

A Predictive Model of Resilience Among Family Caregivers Supporting Relatives with Traumatic Brain Injury (TBI) in Australia: A Structural Equation Modelling Approach

Malcolm Anderson¹, Grahame Simpson^{2,3}, Maysaa Daher^{2,4}

¹Avondale College of Higher Education, Wahroonga, Sydney, Australia, ²Brain Injury Rehabilitation Research Group, Ingham Institute for Applied Medical Research, Liverpool, Sydney, Australia, ³Liverpool Brain Injury Rehabilitation Unit, Liverpool Hospital, Sydney, Australia, ⁴Brain Injury Rehabilitation Directorate, Agency for Clinical Innovation, NSW Health, Liverpool, Sydney, Australia

Objectives: Developing a comprehensive understanding of resilience in family caregivers supporting relatives with TBI is important for mental health promotion, yet resilience has been vastly understudied compared to deficits and vulnerability based research. In response a paradigm shift into family research is underway in the field of rehabilitation, with a new emphasis on investigating positive adaption rather than psychological vulnerability among family caregivers of people with TBI. In the current study, a model based on previous empirical research and resilience theory was devised to examine the predictive and mediating relationships among caregiver resilience, personality, coping, self-efficacy, hope, social support and the outcome variables of caregiver burden and psychological adjustment among family members caring for relatives with TBI.

Method: This study used an observational cross-sectional design of family members (n = 131) of relatives with severe TBI (duration of posttraumatic amnesia > 1 day), recruited from 6 specialist rehabilitation services in New South Wales and Queensland, Australia. The study battery comprised the Connor-Davidson Resilience Scale, Eysenck Personality Questionnaire, Ways of Coping Questionnaire, General Self-Efficacy Scale, Herth Hope Scale, Medical Outcome Study Social Support Survey; and four measures of psychological adjustment including: Caregiver Burden Scale, Mental Health sub-Scale-SF36, General Health Questionnaire, and Positive and Negative Affect Scale. Structural Equation Modelling (SEM) was used to test the hypothesised model.

Main Results: The results showed the usefulness of adopting SEM to study resilience in family caregivers supporting relatives with TBI. The model as a whole fitted the data very well, as indicated by the goodness-of-fit indices ($\chi^2 = 58.521$; $p = 0.166$; NFI = 0.934, IFI = 0.989, CFI = 0.998 and RMSEA = 0.39). A substantial amount of variance (63%) in resilience was accounted for in the model by the joint influence of self-efficacy, coping strategies (problem-focused coping), and personality traits (neuroticism, extraversion) respectively. In terms of family caregiver outcomes, resilience had a direct effect on positive affect in caregivers. Resilience also played the role of a protective factor in relation to two variables associated with caregiver vulnerability. It had an indirect association with caregiver burden mediated through social support. In addition, resilience, in combination with self-efficacy, had a direct effect on hope, which, in turn, was associated with positive mental health among caregivers.

Conclusions: This is the first study to test a model of resilience in family caregivers of relatives with TBI. The research identifies resilience as a key factor importantly involved in psychological adjustment of family caregivers. The clinical significance of these findings include the possibilities that a focus on building resilience could contribute to improved hopefulness and other positive caregiver outcomes.