Western University Scholarship@Western

WLURA Documents

2022

Sample WLURA Application (Sciences)

WLURA Adjudication Committee *Western University*, wlura@uwo.ca

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Western Libraries Undergraduate Research Awards

Sample Application Form (Sciences)

PART 1: Applicant Information

*If a group project, please include the names, email addresses, majors, and years of study for all team members.

Name: Kathy Hammond

Western email: khammon456@uwo.ca

Major (if declared): Basic Medical Sciences (BMSc) Epidemiology and Biostatistics

Year of study: 3

Title of research project: The Effectiveness of Masking in the Prevention of COVID-19 Transmission

Grade received on research project (if graded): 85%

Department and course code (if applicable note if your project was for the USRI program): Epidemiology and Biostatistics; EPID 3330G

Date research project was submitted for grading: January 31, 2022

Style manual used for citations (e.g. Chicago Manual of Style, MLA, APA, etc.): APA

Name of supporting faculty member (who will only be contacted if you are a finalist): Professor Monika Mills

PART 2: Applicant Permissions

I grant permission for my instructor (and teaching assistant) or project advisor to discuss my research project, including the final grade, with members of the WLURA Adjudication
Committee. I recognize that these individuals will only be contacted if my project is chosen as a finalist.

PART 3: Research Reflections

*Please review the Application Tips available on the WLURA site in Scholarship@Western before filling out this part of the form.

Abstract: What is your research project about and why is it important? (150 words): Throughout the COVID-19 pandemic, mandatory masking has been a focal point of many discussions and public debates. As we continue to study and learn more about the coronavirus, research on the effectiveness of masks has evolved. Understanding how masking helps slow the spread of the virus is the focus of this project, specifically among adults between the ages of 20 and 40. Based upon a comprehensive literature review of the most recent research on this topic, I found that the existing experimental and epidemiologic data available demonstrates that masks are an effective means of reducing the spread of SARS-CoV-2. The benefits of masking are a result of both source control and wearer protection. Masks have also been found to be safe with no major negative impacts on respiration, although some research has found that wearing masks during intense exercise can increase dyspnea and prolonged use can result in skin reactions.

How did you design your research question? (200 words): One of my friends avoided wearing masks whenever possible during the pandemic and never contracted COVID-19. In my case, I was infected by the coronavirus even though I used N95 masks ever since the outbreak of the disease. Given these results, I have had many lively discussions with family and friends about the benefits of masking. Opinions and views vary about their effectiveness, the inconvenience of using them, and even whether mandating masking is a violation of one's individual and human rights. As an assignment topic for this course, I thought it would be a good opportunity to look at the evidence to continue engaging in these conversations with science to support my positions. This topic also fits well with the learning objectives of the Epidemiology and Biostatistics program. In consultation with my course instructor, then, I decided that focusing on all public health measures – vaccinations, hand washing, and physical distancing – was far too broad for a single research question. They recommended researching only masking and directed me to some important websites with datasets on COVID-19 and The Lancet COVID-19 Centre. To clarify my research question, I used these resources to browse through several open access peer-reviewed journals.

How did you find library/archives services and resources for your research topic? (200 words): As part of our course, we had a librarian give a lecture on searching the literature. We learned the importance of framing a research question, identifying keywords (including subject headings), using Boolean operators, and deciding which databases to search based on subject coverage. The librarian also embedded a series of StoryMaps on the research process in our course site in OWL to assist us in our assignments. Based on this information, I formulated my search strategy for PubMed, which I have outlined below in point form. I should note, however, that I attended the librarian's office hours and received feedback on controlled vocabulary to help refine my search.

- I developed my research question: "Is wearing masks an effective way to reduce the transmission of COVID-19?"
- I broke down my question into key concepts: masks, COVID-19, transmission
- I brainstormed synonyms for each concept
 - Masks: face masks, masking, masks/virology (MeSH)
 - COVID-19: SARS-CoV-2, COVID-19/epidemiology (MeSH), COVID-19/prevention and control (MeSH)

- Transmission: airborne transmission, transmittal
- I combined the best individual search results first using the Boolean Operator OR and then combining with AND
- Final search: (((COVID-19) OR (SARS-COV-2)) AND ((face masks) OR (masking))) AND ((transmission) OR (airborne transmission)) provided 1,721 results

What library/archives services and resources did you use to perform your research? (200 words): One of the StoryMaps in our course site in OWL provides a link to the Schulich Basic Science research guide. After viewing its content, I found that it had a list of multimedia resources that clarified how to conduct a literature review. For example, Sage Research Methods has a series of instructional videos I watched on the research process that were extremely useful in navigating the wealth of information available on my topic. Since I was looking for peer-reviewed journal articles, I began my search using PubMed and Web of Science, databases from the research guide. I also conducted a search in Google Scholar, using the library link so I could obtain the articles available via Western Libraries. In reviewing the article abstracts, I found several relevant articles for my assignment. Some articles were not available via Western Libraries, so I requested and received them from RACER after I created a free account. In terms of datasets, the librarian for our course gave me the contact information of one of the data librarians. I sent an email to them, and they provided me with some websites on COVID-19 that my instructor did not know about.