

CYSF LOGBOOK

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“Trust in Public Health Measures:
A Mixed Methods Study of Family Caregivers
for People Living with Dementia”

Timetable:

December 15 - Finalize topic.

December 30 - Begin preparing project outline, make a general agenda.

January 15 - Talk with research team to learn more about trust in public health.

January 30 - Locate all background information.

February 15 - Begin SPSS 27 software, familiarize self with Excel, decide on method of quantitative analysis, decide on method of qualitative analysis, go over selection with research team, receive feedback.

March 1 - Create a hypothesis, organize all background information, do a brief review of literature, decide on software to use for quantitative coding. Complete quantitative analysis, complete theme preparation for qualitative analysis.

March 15 - have all sections of the write up completed, including the following: abstract, problem, methods, measures, demographics, analysis (quantitative and qualitative), results (quantitative and qualitative), discussion, limitation, further research, conclusions.

Finalize all citations and references, perform a second review of the literature. Ensure tables are clear and valid, ensure all charts and figures have been made with precision and accuracy. Have project reviewed by researchers of parent study for final feedback.

Topics:

- Nursing home?
- Old age
- Old age related mortality rates
- Parkinson's disease
- Dementia/Alzheimer's disease
- Families
- COVID-19
- COVID-19.....plus dementia?
- Access to resources
- Mental Health
- Nursing home COVID-19 transmissions
- Conspiracy theories
- Conflicting information from multiple sources
- Trust??

My topic is focusing on trust in public health among patients with dementia and their families. I chose this topic because I have been volunteering for the past 4 years in a nursing home in NW Calgary. Many residents of the nursing home were afflicted with either dementia or Parkinson's disease and I knew immediately that I wanted to create a science fair project centred around these topics. In July 2020 my search led me to researchers in the University of Calgary who gave me the opportunity to volunteer as a research assistant. Their research centered around

family caregivers of people living with dementia. After nearly 6 months of assisting with their project, I had a chance to create my own survey subsection in which I asked a short answer and long answer question about trust in public health.

Background Research:

Sun J, He W, Wang L, Lai A, Ji X, Zhai X, et al. COVID-19: Epidemiology, Evolution, and Cross-Disciplinary Perspectives. *Trends in Molecular Medicine*, 2020. 26 (5): 483–495.

COVID-19 info for Albertans. *Government of Alberta*. Retrieved March 14, 2021. <https://www.alberta.ca/covid-19-alberta-data.aspx>

Azarpazhooh, M. R., Amiri, A., Morovatdar, N., Steinwender, S., Rezaei Ardani, A., Yassi, N., Biller, J., Stranges, S., Tokazebani Belasi, M., Neya, S. K., Khorram, B., Sheikh Andalibi, M. S., Arsang-Jang, S., Mokhber, N., & Di Napoli, M. (2020). Correlations between COVID-19 and burden of dementia: An ecological study and review of literature. *Journal of the neurological sciences*, 416, 117013. <https://doi.org/10.1016/j.jns.2020.117013>

O'Hara K. *Trust: from Socrates to spin*. Cambridge: Icon Books, 2004.

Mohseni M and Lindstrom M. Social capital, trust in the health-care system and self-rated health: the role of access to health care in a population-based study. *Soc Sci Med* 2007; 64: 1373–1383.

Chan HF, Brumpton M, Macintyre A, Arapoc J, Savage DA, Skali A, et al. (2020) How confidence in health care systems affects mobility and compliance during the COVID-19 pandemic. *PLoS ONE* 15(10): e0240644. <https://doi.org/10.1371/journal.pone.0240644>

Cohen, Gabriela, et al. "Living with Dementia: Increased Level of Caregiver Stress in Times of COVID-19." *International Psychogeriatrics*, vol. 32, no. 11, 2020, pp. 1377–1381., doi:10.1017/S1041610220001593.

World Health Organization (2020) COVID-19 Snapshot Monitoring (COSMO) Sample questionnaire: Behavioural insights for COVID-19.

Likert, R. (1932). A Technique for the Measurement of Attitudes. *Archives of Psychology*, 140, 1–55.

Gerald, B. (2018). A brief review of independent, dependent and one sample t-test. *International Journal of Applied Mathematics and Theoretical Physics*, 4(2), 50.

Braun, V., & Clarke, V. (2008). Using thematic analysis in psychology. *Qualitative Research in Psychology*. 3(2), 77-101.

Glaser, B. G. (1965). The constant comparative method of qualitative analysis. *Social problems*, 12(4), 436-445.

Sher, L. (2020). The impact of the COVID-19 pandemic on suicide rates. *QJM: An International Journal of Medicine*, 113(10), 707-712.

Hypothesis:

I'm guessing that, based off my previous research, trust in public health will be at an all time low. This effect will be further exacerbated by the vulnerability of people living with dementia in a major health crisis and the stress and lack of support resources during the pandemic.

Common themes to emerge will probably include lack of trust in elected officials. I hypothesized this because of recent events in the media which focussed on politicians travelling internationally.

Materials:

Firstly, I will need data with which to begin my analysis. To access this data I will probably need to reach out to IT support or some other department in the University of Calgary in order to be granted permission. Once I can access the results of the questions I asked family caregivers, I will need to download data analyses software. For the qualitative data, things will be simple and I only need to use Microsoft Excel. The difficulties of qualitative data analysis come not from the program used but from the process of extracting important information. The quantitative data analysis, which I have decided will be statistical, will be far more complex in the preliminary data analysis stages. I have learnt that certain statistical tests may be run on various data analysis software that can help a researcher make sense of his/her results. Much of these statistical research out there have utilized certain tests called t-tests and ANOVAs. Though more research is required to fully understand the intricacies of each test, I do have a basic level of understanding. I suspect I will need to use both as some demographics have two subsections and others have many more. A combination of the two will likely be the best strategy. Interestingly, I have come to the conclusion that most of the research is completed based on the amalgamation of multiple strategies for a more accurate and well rounded result.

For the purpose of the statistical analyses I have determined the program SPS 27 and Graphpad Prism to provide the best and most efficient tool for quantitative analyses.

Procedure:

The initial stage of the project focused on coding qualitative data inductively. After initial codes were formed and assigned to each of the 44 long answer responses, results were reviewed by a researcher working on the parent study. The quantitative aspect of the research consisted of much trial and error and many data analyses which resulted in the recording of the Levene Statistics. Ultimately I chose to perform these tests on SPS27 seeing as many of these tests were too complicated for the most simplistic correlation extractions of other software.

Variables:

Due to the exploratory nature of this study, the focus remained on gathering the most information as possible. Because this information was not simply an experiment, research focussed on the accumulation of data and its frequent analysis as opposed to manipulation of variables on the part of the researcher.

Conclusion:

Through the research study, results revealed very little variance between demographics of family caregiver trust in public health measure and overall rates of lowered or neutral trust levels at 66.3%. This disproved the hypothesis that anticipated lower levels of trust and variance in demographics. Exploring caregivers experiences can help researchers and policy makers better understand the caregiver perceptions of the Alberta Governments's Covid 19 public health measures.

Recommendations:

My recommendations for improving the project may include adding features such a deductive qualitative analysis, or even a content analysis to further increase the validity of research done in this aspect of mixed method study. Future studies may wish to focus on increasing the surveyed group from 153 participants to four or five times that number. Increasing the sample size could find more significant relationships from the data. Research might also be improved with a sample that is more representative of the province so that factors such as race and income can be better evaluated when looking at trust in the public health measures.