

**PhD research: What is the impact of living with a moderate to severe traumatic brain injury and how can co-design of a resource with moderate to severe traumatic brain injury survivors, expert clinicians and professional stakeholders be achieved?**  
**Karen Saunders (PhD Doctoral Student), Centre for Health Services Studies, University of Kent, UK**

**Background:** Regional data collected recently shows that the number of hospital in-patient admissions for traumatic brain injury (TBI) in Kent and Medway increased over a 3 year period from 3645 in 2016 to 4295 in 2019 (1). This data likely represents the cases of relatively more severe TBI (sTBI). This regional increase in incidence is a key driver for this research because an increased number of admissions for TBI in Kent and Medway means that there will be more survivors, confronted by health challenges in the longer term, who will need to access health and care support services as a direct result of their TBI. Also, the latest national data figures published by Headway UK (a national charity) show that Head Injury hospital admissions have increased by 3% (2), which supports the need to consider how this emerging public health issue might be addressed. In addition, there is a gap in the national trauma care pathway (3) for TBI survivors regarding available accessible resources in the community in the long term and limited capacity to meet the ongoing rehabilitation needs of survivors (4). This research is presented in 2 stages:

**Objectives:**

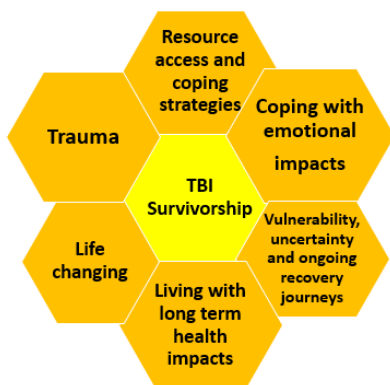
**Stage 1 – What is the impact of living with a moderate TBI or a severe TBI?**

**Stage 2 - How can co-design of a resource with moderate traumatic brain injury survivors, severe traumatic brain injury survivors, expert clinicians and professional stakeholders be achieved?**

**Materials and methods:** Stage 1: Qualitative: 10 interviews with survivors of moderate and severe TBI and 5 with primary care-givers. University of Kent Ethical Committee approval received on 21/1/2022 for Stage 1 and Ethical Committee approval received on 10/4/2024 for Stage 2.

**Stage 1 Results:** Data analysis identified 7 themes with a unifying thread of TBI survivorship: Trauma and survivorship; Life changing; Long term health impacts; Resource access, coping strategies and support networks; Vulnerability, uncertainty and ongoing recovery journeys; Non-visible disabilities and stigma; Beyond survivorship-achievements and aspirations (See Figure 1). An eighth theme collated participant ideas for the co-design of a potential resource in stage 2.

Figure 1: Conceptual model of TBI survivorship



**Stage 2 Co-design process**

**4 online focus group workshops over 4 month period:**  
**Workshops 1, 2, 3: 5 participant survivors of moderate and severe TBI and 1-2 co-facilitators. Workshop 4: 5 participants: Consultant physician experts and brain injury charity professional managers.**

- **Outputs:** Thematic analysis of the Stage 2 process; reflective analysis of enablers and challenges of process (researcher and co-facilitator); blueprint outline of what the chosen co-designed resource for TBI survivors would look like with input from clinician and professional stakeholders, reflective evaluation of the co-design experience from all participants, further refinement and development of the Impact and Implementation frameworks for TBI survivors in Kent and Medway, shared celebratory co-design event

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