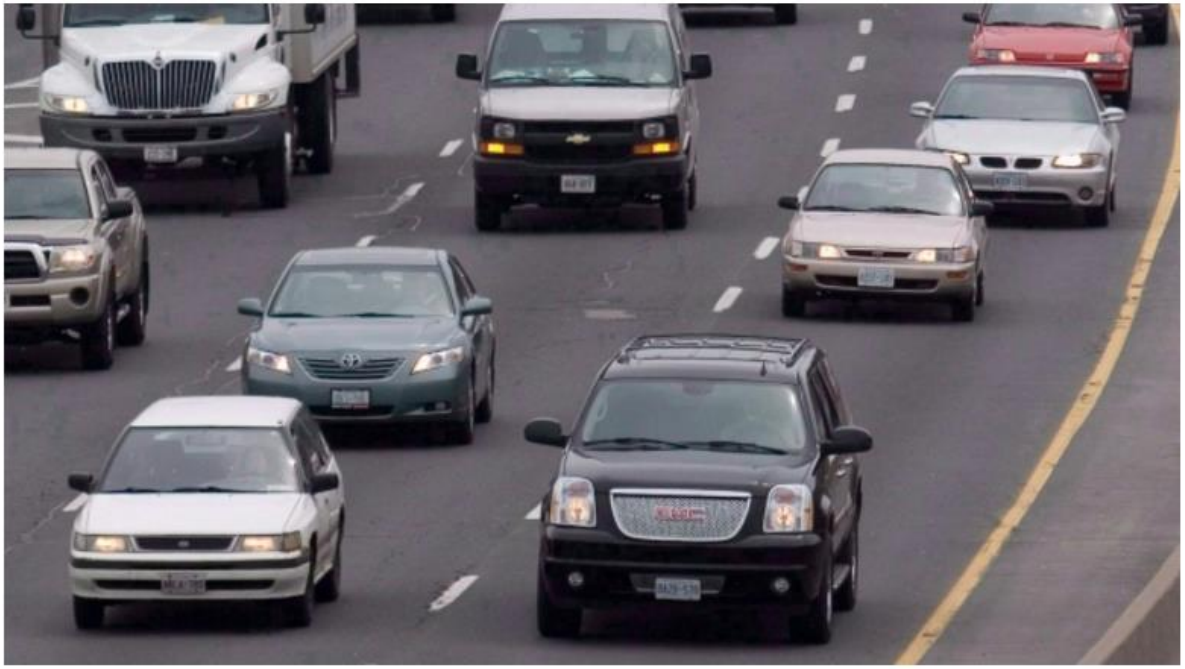
Dementia risk linked to living close to high-traffic roads

Air pollutants could be a factor, but hypothesis remains unproven

CBC News Posted: Jan 04, 2017 6:30 PM ET | Last Updated: Jan 05, 2017 8:37 AM ET



About 19 per cent of people in Ontario live within 50 metres of a major road. A study suggests this proximity is linked to a slightly higher risk of dementia. (Lars Hagberg/Canadian Press)

http://www.cbc.ca/news/health/dementia-traffic-1.3921614

- TODAY ->
- Course Logistics
- Begin with our 1st lecture

- Don Kerr
- http://dkerr.kingsfaculty.ca/

- Course Web Page

- **Announcements**
- **Assignments**
- **Learning Objectives / overheads**
- **Grades**
- **Useful Links**

- SPSS consultant and times:

- Prof. Donna Maynard

- Hours:
- Monday 1:30 a.m. – 3:30 p.m.
- Wednesday 9:30 a.m. – 1:30 p.m.
- Friday 9:30 a.m. – 1:30 p.m.

- She is located in the computing lab which is in the “Wemple Building” (Room W022)

4.0. COURSE REQUIREMENTS:

(i) Final exam 20% (final examination period)
(ii) 3 assignments 30% (10 % each)
(iii) Analysis assignment 40% (due end of term)
(iv) Participation/attendance 10%

Assignment #3 should go directly into your final paper!!

