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### Predictors and indicators of disability and quality of life 4 years after a severe traumatic brain injury. A Structural Equation Modelling analysis from the Paris-TBI study



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**Objective** To assess the predictors and indicators of disability and quality of life four years after a severe traumatic brain injury (TBI), using a Structural Equation Modelling (SEM). SEM is a multivariate approach permitting to take into account the complex inter-relationships between individual predictors, in order to disentangle factors which have a direct or indirect relationship with the dependant variable.

**Methods** The Paris-TBI study is a longitudinal inception cohort study of 504 patients with severe TBI in the Parisian area [1]. Among 245 survivors, 147 patients were assessed four years post-injury. Two outcome measures were analysed separately using SEM: the Glasgow Outcome Scale-extended (GOS-E) [2], which is a global measure of disability after TBI, and the QOLIBRI, a disease-specific measure of quality of life after TBI [3]. Four groups of variable were entered in the model: demographics; injury severity; psychological and cognitive impairments; somatic impairments.

**Results** The GOS-E was directly significantly related to all four groups of variables (age, gender, severity of injury, psycho-cognitive and somatic impairments). Education duration had an indirect effect, mediated by psycho-cognitive impairments. In contrast, the QOLIBRI was only directly predicted by psycho-cognitive impairments. Age and somatic impairments had an indirect influence on the QOLIBRI, via psycho-cognitive impairments.

**Discussion/Conclusion** Disability and quality of life were directly influenced by different factors. While disability appeared to result from an interaction of a wide range of factors, including demographics, injury severity, psycho-cognitive and somatic deficiencies, quality of life was solely directly related to psycho-cognitive factors. Other factors, such as age and somatic impairments only had an indirect effect.

**Keywords** Traumatic brain injury; Disability; Quality of life

**Disclosure of interest** The authors have not supplied their declaration of conflict of interest.

**References**

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### Functional outcome in traumatic brain injury in Tunisia



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**Introduction** Traumatic brain injury (TBI) occurs mainly in young adults in full swing. The objective of this work is to specify the functional outcome of patients with TBI sequelae.

**Methods** We included adult patients who were hospitalised between January 2009 and December 2013 for the management of TBI sequelae. We excluded patients with a history of neurological or psychiatric disorders before the TBI. We contacted these patients in an attempt to clarify their current functional status. For each patient we stated: the functional independence measurement (FIM), the severity of disability based on the Glasgow Outcome Scale (GOS). The motor part of the Canadian neurological scale was used to evaluate motor impairments.

**Results** 27 patients were included. 89.3% of our patients were male. The mean age was 34.6 (range: 19 to 66 years). The TBI was severe in 19 cases and moderate in 8 patients. The average duration of post-traumatic coma was 38.7 days. Initial FIM was 66.4/126. The overall assessment of disability by the GOS found two vegetative states; 9 patients had moderate disability and 16 patients had severe disability. A motor impairment was found in all these patients. Only one patient had resumed his previous occupation; 2 had resumed a professional activity with adaptation of the workplace; and 3 others were following appropriate training.

**Conclusion** The socio-professional reintegration remains a difficult goal to achieve, due to neuropsychological disorders in addition to orthopaedic sequelae which often causes neuro dependency and disability. However, it should optimise the residual functional capacity whenever the possibility of a life plan is offered to the patient.

**Keywords** Traumatic brain injury; Evaluation; Evolution

**Disclosure of interest** The authors have not supplied their declaration of conflict of interest.

**Further reading**

Mailhan L. Quality of life after severe head injury. *Psychol Pract* 2005;11:343–57.

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### Evolution of the psychological processes and quality of life in adults with brain injury participating in Unit for Evaluation, Training and Social and Vocational Counselling (UEROS-Aquitaine): A preliminary study



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**Introduction** Brain injuries generate real difficulties in social and professional reintegration. In response to these concerns, Units for Evaluation, Training and Social and Vocational Counselling (UEROS) have been developed. Our research aims at studying