

# The effect of water fluoridation and social inequalities of dental caries in 5-ye...

[Sociology](#)



Introduction to Sociology Research Article Analysis #2 Alissa Stueve

Instructions: Read the article posted on D2L d “ The Effect of Water Fluoridation and Social Inequalities of Dental Caries in 5-year Old Children.”

After reading the article answer the following questions. (Be specific!)

1. What is the problem or issue discussed by the authors? (2 pts)

The authors’ problem of discussion is moderator effect of water fluoridation on the relationship between social inequalities and tooth cavity of five year olds (Riley, Lennon, & Ellwood 300).

2. List ten research articles (list title and author) that are used in the literature review. (2 pts)

I. Can prevention eliminate caries? By O’Mullane D.

II. The relationship between fluoridation, social class and caries experience in 5 year old children in Newcastle and Northumberland in 1987 by Carmichael CL, Rugg-Gunn AJ, Ferrell RS.

III. The effect of fluoridation upon the relationship between caries experience and social class in 5 year old children in Newcastle and Northumberland, by Carmichael CL, Rugg-Gunn AJ, French AD, Cranage JD.

IV. The relationship between social class and caries experience in 5 year old children in Newcastle and Northumberland after twelve years of fluoridation by Carmichael CL, French AD, Rugg-Gunn AJ, Furness AJ.

V. The effect of fluoridation and social class on caries experience in 5 year old Newcastle children in 1994 compared with results over the previous 18 years by Evans DJ, Rugg-Gunn AJ, Tabari ED, Butler T.

VI. Social background, fluoridation and caries experience in a 5-year old population in the West Midlands by Bradnock G, Marchment MD, Anderson

RJ.

VII. The relationship between caries, fluoridation and material deprivation in five-year-old children in County Durham by Provar SJ, Carmichael CL.

VIII. Underprivileged Area Scores, tooth decay and the effects of water fluoridation by Jones C, Taylor G, Woods K, Whittle G, Evans D, Young P. Jarman

IX. Water fluoridation, tooth decay in 5 year olds, and social deprivation measured by the Jarman score; analysis of data from British dental surveys by Jones CM, Taylor GO, Whittle JG, Evans D, Trotter P.

X. Which deprivation? A comparison of selected deprivation indices by Morris R, Carstairs V.

3. What is the authors' hypothesis? (This will take some effort because it is not blatantly obvious.) (4 pts)

The authors do are not explicit in stating their hypothesis but two hypotheses can be inferred, from the study's aim, as follows.

There is no association between material deprivation and dental caries in five year olds in England

Water fluoridation does not influence the relationship

What is the independent variable?

Material deprivation is the independent variable.

What is the dependent variable?

Dental caries is the study's dependent variable.

What research design did the authors use? Discuss their design in depth: (3 pts)

Survey design was used for the study. The design collects and considers data

in its naturally existing forms, without efforts for treatment and randomization. It is also suitable for descriptive measures that the study focused on (Riley, Lennon, & Ellwood 300, 301).

4. What were the “ census indicators of material deprivation” cited by the authors? (4 pts)

The census indicators of material deprivation were “ car ownership, unemployment, household overcrowding,” and type of dwelling with focus on rental accommodation (Riley, Lennon, & Ellwood 301).

5. Toward the end of the article, the authors discuss issues of validity. Discuss the three “ confounding variables” and why they might cause validity issues (4 pts).

“ Residency,” “ other sources of fluoride,” and “ ethnicity” are the discussed confounding factors. The factors are likely threats to validity through confusing classification of participants into the classes of the independent variable. The children could have migrated across regions of different social classes, there could be other sources of fluoride than water, and while ethnicity is not an accurate indicator of social inequality (Riley, Lennon, & Ellwood 303, 304).

6. What was the authors’ conclusion? (1 pt)

The authors conclude that a significant relationship exists between water fluorination and dental carries and social inequality is a mediator. The relationship is stronger in low classes (Riley, Lennon, & Ellwood 304).

Works cited

Riley, Jane, Lennon, Michael, & Ellwood, Roger. “ The effects of water fluorination and social inequalities on dental caries in 5-year-old children.”

<https://assignbuster.com/the-effect-of-water-fluoridation-and-social-inequalities-of-dental-caries-in-5-year-old-children/>

International Journal of Epidemiology 28. 2 (199). Print.

#### Works Cited

Jane C Riley, Michael A Lennon, and Roger P Ellwood. " The effect of water fluoridation and social inequalities on dental caries in 5-year-old children." International Journal of Epidemiology 1 1999. , 300-305.