- Required Texts:

- ***INVESTIGATING THE SOCIAL WORLD: QUANTITATIVE RESEARCH***
- **SOCIOLOGY 3306 SECTION 570**

- Make sure you get the correct reading as there may be other packages prepared by other faculty

ELECTRONICS USE –

Please don't use your hand-held devices during lectures. I'm fine with other computer use in the classroom in most circumstances (i.e. primarily for taking notes). However, please don't use social media, play games, surf the web etc. during lecture time!

Should we adopt a policy on laptop use as a class? Ban laptops??

- **Goals**
- **-> how to evaluate quantitative research**
- **-> refine your skills with SPSS and working with large datasets**

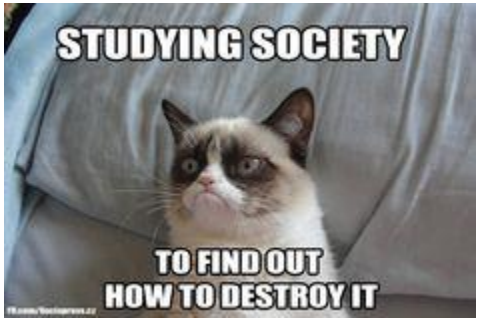
- **-> how to move from sociological theory -> statistical methods**
- **-> how to apply the techniques of multivariate analysis in a well organized research paper**

- **Work with one of the following datasets:**

- ☐ **Public Use Individual File from the 2006 Census**
- ☐ **General Social Survey, 2009 [Canada]: Cycle 23, Criminal Victimization. Main file (GSS)**
- ☐ **Canadian Community Health Survey, 2010**
- ☐ **National Longitudinal Survey of Children and Youth, 1994 cycle 1**

http://dkerr.kingsfaculty.ca/teach/sociology-3306/assignments/

Introduction



- **Why research methods?**

- **Justification:**
- **Research methods are at the heart of the social sciences.**

- **Informed reader of the research literature/journalism/ect..**

Where do you find “sociological research”???

Sociological Abstracts or the “Social Science Citation Index”.

Select 1-20 0 Selected items Brief view | Detailed view

1 The SkyTrain as an exporter of crime? Exploring the spatial distribution of crime on the Canada Line (Canada Line, SkyTrain, Mass transit crime).

Gallison, Jordana Kimberly. ProQuest, Ann Arbor MI, 2014. AAIMS22752.

...along the Canada Line. Time series techniques were used to analyze crime data
...between crime, land use and transit systems. Keywords: Crime; Canada Line;
... Canada Line is the most recent expansion of Metro Vancouver's SkyTrain system.

References (75)

Abstract/Details Preview - PDF (1 MB) Full text - PDF (2 MB) Order a copy Preview

2 Understanding Hate Crime Victims in Canada

Sommerlad-Rogers, Deirdre. Jul 2005.

...crimes includes little research analyzing hate crime victims --especially those

Abstract/Details Get it @ Western Preview

3 Police Officers' Perceptions of Gender-Motivated Violence in Canada

Scrivens, Ryan. ProQuest, Ann Arbor MI, 2012. AAIMR81444.

...crime research. In an attempt to fill a gap in the hate crime, violence against

Abstract/Details Get it @ Western Preview

4 The Market for Scientific Crime Prevention: A Comparative Study of Canada and Venezuela

Birkbeck, Christopher. **European Journal on Criminal Policy and Research** 11.3-4 (Dec 2005): 321-346.

...crime prevention is less scientific and more pragmatic. Using a marketing
...Crime prevention is an activity that, sooner or later, requires the concourse of
...selected aspects of the supply of and demand for scientific crime prevention in

Cited by (2)

Abstract/Details Full text - PDF (157 KB) Preview

5 Group Crime in Canada

Carrington, Peter J. **Canadian Journal of Criminology/Revue Canadienne de Criminologie** 44.3 (Jul 2002): 277-315.

...Group crime is an important but unexplored topic in Canadian
...crime committed by groups in Canada in the 1990s, & of the offenders involved in

References (59)

Don’t merely do a “google search”.. We don’t rely on journalists to do our research, eh?

