COEXISTING WITH COUNTS: WHERE DO COUNTS STAND IN THE AGE OF RAW DATA?

The physical behaviour research community has long benefitted from ActiGraph counts and their role in compiling a body of evidence to better characterize and understand physical behaviours and health. Despite frustrations and criticisms with counts over the years, the debut of counts in an open-source format sparked surprise and curiosity among researchers, raising questions about the implications of this format in an era prioritizing raw data. This portion of the symposium explores the advantages and drawbacks of open-source counts and their relevance in the raw data age.

The physical behaviour assessment literature is saturated with methods for processing and analyzing counts data, which made open-source counts a welcome evolution for many users. One reason for this enthusiasm may be methodological adoptability which relates to accessibility, useability, and interpretability. For some users, these factors favor counts-based methods because of the ease of implementation. Conversely, the abundance of available counts-based methods makes data comparison challenging, even with the same outcome metric. However, there is also skepticism about the relevance of counts in the current physical behavior research landscape which emphasizes raw data methods. Additionally, current data collection protocols have largely shifted towards favoring wrist-worn devices for 24-hour behaviour analysis, where there are limited counts-based options available, especially in comparison to raw data methods with open-source and well-documented processes to facilitate their useability. Nevertheless, feasibility remains a pivotal factor for widespread adoption, regardless of the metric or outcome.

The transition to open-source counts presents an opportunity for comparison with existing data, as evidenced by several manuscripts in the special issue. This comparison allows the physical behaviour research community to select the most suitable data format for their specific use case or research question. Furthermore, it facilitates the simultaneous evaluation of data using various open-source metrics, which could potentially culminate with or promote the development of consensus guidance or recommendations. While this may not directly advance data standardization or harmonization efforts, the availability of open-source counts for integration into existing data processing pipelines is a promising step forward for the field.

The growing availability of and support for open-source methods for processing, analyzing, and interpreting physical behaviour data promotes transparency and furthers opportunities for data harmonization and standardization, even if only incremental. As the field continues to evolve, addressing useability concerns will be essential in maximizing the potential of open-source methods in advancing physical behaviour research.