Gender Differences in Reading Group Membership

John R. Slate

Sam Houston State University

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Research Question

What is the difference between boys and girls in their reading group membership?

Results

To ascertain whether a difference was present in reading group membership (i.e., Excellent, Good, Extremely Poor) between boys and girls, a Pearson chi-square was conducted. This statistical procedure was viewed as the optimal statistical procedure to use because frequency data were present for reading group membership and for gender. As such, chi-squares are the statistical procedure of choice when both variables are categorical. In addition, with the large sample size, the available sample size per cell was more than five. Therefore, the assumptions for utilizing a chi-square were met.

For this research question in which the focus was placed on reading group membership between boys and girls, the result was statistically significant, $\chi^2(2) = 122.86$, $p < .001$. The effect size for this finding, Cramer's *V*, was moderate, .32 (Cohen, 1988). As can be seen in Table 1, 47.30% of the girls were in the Excellent Reader group, compared to only 21.4% of the boys. Most of the boys were in the Extremely Poor Reader group, 57.40%, compared to only 27.30% of the girls.

Reference

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Table 1

Frequencies and Percentages of Reading Group Membership by Gender

Reading Group	Girls *n* and %age of Total	Boys *n* and %age of Total
Excellent Reader	47.30% (*n* = 279)	21.40% (*n* = 126)
Good Reader	25.40% (*n* = 150)	21.20% (*n* = 125)
Extremely Poor Reader	27.30% (*n* = 161)	57.40% (*n* = 338)

Appendix

SPSS Statistical Output

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	**122.856**[a]	**2**	**.000**
Likelihood Ratio	125.706	2	.000
Linear-by-Linear Association	121.427	1	.000
N of Valid Cases	1179		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 137.38.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.323	.000
	Cramer's V	**.323**	.000
N of Valid Cases		1179	

Gender of Persons in Study * Reading Group Membership Crosstabulation

			Reading Group Membership			
			Excellent Reader	Good Reader	Extremely Poor Reader	Total
Gender of Persons in Study	Boys	Count	126	125	338	589
		% within Gender of Persons in Study	21.4%	21.2%	57.4%	100.0%
	Girls	Count	279	150	161	590
		% within Gender of Persons in Study	47.3%	25.4%	27.3%	100.0%
Total		Count	405	275	499	1179
		% within Gender of Persons in Study	34.4%	23.3%	42.3%	100.0%