VISUAL CULTURE AND BRAIN INJURY

AN ANALYSIS OF NEURO IMAGES

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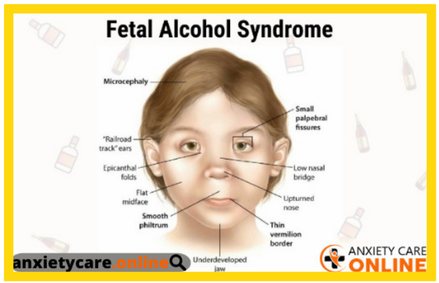

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Our project examines the use of infographics (images and text) to impart information about neurological conditions to the public. We explore how symptoms of brain injuries are translated into graphics, cartoons, and other images that get circulated in clinical spaces and social media and consider how effective such messaging is in sharing urgent information about brain health.

Using keywords, we searched for infographics focused on brain trauma from infancy to elderly care (including shaken baby syndrome, fetal alcohol spectrum disorder, intimate partner violence, veteran health, bicycle safety, and accidents) collecting a database of more than 650 images (in 8 different languages). We then analyzed a collection of the infographics (n=100) targeting patients and/or caregivers with brain trauma awareness, education, and other messaging. Infographics were analyzed for their use of text, shape, colour, illustration, affect, and messaging and for the underlying ideas within the medical narratives. For the purpose of this paper, we focus on three dominant themes that we identified across our sample of infographics: (1) brains are often portrayed as disembodied, (2) there is an emphasis on the responsibilization of health, and (3) mimicked closed or unidirectional dialogue.

(1) Clip art of the brain was common, with colour-coded diagrams of brain anatomy to map symptoms to their corresponding brain region. Conventional representations of moods and symptoms were pervasive, which included cartoon tropes of traumatic impact (lightning bolts), dizziness (circles/stars), and suffering (head in palms). These images were often disembodied, suggesting a person's physical or imagined injury is sequestered only within their brain tissue. As others have argued (Chamany 2011), this symbolic fractionating of the body may contribute to broader trends in biomedical research wherein the value of the subject is reduced to their bodily resources. The intractable link between brain and personal identity is also pervasive in popular culture (Vidal 2022). Most infographics were text-heavy and were written with a moderate to high level of medical and explanatory language.

(2) A risk-based approach to health was noted in many infographics. This may be a product of the impact of neoliberal governance, where self-regulation is ushered in as the best option to maintaining a healthy brain, and this may further disadvantage people with neurological impairments or social disadvantages. In this case, health risk is communicated through symbols (Lupton 2023). We noted the use of red font and capitalized letters to catch a reader's attention and raise alarm, specifically with large numerical statistics. Some cautionary phrasing had the affective thrust of being scolded, or of dismissing potential limits to a patient's agency. Research shows that different risk information formats result in varying attention to and feelings about medical advice (Ju et al. 2020). The consequence of further brain injuries was often framed in terms of a patient's ability to participate in societal labor. Military awareness posters conflated recovery and value with work. Echoes of this also appeared in fetal alcohol spectrum disorder materials.

(3) Most text-based materials organize content in a question/response format, mimicking a unidirectional dialogue between clinician and patient. Though claimed to be active-learning tools, medical infographics largely disseminate information in ways that standardize and anticipate a subject's questions before they ask them (Hernandez-Sanchez et al. 2021), which suggests a call for intentional, dynamic conversation. Comic-based artefacts, like those from the Model Systems Knowledge Translation Center (MSKTC), depict interactions among patients, support networks, and clinicians that model engaged participation in one's care. Graphic medicine scholarship notes that comics, mixing serious realities with a format typically associated with humor, reconceptualize healthcare to bring emotional and unspoken aspects of illness to the fore (Al-Jawad & Czerwiec 2019). Materials from MSKTC are noteworthy outliers that show how TBI/ABI infographics can invite multidimensional conversation, humanizing and personalizing what can otherwise be a frightening, alienating experience.

Our next steps include facilitating discussions between patients and neurologists, mediated by neuro-illustrators. These discussions might focus on portrayals of risk in medicine, emotional and affective consequences of living with an ABI, the temporality of healing, challenges communicating with health care providers, and more. We also seek further collaborations with different illustrators, as a multiplicity of formats of infographics are needed to match the variation across patients with brain injuries.

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