



Univariate Hypothesis

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Presentation Link-

<https://www.youtube.com/watch?v=Ext4-1iUqVU>

STUDENT STARTUP

The Internship for Entrepreneurs

Quality Assurance – Mentoring – Professional Resources

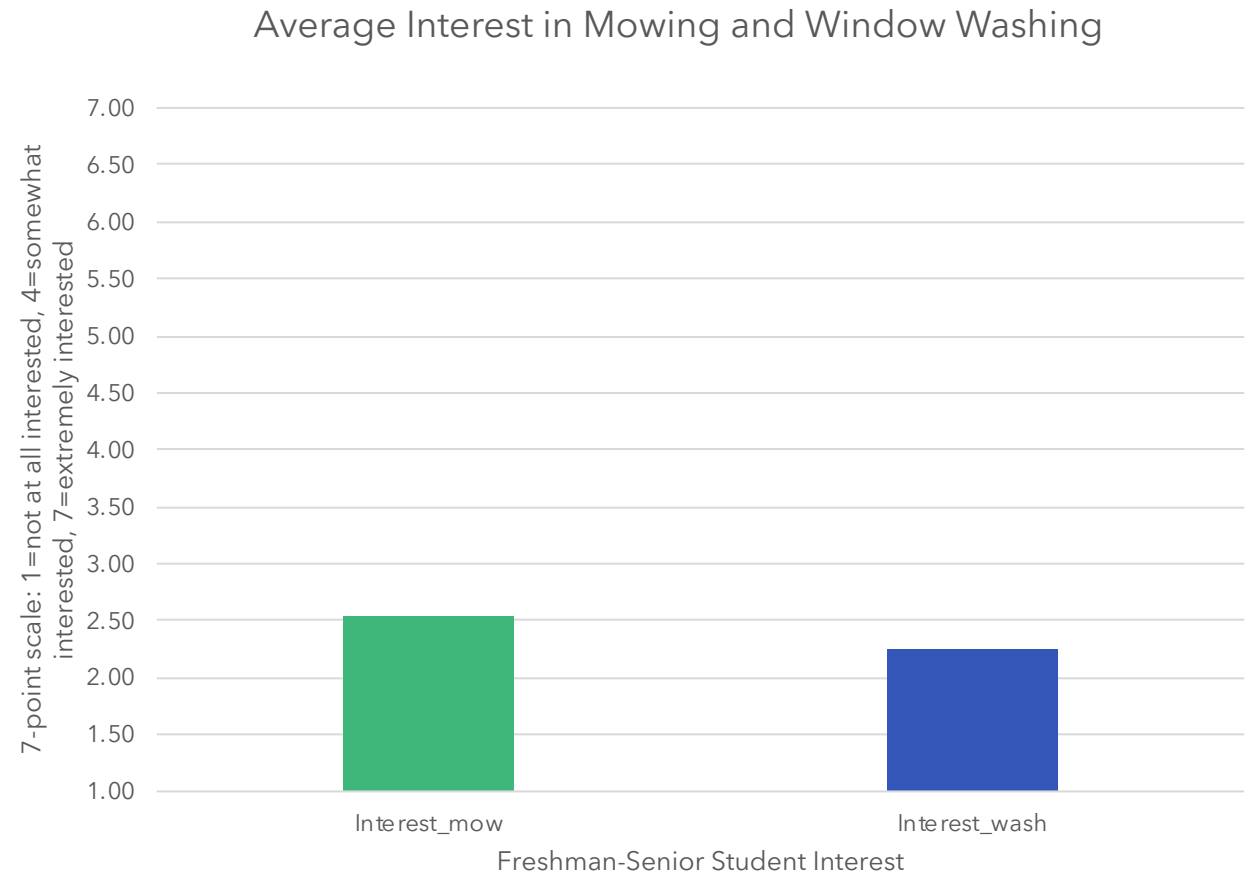
Univariate Hypothesis

- Hypothesis: Students would rate their interest in owning a business involving physical labor at least a 6 on a 7-point scale.
- “Physical labor” defined as mowing and window washing.
- Variables: Interest in mowing (Interest_mow) and interest in window washing (Interest_wash)



Univariate Hypothesis

- Means:
Interest_mow=2.54
Interest_wash=2.25
- Only a 0.29 difference in interest between mowing and window washing.



Univariate Hypothesis

- Used a single sample T-Test calculator to test the mean of each variable's score to a hypothetical population mean (6)
- We tested at a significance level of 0.05

Single Sample T-Test Calculator

A single sample t-test compares the mean (M) of a single sample of scores to a known or hypothetical population mean (μ). This means you need to input the value of your known (or hypothetical) mean and your sample scores. So, for example, if you wanted to find out whether the students from a particular fraternity study the same number of hours as the college average of 4 hours, you'd enter "4" as your *population mean* and your fraternity sample scores in the *Sample X* textbox.

Note: sample scores have to be entered either one score per line or as a comma delimited list (the calculator runs a type check on the data, and it won't work otherwise).

Population mean (μ)

Sample X

Significance Level:

- ☐ 0.01
☒ 0.05
☐ 0.10

One-tailed or two-tailed hypothesis?:

- ☐ One-tailed
☒ Two-tailed

Univariate Hypothesis

- Our p-value is less than .00001 for Interest_mow and Interest_wash.
- mean for interest_mow was 32.50 standard deviations away from the true mean
- interest_wash was 40.55 standard deviations away from the true mean
- Our hypothetical mean (6) is not close to the true mean (2.54=mowing, 2.25=window washing).

Significance Level:

- ☐ 0.01
☒ 0.05
☐ 0.10

One-tailed or two-tailed hypothesis?:

- ☐ One-tailed
☒ Two-tailed

The t -value is -32.496444. The value of p is $< .00001$. The result is significant at $p < .05$.

Significance Level:

- ☐ 0.01
☒ 0.05
☐ 0.10

One-tailed or two-tailed hypothesis?:

- ☐ One-tailed
☒ Two-tailed

The t -value is -40.548675. The value of p is $< .00001$. The result is significant at $p < .05$.

Univariate Hypothesis

- Conclusion: We do not support our hypothesis because the mean was significantly lower than 6 and our p-value was less than 0.05.
- Students are not “interested” in owning a physical labor job. They are “not very interested” in owning a physical labor job.
- Students are interested in owning a business and making \$1000 or more per month.

Interest in physical labor jobs (# of students)	interested	not interested	
mowing	90	202	
window washing	69	223	
Interest in physical labor jobs (% of students)			
mowing	31%	69%	
window washing	24%	76%	
Level of Attraction to Jobs paying \$1000 or more per month	Attractive	Not Attractive	Neutral
# of students	243	26	23
% of students	83%	9%	8%
Level of Interest in Owning a Business	interested	not interested	
# of students	94	36	
% of students	71%	27%	