Sep 04, 2016

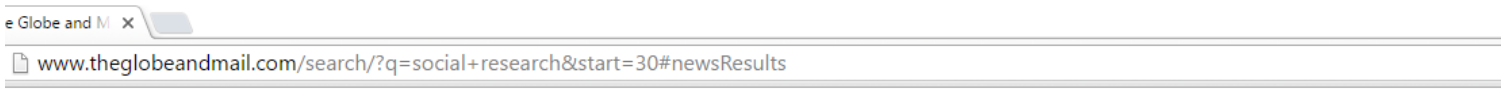
The downsides and dangers of ‘cheque day’

Researchers document 40-per-cent spike in fatal overdoses following monthly social-assistance

http://www.theglobeandmail.com/news/british-columbia/the-downsides-and-dangers-of-cheque-day/article31707434/

Sep 02, 2016

Is the university experience worth the cost?

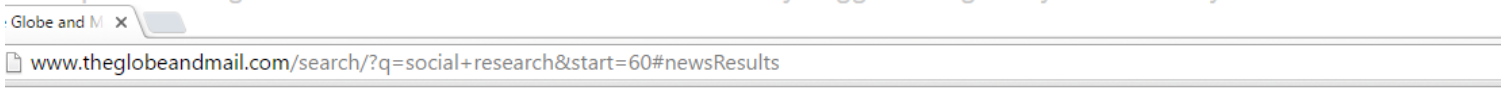


Aug 30, 2016

Roll over: Study suggests dogs may know what you’re saying

Scientists have found evidence to support what many dog owners have long believed: man’s best friend really does understand some of what we’re saying.

http://www.theglobeandmail.com/news/world/roll-over-study-suggests-dogs-may-know-what-youre-



http://www.theglobeandmail.com/globe-investor/inside-the-market/warning-signs-found-in-a-companys-financials-call-for-close-scrutiny/article31470473/

Aug 19, 2016

Studies show that hot weather brings out the worst in us

Several studies have suggested a link between summer heat and bad moods and poor self-control

http://www.theglobeandmail.com/life/health-and-fitness/health/studies-show-that-hot-weather-brings-out-the-worst-in

Dementia risk linked to living close to high-traffic roads

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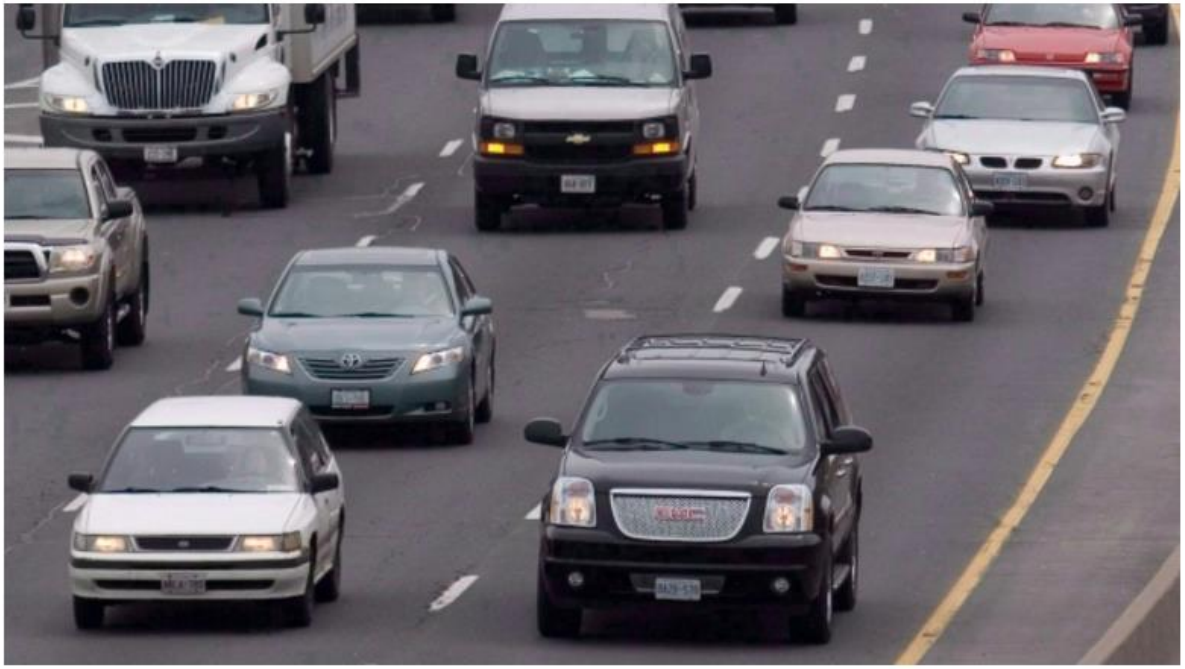


