

Research Critique 1: Worth 5%

1. Identify the Research Goal in standard format	1
2. Identify the experimental unit and universe of interest	1
3. Identify the Response variable and classify them	1
4. Identify Factors and classify them as study or extraneous; qualitative or quantitative	1
5. Identify the study time perspective	.5
6. Summarize the Research	.5
Total	5%

Watando, A., Ebihara, S., Ebihara, T., Okazaki, T., Takahashi, H., Asada, M., & Sasaki, H. (2004). Daily oral care and cough reflex sensitivity in elderly nursing home patients. *Chest, 126*(4), 1066-1070.

1. **Research Goal:** To study the relationship between *intensive oral care* and *cough reflex sensitivity* in *elderly adults*.
2. **Experimental unit:** an elderly adult
Universe of interest: all elderly adults
3. **Response variable:** *Cough reflex sensitivity*: as measured by the log of the concentration of citric aerosol necessary to cause at least 5 coughs in one minute while breathing the aerosol; it is continuous. (NOTE: this point contains the concept being measured, how it is measured and the type of variable.)
4. **Factors:** Study factors: intensive oral care: yes or no (qualitative)
Extraneous factors: age (quant), Serum substance P (quant), cognitive function (quant), ADLs (quant); gender (qual); dentures (qual)
5. **Study type:** Prospective study

Summary:

Impaired cough reflex is a risk factor for aspiration pneumonia. Investigators randomly assigned nursing home patients to either intensive oral care or no intensive oral care. Intensive oral care was performed by the caregiver after every meal for a month. Patients assigned to no intensive oral care performed their usual oral hygiene for a month. Investigators measured serum substance P concentration, cognitive function, activities of daily living, and cough reflex sensitivity at baseline, 3 days, 10 days, and 30 days.

The two test groups were comparable for all extraneous factors. After 30 days, there was no change in cough reflex sensitivity for the usual care group. There was a significant increase in cough reflexivity in the treatment group (log 1.5 to log 1.2, $p < 0.01$). The odds ratio improvement of cough reflex sensitivity was 5.3 (95% CI, 1.7 to 16, $p < 0.005$). There were no changes in substance P concentration, cognitive function or ADLs. Conclusion: intensive oral care provided by caregivers after every meal may reduce aspiration pneumonia by improving cough reflex sensitivity.

Critique 2: Worth 10%

1. Identify the Research Objective	0.5
2. Identify the experimental unit and universe of interest	0.5
3. Identify the Response variable and classify them	1
4. Identify Factors and classify them as study or extraneous; qualitative or quantitative	1
5. Identify the study design and time perspective	1
6. Identify the inclusion and exclusion criteria and analyze whether they support the research objective/universe of interest	1
7. Analyze whether the extraneous factors have been adequately controlled and whether confounding factors are present.	
8. Identify the sampling method and whether or not the sample was representative and sufficient for analysis	1
9. Identify any reports of error measurement.	1
10. Analyze the review of literature and report whether the review has influenced the choice of response variable, instruments, or assignment/identification of factors.	2
11. Summarize the Research	1
Total	10%

Critique 3: Worth 20%

1. Identify the Research Objective	0.5
2. Identify the experimental unit and universe of interest	0.5
3. Identify the Response variable and classify them	1
4. Identify Factors and classify them as study or extraneous; qualitative or quantitative	1
5. Identify the study design and time perspective	1
6. Identify the inclusion and exclusion criteria and analyze whether they support the research objective/universe of interest	1
7. Identify the sampling method and whether or not the sample was representative and sufficient for analysis	1
8. Identify any reports of error measurement.	1
9. Analyze the review of literature and report whether the review has influenced the choice of response variable, instruments, or assignment/identification of factors.	2
10. Discuss the reporting of the results. Are tables used properly? Are descriptive statistics used appropriately? Is information missing?	1
11. Discuss the inferential statistics. Are the appropriate statistics used? If tests are performed, what is the alpha level? Is it appropriate? Was a power analysis performed? Did the study meet the sample requirements?	4
12. Does the discussion address all findings? Does it compare findings to other studies?	2
13. What are strengths and weaknesses identified?	1
14. What is your opinion of the research	2
15. Summarize the Research	1
Total	10%