Gender and Student Performance

Student's Name

Institutional Affiliation

Gender and Student Performance

Data analysis plan

The variables of interest are performance and gender. The independent variable is gender, which is a nominal variable with two levels. The dependent variable in the study is the performance, which is measured by the students' GPA. GPA is measured on an interval scale. Does gender affect student performance? The null and alternate hypotheses are:

H0: The mean GPA for male students is not significantly different from the mean GPA for the female students

H1: The mean GPA for male students is significantly different from the mean GPA for female students.

Testing Assumptions

		Levene's Test for Equality of Variances	
		F	Sig.
GPA	Equal variances assumed	.095	.758
	Equal variances not assumed		

The homogeneity of variance was the main assumption that was tested in the study. Levene's test presents the results of the homogeneity test (Field, 2018). The test reveals that the null hypothesis should not be rejected since the associated p-value is greater than 0.05. Therefore, Levene's test results reveal that the variance of the male and female groups are not significantly different. Thus, the homogeneity assumption has been met.

Results & interpretation

Group Statistics					
	gender	N	Mean	Std. Deviation	Std. Error Mean
gpa	1	64	2.9719	.67822	.08478
	2	41	2.6910	.73942	.11548

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
GPA	Equal variances assumed	1.999	103	.048	.28090	.14055	.00215	.55965
	Equal variances not assumed	1.961	79.985	.053	.28090	.14326	-.00419	.56599

The mean GPA for female students (M=2.97, SD=.68) was higher than the mean GPA for male students (M=2.69, SD=.74). The t-test results reveal that the mean GPA for male students is significantly different from the mean GPA for female students, t (103) =1.99, p<.05. The results suggest that gender influences the performance of the students.

Statistical conclusions

The study sought to determine whether gender influences student performance. The results of the study suggest that gender influences student performance. However, there are several limitations. First, the GPA may not capture all facets of academic performance. Secondly, the results of the test could be affected by the violation of the assumptions associated with the between-samples t-test.

There are alternative explanations for the findings. First, the women in this specific class may be brighter than the male students. Secondly, the learning environment may be more enabling or supportive of female students than male students.

Application

In my field, this kind of test can be used to identify the factors that influence the performance of teachers. It can also be employed in determining the factors responsible for differences in performance between employees. The main value of such analysis would be providing an evidence-basis for making decisions such as promotions, training, and bonuses. It can also help eliminate the risk of bias and favoritism when making decisions in an organization.

References

Field, A. (2018). Discovering statistics using IBM SPSS statistics (5th ed.). *Thousand Oaks*,

    CA: SAGE.