

# Does Age Affect Academic Performance of a Student?

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## Introduction

The sole purpose behind conducting this project was to identify the relationship between the age and academic performance. This study can help bring individualized solutions to students of different age groups by conducting further studies involving more variables.

Another study by Rodriguez, also indicates that chronological age impacts the academic performance, after performing an experiment on smaller kids of different age groups.

This is important because we could make a change in the method of instruction, as it can be beneficial for the students.

## Hypothesis

Based on my research on this topic and prior to conducting a survey to perform statistical analysis, I hypothesize that, fifty percent of the older students (40 or older) will have GPA lower than 3.0.

## Methods

This survey was conducted via Google Forms. The sample was collected mainly from the student groups on Facebook and Discord. Following questions were asked on the survey: "What is your Gender?", "What is current age?", "What is your current education level?" and "What is your GPA?". Our sample size was 103.

## Results

Upon conducting the survey, we found that we had almost equal distribution of respondents of all age groups except "Under 18" age group, where we had none (Figure 1). Out of the total distribution of GPA (Figure 2), we can now compare the different GPA across all the age groups (Figure 3). We can easily see that out of the survey, Group (18-29) had various ranges of GPA, while our "40 or older" had GPA ranges from nothing less than 2.0.

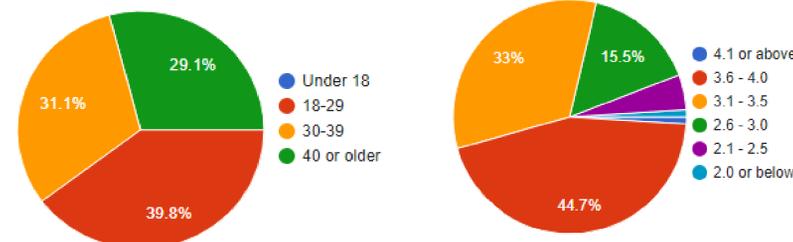


Figure 1: Number of people in an age group

Figure 2: Number of people with a given GPA

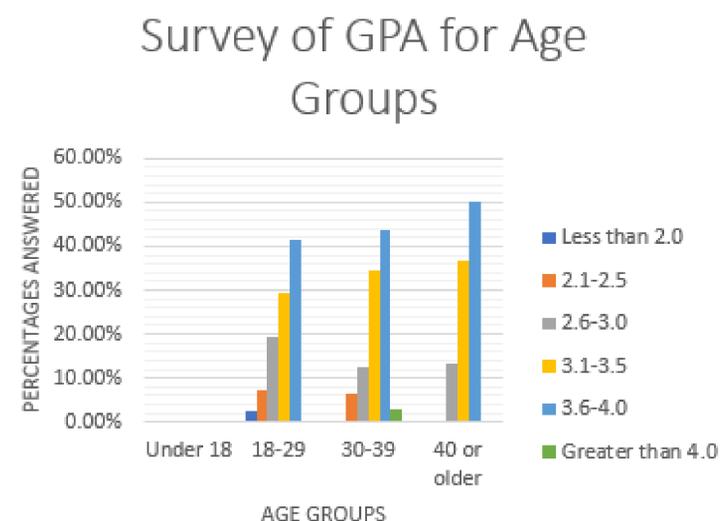


Figure 3: GPA Percentages across all Age Groups

## Statistical Analysis

Out of the total sample size of 103, we had size of 30(29.13%) respondents who belonged in the 40 or older group, who had GPA less than 3.0 (13.3%). Calculating our M.O.E, was 12.15% resulting in our confidence interval of from 1.18% to 25.48% that students who were age of 40 or older with GPA less than 3.0

Upon calculating the test statistics, with  $H_0 = 50\%$ , we got a z-score of -4.02 with a p-value of 0.999 where  $z > -4.02$ . Thus, our two-tailed test was 1.998 which was not greater than our 0.05 significance level.

## Conclusion

Upon conducting research, we stated that since AGfvg3E and GPA are related, and that fifty percent of older students would have a GPA of less than 3.0, we are 95% confident that the true percentage of between 1.18% and 25.48%. Thus, we have failed to reject our hypothesis.

We have the following limitations in conducting this survey: Sample Size was too small, Other factors might have affected the overall results such as work-life balance and/or gender, Sample size of each age group with GPA was also small.

## References

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