Scholarship During a Pandemic: Secondary Data Analysis
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ABSTRACT
The COVID-19 pandemic has disrupted nearly every aspect of life in the United States and around the globe, including significant impacts to higher education, both in its teaching-learning and research missions. With the physical closure of so many college and university campuses, a looming challenge is how nurse researchers can continue to generate new knowledge during a temporary but extended period of social distancing where conducting research requiring physical interaction with participants is impossible. In this Methodology Corner installment, a brief overview of secondary data analysis is provided, and resources for locating potentially useful data are described. Although secondary data analysis will not replace the dominant approaches used in nursing education research, current circumstances require it to take a much more prominent place in the toolbox of nursing education researchers. [J Nurs Educ. 2020;59(5):245-247.]

In addition to the tremendous insults inflicted on the health and welfare of millions of people and on economies worldwide, the impacts of the COVID-19 pandemic on nursing and nursing education have made work that was already challenging on its best day seem exponentially more so. As the scope, scale, and growth of the pandemic became clearer in early March 2020, what started as a handful of college and university closures in hard-hit areas of the West coast of the United States cascaded into a near complete transition of higher education in the United States to a completely online format in just a few weeks.

Often with little or no time to prepare for such a transition, faculty from every discipline and in every type of course offered by vocational programs through research-intensive universities were asked to reimagine, no matter the subject or inherently physical, in-person nature of the subject matter, how to continue the teaching-learning process online (Schmalz, 2020). Without question, numerous scholarly papers will document how well this all went in the coming months and years. A much less visible impact of COVID-19 on higher education is on the academic research enterprise and how it, too, like teaching, came to an often abrupt stop as campuses began to close their physical facilities in compliance with local and state public health directives.

Although the various public health interventions aimed at controlling the spread of COVID-19 will be eased over time as the virus comes under control, the timeline for faculty and students to return to their physical campuses is far from certain. Given the potential for physical campus operations to be impacted throughout the summer and into the fall months, researchers in nursing education can continue to produce new scholarship using a variety of approaches including the one described in this Methodology Corner installment, secondary data analysis. The August Methodology Corner installment will continue in this vein, with a focus on best practice approaches for using internal, administrative, and student-record data collected during the course of program operations for another purpose: research. Both of these approaches make use of data already accessible to many nursing faculty and as such, are ripe for consideration when using research methods that require close physical proximity simply are not possible.

Secondary Data Analysis
Polit and Beck (2016) provide a clear, yet simple description of secondary data analysis as “…using data from a previous or ongoing study to test new hypotheses or answer questions not initially envisioned” (p. 244). Secondary data analysis has not been a topic of significant interest in nursing education research, owing perhaps to assumptions that it is most applicable in analyzing large, primarily federal datasets generated from ongoing, yearly national health and behavior surveys or from longitudinal health outcomes studies like the one with which our profession is most familiar, the Nurses’ Health Study (Colditz et al., 1997). Although some have suggested the slow uptake of secondary data analysis may be due to concerns over the merits of the approach (Smith, 2008), a more practical explanation for nursing education is the relative lack of accessible datasets avail-

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able on questions of interest to nursing education researchers. The Internet has helped remove this barrier, however, allowing researchers to now discover and make use of datasets that, but for having been posted online, they otherwise would never have known existed.

Some researchers have provided examples of how secondary analysis of existing datasets, even originating outside of nursing education, can be used to produce findings of significance to nursing education. For example, Popkess and McDaniel (2011) compared levels of student engagement among nursing and health professions students with those from other disciplines using data from the National Survey of Student Engagement, a regularly occurring survey administered to U.S. college students. In another example, Pittman et al. (2019) combined data from the federally maintained Integrated Postsecondary Education Data System (IPEDS) database with NCLEX-RN® pass rate data to compare the characteristics of nursing programs based on whether the program was housed in a for-profit versus a public institution and to describe the growth of that sector of nursing education. These examples show the type of impactful scholarship that is possible using secondary data analysis. As Polit and Beck (2016) noted, although one generally thinks of secondary analysis as a quantitative technique, qualitative secondary analyses can be similarly conducted.

Although there are legitimate cautions and considerations one must make before undertaking secondary data analysis (e.g., Smith et al., 2011), similar to the considerations necessary in planning any type of research, secondary data analysis does not require use of what would typically be considered “large datasets” containing thousands of cases and hundreds of variables. A valuable secondary analysis can be conducted on much smaller datasets if the required alignment between one’s research questions, the setting and sample from which the data were collected, and the measures and variables that the data represent are in place. Researchers considering conducting a secondary data analysis should familiarize themselves with common sources or collections of available data to begin exploring the possibilities. Several example sources are described below.

**Sources of Existing Data: Three Examples**

**Federal Government Source**

Data.gov (https://data.gov) provides a unified search and linking engine for datasets generated from agencies across the federal government and some data collected or submitted by state governments. Some data are hosted directly on the Data.gov site, whereas other data are hosted on other sites specific to the type of data or agency that generated the data. Nearly every category of data produced by the federal government can be searched via Data.gov.

**Open Science Source**

The Open Science Framework (https://cos.io) is a project of the Center for Open Science. The Open Science Framework provides a repository for posting open science papers, data, figures, and related materials. The repository is searchable and has an active user base. As with any “open” platform, increased vigilance should be exercised as the community of contributors is often hoped to be self-regulating, and as one can imagine, there is variability in the quality of some items submitted. As an outgrowth of the replication crisis in psychology and the interdisciplinary movement to reconsider how we use and interpret p-values, the Open Science Framework has grown to be a leader in the open science field. But in true open science fashion, it provides links to many other open data sources as well.

**Consortium Source: The Inter-University Consortium for Political and Social Research (ICPSR)**

The ICPSR (https://www.icpsr.umich.edu/icpsrweb/) is a unit of the Institute for Social Research at the University of Michigan. Perhaps the most well-known repository of high-quality data that is often well-documented and includes links to publications that have used the data, ICPSR provides numerous resources to faculty from its members institutions, a list of which can be located on the website listed above. Although some data are freely available to the public from the ICPSR website, significantly more data, documentation, and visual analysis tools are available to consortium members who create their own ICPSR account. Also, data sources are not confined to the social sciences; very discipline-specific datasets are available, such as several datasets from the RN Work Project, a multiyear longitudinal survey of new graduate nurses (Kovner & Brewer, 2020).

**Conclusion**

“If immeasurable was not just an adjective, but was a physical or emotional experience that you have or feel—at least a few times each hour—that’s how much.” That was my answer when a colleague and I recently pondered aloud the question of just how much has changed in nearly every facet of our personal and professional lives over the past few months due to the COVID-19 pandemic. The limitations imposed by the pandemic on the collective building the science of nursing education, primarily after the initial crisis phase has passed, calls us to consider approaches to generating knowledge for educational practice that may be somewhat unfamiliar to and therefore uncomfortable to undertake at first. However, as the courage and determination shown by nurses on the frontlines of the battle against COVID-19 illustrate, the profession has shown it is more than capable of rising to the occasion.

**References**