About 19 per cent of people in Ontario live within 50 metres of a major road. A study suggests this proximity is linked to a slightly higher risk of dementia. (Lars Hagberg/Canadian Press)

http://www.cbc.ca/news/health/dementia-traffic-1.3921614

Is this merely descriptive?
Persons living on these busy routes have a 7% higher risk of dementia?

Or are they reporting the effect of “living on these busy routes” after considering other factors that might be relevant?

Are we looking at the “bivariate” relationship between “place of residence” and “risk of dementia”?

or are we conducting a “multivariate” analysis (considering several variables simultaneously with place of residence) in examining dementia risk??

Microsoft Office Home | Mail - Don Kerr - Outlook | Living near major roads | Census Tract Map Income

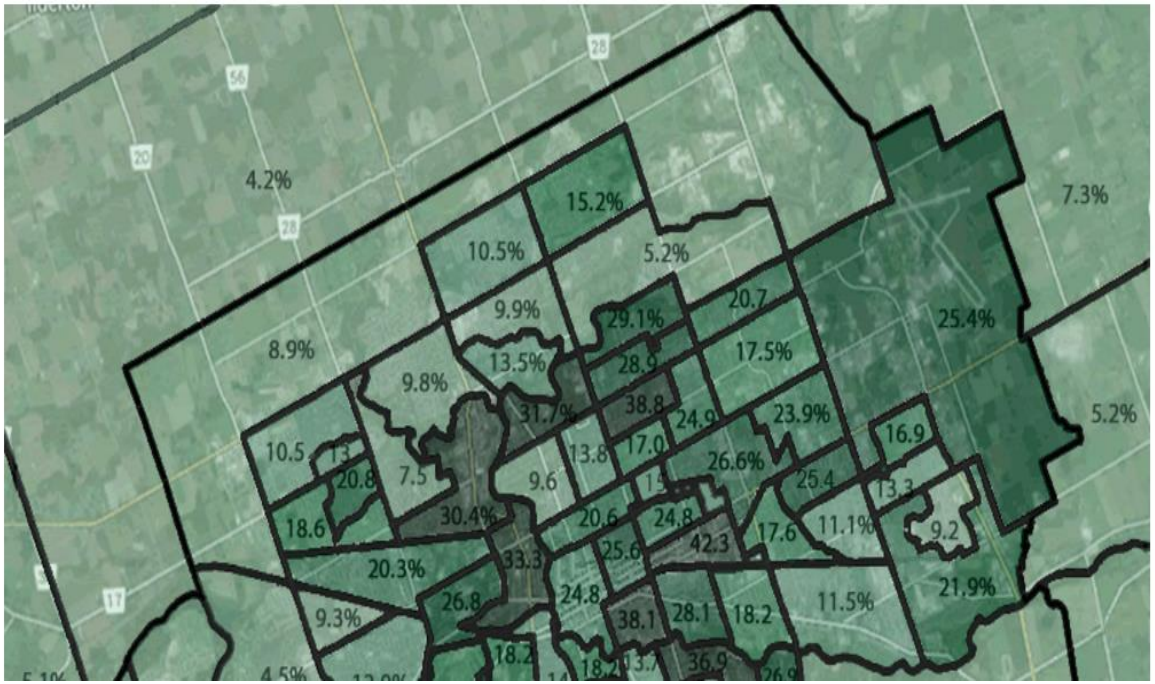
www.povresearchkings.ca/london-census-tracts/census-tract-map-income/

