PhAB: Barriers to and facilitators of physical activity in cancer patients with brain tumours in Wales and Bangladesh

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Summary:

Although primary brain tumours (BTs) represent only 2% of all cancer deaths, they are associated with high rates of morbidity with debilitating effects on cognitive, physical, and social functioning. For patients with high grade gliomas (HGG), median survival is 12 months and treatment toxicities add to disease-related neurological and physical deficits. The palliative rehabilitation of this patient group is therefore complex and challenging.

Exercise has been increasingly recognized as a safe, feasible, and beneficial supportive therapy for cancer patients both during and after the end of adjuvant therapy. Results from several randomized trials have provided promising preliminary evidence that exercise has a positive effect on a broad range of debilitating symptoms associated with a cancer diagnosis and subsequent treatments, culminating in clinically meaningful improvements in functional capacity and overall quality of life. Exercise may also be a particularly efficacious intervention to address a number of major concerns in patients diagnosed with neurologic malignancies.

However, there is very limited knowledge available about the specific physical activity interests and preferences of HGG patients, with published studies limited by small sample sizes and participant heterogeneity. Given the rehabilitation needs of this patient group, and in light of evidence of physical activity benefits in other cancers, more well designed, patient focused studies on the potential benefits of structured physical activity as part of multidisciplinary rehabilitation in HGG patients are needed. To underpin the design and implementation of such interventions, a better understanding of the factors that influence behavioural intent and maintenance of activity from both patients' and carers' perspectives is necessary.

Aims:

The main objective of the study is to have a better understanding of the barriers to and facilitators of taking part in physical activity or exercise session among adult high-grade glioma patients in Wales and Bangladesh. Cultural differences and influences over their perceptions to barriers and preferences will also be explored.

The specific objectives of the study are:

- To understand the knowledge of brain-cancer patients on the benefits of physical activity
- To identify the barriers that these patients may have and the opportunities that can be created to promote physical activity among them
- To explore how they define an appropriate physical activity intervention for them
- To investigate if there is any difference in the perception of barriers and opportunities between the patients in Bangladesh and patients in Wales.

Recruitment: Forty participants will be recruited across two sites.
Sites: Velindre Cancer Centre, Cardiff, Wales; Bangladesh Institute of Neuroscience and Hospital, Dhaka, Bangladesh.

Progress:

Ethics approval for the Welsh site was obtained in May 2020, however, recruitment was suspended between June and August 2020. The goal is to recruit 10 HGG patients and 10 carers, no participants have been recruited to date. In light of the recruitment delays due to the Covid-19 pandemic, the study has been granted a 6-month extension and will now close on 30 September 2021.
Ethics approval for the Bangladesh site was obtained in October 2019. Data collection was carried out between December 2019 and June 2020. Resource constraints and lockdown in Bangladesh disrupted data collection at the recruitment site in Dhaka, where the research assistant was able to conduct a total number of 8 interviews (7 patients, 1 carer). These interviews are currently being analysed.

Sponsor: Cardiff University

Ethics approval: Wales REC3/HRA and Health and Care Research Wales (HCRW) Approval (Ref:20/WA/008); Ethical Review Committee of the Bangladesh Institute of Neuroscience and Hospital (Ref: ERC-NINS letter number:61).