Ethics Considerations for Conducting Secondary Data Analyses

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15 November 2021

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Ethics Principles and Informed Consent

Anonymous vs Anonmised Data

A review of international policy documentations revealed a lack of consistency over terminology and standards. Phillips and colleagues (2017) reviewed 22 policy documents covering both international- (e.g., the European Union) and national-level (e.g., Australia, Canada, the UK and the USA) directives on research ethics.

harmonisation of terminology (M. Phillips & Knoppers, 2016)

Technological advancement has made is more difficult to ditinguish between anonymous and anonymized due to the increasing difficulty in achieving anonymity (Canadian Tri-council, 2018).

Secondary Data Analysis

Necessity

Good science must enable falsifiability by opening its data for scrutiny. Secondary analyses reinforce open science enqiry by replicating, reanalysing and evaluating prior results (Hedrick, 1985).

Advancement in understanding of the ætiology of diseases, for example, often occurred through secondary analyses of medical records that were not collected with the intention of making such a causal inference (Dale et al., 1988).

Reuse of data sets promotes positive externality to society through its cost-effectiveness and convenience. Since Norwegian residents collectively finance the compilation of registry data through taxation, such information shall remain public property in principle (Davey Smith, 1994). Secondary analyses using registry data therefore serve to maximise social benefits through additional learning, knowledge and insight for the betterment of social well-being. Additionally, secondary data analyses also serve to reduce harm to society. This is achieved by reducing the impact on the larger population by involving a smaller number of research participants and subjecting them to a smaller number of tests while a significant mutiple of the original test subjects benefit from the resulting scientific inferences at zero additional costs (Law, 2005). Lastly, since an enhanced methodology is one primary mechnism for reducing harm, the reemployment of piror data sets and studies assists subsequent projects with more targeted research questions and more purposeful analysis strategies (Davey Smith, 1994).

Special Considerations

Power imbalance between the researchers and participants dominates many ethical debates. Obtaining informed consent for secondary ressearch is never truely voluntary due to the foot-in-the-door effect (Freedman & Fraser, 1966) such that participants are vulnarable to giving away consent to subsequent projects after agreeing to the original study (Law, 2005). Furthermore, Law (2005) observed that although it is the *participants*, not the researchers, interpretation of non-disclosure of personal data that all ethical considerations prioritise, the former is still under the influence of the latter while making such interpretation.

Conclusion

The secondary analyses of existing data sets provides many exciting opportunities for the development of new knowledge. Advancement in technology has so

greatly enabled the dissemination and sharing of previously fragmented research data that optisim such as "we have the means, for the first time in our history, to begin putting together the full picture of human behaviour" (Johnson & Sabourin, 2001, p. 212) arose.

References

- Canadian Tri-council. (2018). Ethical conduct for research involving humans. Canadian Institutes of Health Research; Natural Sciences and Engineering Research Council of Canada; Social Sciences and Humanities Research Council. https://ethics.gc.ca/eng/documents/tcps2-2018-en-interactive-final.pdf
- Dale, A., Arber, S., & Procter, M. (1988). Doing secondary analysis: A practical guide.

 Routledge.
- Davey Smith, G. (1994). Increasing the accessibility of data. *British Medical Journal*, 308, 1519–1520. https://doi.org/10.1136/bmj.308.6943.1519
- Freedman, J. L., & Fraser, S. C. (1966). Compliance without pressure: The foot-in-the-door technique. *Journal of Personality and Social Psychology*, 4(2), 195–202. https://doi.org/10.1037/h0023552
- Hedrick, T. E. (1985). Justifications for and obstacles to data sharing. In S. E. Fienberg, M. E. Martin, & M. L. Straf (Eds.), Sharing research data (pp. 123–147). National Academies Press. https://doi.org/10.17226/2033
- Johnson, D. H., & Sabourin, M. E. (2001). Universally accessible databases in the advancement of knowledge from psychological research. *International Journal of Psychology*, 36(3), 212–220. https://doi.org/10.1080/00207590043000081
- Law, M. (2005). Reduce, reuse, recycle: Issues in the secondary use of research data.

 IASSIST Quarterly, 29(1), 1–6. https://doi.org/10.29173/iq599
- Phillips, A., Borry, P., & Shabani, M. (2017). Research ethics review for the use of anonymized samples and data: A systematic review of normative documents.

 Accountability in Research, 24(8), 483–496.

 https://doi.org/10.1080/08989621.2017.1396896
- Phillips, M., & Knoppers, B. M. (2016). The discombobulation of de-identification.

 Nature Biotechnology, 34 (11), 1102–1103. https://doi.org/10.1038/nbt.3696