Income Distribution and Low Income

Percentage Low Income Across London Census Tracts (Neighbourhoods)

This map portrays the **low income rate** across London's many urban neighborhoods(Census Tracts) **Click on any census tract on this map to obtain more detailed information on the income characteristics of specific urban neighborhoods, including information on the incidence of low income by family type, median income and income distribution.**

The darker shades of green portray a higher incidence of low income. The incidence of low income varies dramatically across neighbourhoods, from a low of only about 4-5% in some of the more suburban neighbourhoods to well over a 3rd of all persons living in selected neighbourhoods in the urban core.



Are low income Londoners more likely to be living on "busy roads"???

Are there other factors, associated with being low income that might explain more comprehensively this relationship?

Articles

Living near major roads and the incidence of dementia, Parkinson's disease, and multiple sclerosis: a population-based cohort study

Hong Chen, PhD, Jeffrey C Kwong, MD, Ray Copes, MD, Karen Tu, MD, Paul J Villeneuve, PhD, Aaron van Donkelaar, PhD, Perry Hystad, PhD, Prof Randall V Martin, PhD, Brian J Murray, MD, Barry Jessiman, MSc, Andrew S Wilton, MSc, Alexander Kopp, BA, Richard T Burnett, PhD

Published: 04 January 2017

This study was supported by Public Health Ontario (PHO) and the Institute for Clinical Evaluative Sciences (ICES), which is funded by an annual grant from the Ontario Ministry of Health and Long-Term Care (MOHLTC). Parts of this material are based on data and information compiled and provided by Canadian Information Health Institute (CIHI). The opinions, results, and conclusions reported in this article do not necessarily represent the views of ICES, PHO, MOHLTC, or CIHI.

Important issue here:

Is the higher "risk of dimension" due to the pollutants/noise associated with heavy traffic, or is it due to the long term risk factors associated with the poverty of persons who live in specific types of neighborhoods??
(e.g. smoking, obesity, etc.)

Are they reporting a bivariate association?

Neighborhood:
"pollutants/Noise" -> "dementia risk"

or the results the by-product of a "multivariate" analysis (considering several variables simultaneously)?

Neighborhood "pollutants/noise"
SES (socioeconomic status)
"smoking/obesity" -> "dementia risk"
"diet"/"lack of exercise"

NOTE: This study correctly "controlled" for these types of variables..
and after so doing, inferred a "significantly higher risk"..
7% higher risk, even after these controls (even after taking into consideration poverty and its associated risks).

GUEST COLUMNIST

Ottawa silent on wind turbine noise

JIM MCPHERSON, GUEST COLUMNIST

FIRST POSTED: WEDNESDAY, JUNE 29, 2016 08:31 AM EDT

Don't believe everything you read!

A wind turbine. (QMI Agency file photo)

The federal government's inaction on wind turbine noise is making Canadians sick.

It's been a year-and-a-half since Health Canada's $2-million study determined low-frequency acoustic waves from industrial wind turbines cause community annoyance.

According to the World Health Organization, unwanted noise, even at a moderate level, can lead to a myriad of adverse health outcomes, including stress-related symptoms such as sleep disturbance, elevated blood pressure, cardiac events and depression.

It's a "green" form of radiation sickness.

Canada's Radiation Emitting Devices Act (REDA) is supposed to regulate the design and operation of devices that emit radiation, such as microwave ovens and tanning beds.

In sworn testimony at an environmental review tribunal, a Health Canada official confirmed industrial wind turbines — large, noise-emitting devices — are regulated by REDA.

REDA requires a manufacturer or importer of such a device to "forthwith notify the Minister" upon becoming aware its device is emitting radiations not necessary for the performance of its function.

