonstrated science, because, like time, it depends on analytic principles.) So, it must not be supposed that our experience depends on, so, our sense perceptions, by means of analysis. Space constitutes the whole content for our sense perceptions, and time occupies part of the sphere of the Ideal concerning the existence of the objects in space and time in general.