#7 Measures of Association II

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POLI 102

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Up-to-date

- All you got done so far:
  - Fundamentals and R Data ✓
  - Data wrangling/cleansing ✓
  - Data visualization I, II & III ✓
  - Data summarization and MCT&D ✓
  - Hypothesis testing ✓
  - HW #1, #2, #3 & #4 ✓
- **Final project**
  - Posted before next class
  - $\sim$ 3 people groups

Canvas chat for attendance

Effect sizes and association

- Cohen's d
- ANOVA
- F-statistic
- Eta squared
- Odds ratio
- Chi-squared
- Correlation, Pearson's r

Useful package `R`: `effectsize` (function reference)

Cohen's d (effectsize)

```
cohens_d(
  x,
  y = NULL,
  data = NULL,
  pooled_sd = TRUE,
  mu = 0,
  paired = FALSE,
  ci = 0.95,
  alternative = "two.sided",
  verbose = TRUE,
  ...
)
```

ANOVA (base R)

```
aov(formula,
    data = NULL,
    projections = FALSE,
    qr = TRUE,
    contrasts = NULL,
    ...)

formula:
  y ~ x
  y ~ x + z
  y ~ x*z
  ...
```

Eta squared (`effectsize`)

```
eta_squared(
  model,
  partial = TRUE,
  generalized = FALSE,
  ci = 0.95,
  alternative = "greater",
  verbose = TRUE,
  ...
)
```

Odds ratio (effectsize)

```
oddsratio(x, y = NULL,
          method = c("midp", "fisher", "wald", "small"),
          conf.level = 0.95,
          rev = c("neither", "rows", "columns", "both"),
          correction = FALSE,
          verbose = FALSE)
```

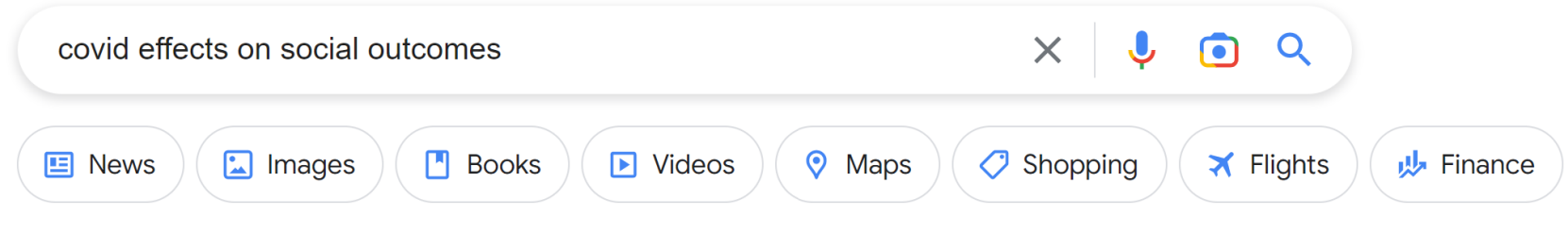
Chi-squared (base R)

```
chisq.test(x,
           y = NULL,
           correct = TRUE,
           p = rep(1/length(x), length(x)),
           rescale.p = FALSE,
           simulate.p.value = FALSE,
           B = 2000)
```

Pearson correlation (base R)

```
cor(x, y = NULL,
    use = c("everything", #default
            "all.obs",
            "complete.obs",
            "na.or.complete",
            "pairwise.complete.obs"),
    method = c("pearson", #default
               "kendall",
               "spearman"))
```

Lab


covid effects on social outcomes
News
Images
Books
Videos
Maps
Shopping
Flights
Finance
About 156,000,000 results (0.37 seconds)
Scholarly articles for covid effects on social outcomes
The dual effect of social ties on COVID-19 spread in … - Fraser - Cited by 37
Covid-19 modelling: the effects of social distancing - Bendtsen Cano - Cited by 37
Social capital and COVID-19: a multidimensional and … - Wu - Cited by 113
Social constraints in the COVID-19 pandemic force individuals to adapt to isolation and increase the prevalence of violence in the family, depression, anxiety, post-traumatic stress disorder.
Mar 30, 2022
National Institutes of Health (.gov)
https://www.ncbi.nlm.nih.gov › articles › PMC9052715
Social Consequences of the COVID-19 Pandemic. A ... - NCBI

HW #5 posted, deadline next week

4 weeks to go! Rest, enjoy, use them wisely :)

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