On June 15, Barbara Ashbee of Mulmur, Ontario, together with hundreds of

Note: This was merely “an opinion piece” in the editorial section of the Sun…

Not based on facts.,
i.e. didn’t even look to the research on this issue .. Sloppy.

Back to
Wind Turbine Noise

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Regulatory Transparency and Openness
Completed Access to Information Requests
Proactive Disclosure

Environmental and Workplace Health

Wind Turbine Noise and Health Study: Summary of Results

Background and Rationale

The Government of Canada is committed to protecting the health and well-being of Canadians. Jurisdiction for the regulation of noise is shared across many levels of government in Canada. Health Canada's mandate with respect to wind power includes providing science-based advice, upon request, to federal departments, provinces, territories and other stakeholders on the potential impacts of wind turbine noise (WTN) on community health and well-being. Provinces and territories, through the legislation they have enacted, make decisions in relation to areas including installation, placement, sound levels and mitigation measures for wind turbines.

Globally, wind energy is relied upon as an alternative source of renewable energy. In Canada wind energy capacity has grown from approximately 137 Megawatts (MW) in 2000 to just over 8.5 Gigawatts (GW) in 2014 (CANWEA, 2014). At the same time, there has been concern from some Canadians living within the vicinity of wind turbine installations that their health and well-being are negatively affected from exposure to WTN.

The scientific evidence base in relation to WTN exposure and health is limited, which includes uncertainty as to whether or not low frequency noise (LFN) and infrasound from wind turbines contributes to the observed community response and potential health impacts. Studies that are available differ in many important areas including methodological design, the evaluated health effects, and strength of the conclusions offered.

In July 2012, Health Canada announced its intention to undertake a large scale epidemiology study in collaboration with Statistics Canada (*Statistics Canada Official Title: Community Noise and Health Study*). The study was launched to support a broader evidence base on which to provide federal advice and in acknowledgement of the community health

BASICALLY< THIS RESEARCH FOUND ABSOLUTELY NO EVIDENCE OF NEGATIVE HEATH EFFECTS ASSOCIATED WITH LIVING CLOSE TO A WIND TURBINE!!!

The following were not found to be associated with WTN exposure:

- self-reported sleep (e.g., general disturbance, use of sleep medication, diagnosed sleep disorders);
- self-reported illnesses (e.g., dizziness, tinnitus, prevalence of frequent migraines and headaches) and chronic health conditions (e.g., heart disease, high blood pressure and diabetes); and
- self-reported perceived stress and quality of life.

While some individuals reported some of the health conditions above, the prevalence was not found to change in relation to WTN levels.

1. Self-reported Sleep

Long-term sleep disturbance can have adverse impacts on health and disturbed sleep is one of the more commonly reported complaints documented in the community noise literature. Self-reported sleep disturbance has been shown in some, but not all, studies to be related to exposure to wind turbines.

The Pittsburgh Sleep Quality Index (PSQI) is a frequently used questionnaire for providing a validated measure of reported sleep pathology where scores can range from 0-21 and a global score of greater than 5 is considered to reflect poor sleep quality. The PSQI was administered as part of the overall questionnaire, which was supplemented with questions about the use of sleep medication, prevalence of sleep disorders diagnosed by a healthcare professional and how sleep disturbed people were in general over the last year.

Results of self-reported measures of sleep, that relate to aspects including, but not limited to general disturbance, use of sleep medication, diagnosed sleep disorders and scores on the PSQI, did not support an association between sleep quality and WTN levels.

2. Self-reported Illnesses and Chronic Diseases

Self-reports of having been diagnosed with a number of health conditions were not found to be associated with exposure to WTN levels. These conditions included, but were not limited to chronic pain, high blood pressure, diabetes, heart disease, dizziness, migraines, ringing, buzzing or whistling sounds in the ear (i.e., tinnitus).

3. Self-reported Stress

Exposure to stressors and how people cope with these stressors has long been considered by health professionals to represent a potential risk factor to health, particularly to cardiovascular health and mental well-being. The Perceived Stress Scale is a validated