Student Performance In Portugal Phil 123: Internet, Soc, & Phil

By: Lily Barton, Sarah Thomason, Morgan Castro, and Mia Rodriguez





Question: Are women more likely to be expected to be involved in school involvement and/or perfectionism, while it is more acceptable for men to put in less amount of effort in school?

Introduction:

Are women more likely to be expected to be involved in school involvement and/or perfectionism, while it is more acceptable for men to put in less amount of effort in school? This explores the question of whether gender is correlated with school performance and then examines the comparison of academic performance between males and females. Throughout our findings, we have discovered that women tend to excel in certain aspects, primarily due to outside factors such as additional study time, extra educational support, and school presence. This has caused us to question the cultural impact of women's academic performance. However, we are missing societal contexts that exist in Portugal. Without this information, we are unable to fully connect the data we are given with the constructs and culture that are present in Portugal. The correlations we have discovered have enabled us to pose this question and explore its potential impact.

	A	В	С	D	E	F	G	н	L	J	ĸ	L	м	N	0
1	school	sex	age	address	family size	Pstatus	Medu	Fedu	Mjob	Fjob	reason	guardian	traveltime	studytime	failures
2	GP	F		18 U	GT3	A		4	4 at_home	teacher	course	mother		2	2
3	GP	F		17 U	GT3	Т		1	1 at_home	other	course	father		1	2
4	GP	F	1	15 U	LE3	Т		1	1 at_home	other	other	mother		1	2
5	GP	F	. 3	15 U	GT3	т		4	2 health	services	home	mother		1	3
6	GP	F		16 U	GT3	Т		3	3 other	other	home	father		1	2
7	GP	М	3	16 U	LE3	Т		4	3 services	other	reputation	mother		1	2
8	GP	М		16 U	LE3	т		2	2 other	other	home	mother		1	2
9	GP	F		17 U	GT3	A		4	4 other	teacher	home	mother	1	2	2
10	GP	М		15 U	LE3	A		3	2 services	other	home	mother		1	2
11	GP	М		15 U	GT3	Т		3	4 other	other	home	mother		1	2
12	GP	F		15 U	GT3	Т		4	4 teacher	health	reputation	mother		1	2
13	GP	F		15 U	GT3	Т		2	1 services	other	reputation	father		3	3
14	GP	М		15 U	LE3	Т		4	4 health	services	course	father		1	1
15	GP	М	1	15 U	GT3	Т		4	3 teacher	other	course	mother		2	2
16	GP	M		15 U	GT3	A		2	2 other	other	home	other		1	3
17	GP	F		16 U	GT3	Т		4	4 health	other	home	mother		1	1
18	GP	F		16 U	GT3	Т		4	4 services	services	reputation	mother		1	3
19	GP	F		16 U	GT3	Т		3	3 other	other	reputation	mother		3	2
20	GP	M	1	17 U	GT3	Т		3	2 services	services	course	mother		1	1
21	GP	М		16 U	LE3	Т		4	3 health	other	home	father		1	1
22	GP	М		15 U	GT3	Т		4	3 teacher	other	reputation	mother		1	2
23	GP	М	1	15 U	GT3	Т		4	4 health	health	other	father		1	1
24	GP	M		16 U	LE3	Т		4	2 teacher	other	course	mother		1	2
25	GP	M	1	16 U	LE3	Т		2	2 other	other	reputation	mother		2	2

https://docs.google.com/spreadsheets/d/1BXwjbtssQbbPQMBd LirSGakKGThjh6MxpnjkXb8QKE0/edit?usp=sharing



DATA DICTIONARY:

