



16th Annual Brain Injury Conference

February 9, 2024 | Marriott Downtown at CF Toronto Eaton Centre

Poster #: 3

Abstract Title: Merging arts and science: Creating infographics to raise awareness of sex and gender effects in traumatic brain injury

Author(s): Thaisa Tylinski Sant'Ana¹, Angela Colantonio¹, Tatyana Mollayeva^{1,2,3}

Organization/Affiliation: ¹KITE-Toronto Rehabilitation Institute – University Health Network; ²Dalla Lana School of Public Health University of Toronto; ³Rehabilitation Sciences Institute University of Toronto

ABSTRACT:

Abstract Theme: Mild - Moderate Brain Injury

Topic(s) of Interest: Knowledge Translation

Purpose of Project: Purpose: To develop an evidence-based infographic series on topics of sex and gender in traumatic brain injury (TBI) for patients and their circle of care.

Methods, Procedure, Results/Outcome, Conclusion: Methods: We employed a seven-phase iterative design process: (1) evidence syntheses and assessment of knowledge users' needs; (2) translation of evidence-based content into simple text and visuals; (3) creation of infographic prototypes; (4) analysis of internal stakeholders' feedback; (5) infographic refinement; (6) analysis of external stakeholders' feedback; and (7) optimization of infographics and dissemination to knowledge users.

Procedure: We followed principles of science communication and graphic design to create scientifically accurate and accessible content with actionable messages that met the needs of knowledge users. We incorporated feedback from internal and external stakeholders to ensure the material: (i) was visually appealing and engaging; (ii) enhanced understanding of topics of brain injury, sex, and gender; and (iii) presented information that reflects sex and gender diversity. Finalized infographics were uploaded to an open access platform and shared with knowledge users.

Results: We created seven infographics covering a variety of topics concerning sex and gender effects in TBI, including injury prevention, quality care, and intersectionality. Areas for improvement emerging from stakeholders' feedback concerned inclusive language and evidence reflecting gender diversity, key messages summary, and reduction of visual load. The feedback process prompted us to consult publications outside the TBI field to inclusively represent transgender, non-binary, and gender non-conforming experiences in the infographic series. We achieved an overall Flesch Reading-Ease Test score of 55.9, which corresponds to the reading level of a person with some high school education. We ensured color schemes met requirements of Web Content Accessibility Guidelines (i.e. contrast between text and background are sufficient for accessible readability, including for people with color vision impairments). Most knowledge users found the infographics to be useful, visually appealing, and helpful in understanding complex scientific topics.

Conclusion: Engaging knowledge users, experts in patient education, scientists, and artists during the design process promotes the development of knowledge translation materials that meet the needs of diverse knowledge users and reduce barriers to brain injury education.