

Job Description

Job Title:	Data Analyst
Department:	COMPASS, School of Public Health and Health Systems
Reports To:	Program Manager
Jobs Reporting:	N/A
Salary Grade:	USG 9
Effective Date:	February 2022

Primary Purpose

The Data Analyst collaborates with research team leads, research partners, and graduate students to lead the analyses associated with COMPASS (Cannabis use, Obesity, Mental health, Physical activity, Alcohol use, Smoking, Sedentary behaviour) study data and contribute to the writing of peer reviewed publications and research reports resulting from the data. Additionally to the role of biostatistician, this position manages the various datasets (student-level, school-level, environmental) and oversees data and cleaning operations. The Data Analyst also provides data outputs for Knowledge Translation and Exchange activities and other reports.

Key Accountabilities

Data Analysis and Planning

- Plans and conducts relevant analyses involving sophisticated statistical methods (e.g., multi-level modeling, longitudinal analysis, analysis with multiple measures and clustered data)
- Makes original contributions to research papers and reports both in the area of population health and in the development of analytical methods
- Uses various statistical packages (e.g., SAS, STATA, SPSS) to meet the needs of the analysis and stakeholders
- Uses statistical methods to contribute to the design of multi-centre studies using complex survey methods and/or longitudinal data across study types involving natural experiments
- Uses external data from a variety of sources (e.g. Statistics Canada), in combination with internal project data to prepare analyses and reports that address research questions
- Synthesizes quantitative and qualitative data at the student-level, school-level and environmental-level to inform evidence-based public health interventions
- Works with external stakeholders and collaborators to conduct data analyses
- Understands new methods for the analysis of natural experiments

Development and Management of Datasets

- Ensures that student-level, school-level and environmental data are accurate, consistent, properly maintained and shared in compliance with relevant privacy protection, confidentiality and other ethical principles
- Identifies and addresses data integrity/reliability issues and uses data cleaning processes to achieve required data quality standards
- Works with large data sets to perform data mining and complete statistical analyses
- Transforms, synthesizes, and cleanses data: identifies opportunities to reduce duplication and errors and to ensure consistency in data; identifies data integrity issues and proposes data cleansing processes to develop clear and consistent data quality standards

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- Applies data coding within online survey software (Qualtrics) and generates testing procedures to ensure structural database accuracy in advance of data collection
- Works with external stakeholders to provide data management and consultation

Knowledge Translation and Communication

- Provides data outputs and creates reports for knowledge translation and exchange activities with external stakeholders, including schools, school boards, public health units and other research groups
- Writes documentation reports to accompany the release of large data sets, including microdata user guides, public use microdata files, data codebooks
- Contributes to the writing of peer-reviewed scientific publications and technical reports
- Presents finding at scientific meetings
- Prioritizes and responds to ad hoc and routine data inquiries
- Prepares reports for Investigators, staff, external data users and stakeholders, including funders.
- Communicates clearly with external stakeholders

Task Organization and Prioritization

- Leads the analyses of data from several large and small projects involving various combinations of investigators and staff
- Demonstrates proficiency in managing competing priorities and time demands from multiple sources
- Oversees and assigns tasks to co-op students, graduate students and casual staff regarding data processing and database management activities

Consultation, Leadership and Student Mentorship

- Advises investigators, staff and graduate students regarding study design, data management and analysis
- Responds to questions of a statistical nature from external stakeholders
- Consults with external stakeholders and collaborators on data analysis plans and database management

**All employees of the University are expected to follow University and departmental health and safety policy, procedures and work practices at all times. Employees are also responsible for the completion of all health and safety training, as assigned. Employees with staff supervision and/or management responsibilities will ensure that assigned staff abide by the above, and actively identify, assess and correct health and safety hazards, as required.*

Required Qualifications

Education

- Master's degree in biostatistics or Master's degree in statistics with significant biostatistics focus

Experience

- Minimum 3-5 years' experience applying advanced statistical methods
- Specific experience performing longitudinal and multi-level regression analyses
- Previous data management, manipulation, interpretation and analysis experience
- Demonstrated experience working with large and complex data sets
- Experience communicating technical concepts to a non-technical audience
- Experience with technical report writing and writing for peer-reviewed scientific publications
- Experience managing the creation, cross-referencing and maintenance of datasets

Knowledge/Skills/Abilities

- Advanced proficiency in statistical analysis software such as SAS and/or R, including longitudinal and multi-level modeling
- Ability to work independently and as part of a team; ability to take initiative and be proactive

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- Advanced proficiency in Microsoft Excel
- Strong organizational skills and ability to meet deadlines
- Ability to perform data management and formatting for standard statistical software
- Strong verbal and written communication skills with statisticians and non-statisticians, with the ability to convey information to those with limited or no technical knowledge or framework
- Ability to apply, identify, and use, a combination of quantitative and qualitative research methods
- Ability to work on multiple analytical projects concurrently
- Initiative to acquire new skills and remain current with new developments as required

Nature and Scope

- **Contacts:** Internally, communicates with all employees in all groups and departments and at all levels to deal with, influence and motivate others, and to address potentially sensitive matters. Externally, communicates with project collaborators and other stakeholders to provide guidance and information on data use
- **Level of Responsibility:** Responsible for the accuracy of data submitted externally to peer-reviewed publications.
- **Decision-Making Authority:** Responsible and accountable for establishing the priorities of projects as assigned.
- **Physical and Sensory Demands:** Minimal exposure to disagreeable conditions typical of an office position exposed to stress and pressure associated with those responsibilities.
- **Working Environment:** Office-based academic environment.