1 school - student's school (binary: "GP" - Gabriel Pereira or "MS" - Mousinho da Silveira) 2 sex - student's sex (binary: "F" - female or "M" - male) 3 age - student's age (numeric: from 15 to 22) 4 address - student's home address type (binary: "U" - urban or "R" - rural) 5 famsize - family size (binary: "LE3" - less or equal to 3 or "GT3" - greater than 3) 6 Pstatus - parent's cohabitation status (binary: "T" - living together or "A" - apart) 7 Medu - mother's education (numeric: 0 - none, 1 - primary education (4th grade), 2 - 5th to 9th grade, 3 - secondary education or 4 - higher education) 8 Fedu - father's education (numeric: 0 - none, 1 - primary education (4th grade), 2 - 5th to 9th grade, 3 - secondary education or 4 - higher education) 9 Mjob - mother's job (nominal: "teacher", "health" care related, civil "services" (e.g. administrative or police), "at home" or "other") 10 Fjob - father's job (nominal: "teacher", "health" care related, civil "services" (e.g. administrative or police), "at home" or "other") 11 reason - reason to choose this school (nominal: close to "home", school "reputation", "course" preference or "other") 12 guardian - student's guardian (nominal: "mother", "father" or "other") 13 traveltime - home to school travel time (numeric: 1 - <15 min., 2 - 15 to 30 min., 3 - 30 min. to 1 hour, or 4 - >1 hour) 14 studytime - weekly study time (numeric: 1 - <2 hours, 2 - 2 to 5 hours, 3 - 5 to 10 hours, or 4 - >10 hours) 15 failures - number of past class failures (numeric: n if 1<=n<3, else 4) 16 schoolsup - extra educational support (binary: yes or no) 17 famsup - family educational support (binary: yes or no) 18 paid - extra paid classes within the course subject (Math or Portuguese) (binary: yes or no) 19 activities - extra-curricular activities (binary: yes or no) 20 nursery - attended nursery school (binary: yes or no) 21 higher - wants to take higher education (binary: yes or no) 22 internet - Internet access at home (binary: yes or no) 23 romantic - with a romantic relationship (binary: yes or no) 24 famrel - quality of family relationships (numeric: from 1 - very bad to 5 - excellent) 25 freetime - free time after school (numeric: from 1 - very low to 5 - very high) 26 goout - going out with friends (numeric: from 1 - very low to 5 - very high) 27 Dalc - workday alcohol consumption (numeric: from 1 - very low to 5 - very high) 28 Walc - weekend alcohol consumption (numeric: from 1 - very low to 5 - very high) 29 health - current health status (numeric: from 1 - very bad to 5 - very good) 30 absences - number of school absences (numeric: from 0 to 93)

Initial reading of the dataset

Denotative Reading & Conceptual Analysis

 The dataset is comprised of many individual profiles of students, whose data is being collected on values such as: sex, age, family profession, alcohol consumption, etc. Additionally, there are values corresponding to school performance: grades, number of failures, absences, etc.

Connotative Reading:

 Most of the values have a connotation of socio-economic status and social identity. This suggests that the dataset is attempting to make an inference between a student's life circumstances or identity and their performance at school.

By making inferences about traits unrelated to education, the dataset then challenges educational equality. In the data, education is not a meritocracy, where opportunity and support is given to the most motivated students regardless of social status. Alternatively, it suggests how outside factors may affect a student's ability to access educational opportunity and do well in school.

Work Performed:

We performed quantitative research by investigating the correlation in the dataset we were provided with. We were given factors such as: school, sex, age, address, family size, parents' cohabitation status, mother's education, father's education, mother's job, and father's job, reason, guardian, traveltime, study time, number of failures, school support, family educational support, paid classes, activities, nursery school, high education, romantic relationships, family relationships, free time, social life, alcohol consumption, health, and absences. With this given information, we were able to draw conclusions with the statistics that were provided with these factors. We also used qualitative research skills by observing the introduction to the dataset and discussing the importance of correlating student performance in Portugal. From there, we were able to draw our conclusions through questioning cultural impacts and societal stereotypes on student performance.



School Performance & Gender

- Since there are many values to consider, we chose to narrow it down to gender and school performance. The fact that gender is one of the first values being considered in this dataset implies that it may be an important one in predicting school performance.
- We wanted to investigate if there was evidence of educational bias or inequality based on the gender of the student.
- After analyzing the data, we found that women were more likely to do well in school and receive more educational support than male students.

Findings

Through the process of investigating potential correlations with the dataset we were given, we observed correlations between multiple factors that could impact our initial question, "Are women more likely to be expected to be involved in school involvement and/or perfectionism, while it is more acceptable for men to put in less amount of effort in school? ?" We found a correlation between study rates, it is shown that women tend to study more, our findings back this, 45.5% of males spend less than an hour studying whereas 23.1% of women spend their time studying for less than an hour while 54.5% of men spend more than an hour and 76.9% of women spend more than an hour learning. This leads us to believe that women tend to experience fewer failures as they put more effort into studying and relearning topics on their own time. It has been discovered that women have fewer absences and participate in fewer extracurricular activities compared to males. We have also come to the conclusion that women tend to receive extra educational support, approximately 6.7% more support than men. This led us to question whether there may be an underlying issue, such as women performing better in school, causing schools to be more willing to provide them with extra support, which in turn leads to the disproportionate representation of women in support from school systems.

Study Time











Count of school support (M)











Female students who want to take higher education





absences

absences (M)



Urban and Rural Environment Comparison

address	sex	COUNTA of sex
R R	F	120
	M	77
R Total		197
Ξ υ	F	263
	М	189
U Total		452
Grand Total		649