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Is Helping Really Helping? Health-Related Quality of Life after TBI Predicting Caregiver Depression Longitudinally in Latin America



Chimdindu Ohayagha¹, Paul B. Perrin¹, Mickeal Pugh, Jr.¹, Yaneth Rodriguez², Silvia Olivera³, Maria Cristina Quijano⁴, & Juan Carlos Arango-Lasprilla^{5,6,7}



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Introduction

- Traumatic Brain Injury (TBI) is one of the most significant contributors to morbidity and mortality globally (Bryant et al., 2010) and in comparison to other regions of the world, the effects of TBI are especially severe in Latin American countries.
- Many individuals with TBI have difficulty functioning autonomously, requiring ongoing support from caregivers to manage their rehabilitative needs.
- Studies have documented depression as one of the primary mental health outcomes in TBI caregivers, revealing that functional and psychosocial sequelae of TBI predict emotional well-being of caregivers (Harris & Hamish, 2000).
- Previous research examining the mental health of caregivers and the health-related quality of life (HRQoL) of people with TBI have primarily been in the US (Sander et al., 2012).
- Very little research has been conducted to uncover the unique relationships between HRQoL of people with TBI and caregiver mental health longitudinally, or in low-middle

Study Aims

- To evaluate how HRQoL after TBI predicts caregiver depression over the first 4 months after injury in two countries and three data collection sites in Latin America.
- To discuss culturally appropriate mental health services for caregivers and avenues to address caregiver mental health during the rehabilitation process.

Method

Participants

- A sample of 109 caregiver-TBI patient dyads were recruited from three acute hospitals in: Mexico City, Mexico, Cali and Neiva, Colombia.
- Data were collected before hospital discharge and at 2 and 4 months after discharge, either in the acute hospital setting or in the homes of individuals with TBI and caregivers.

Main Outcomes Measures:

- Short Form Health Survey (SF-36; caregiver): Spanish version
 - Assesses eight health concepts: physical function, role-physical, bodily pain, general health, energy/vitality, social function, role-emotional, and mental health
- Patient Health Questionnaire-9 (PHQ-9; TBI patient)
 - Assesses depressive symptoms

Analysis

- Three multiple regressions were conducted to examine which aspects of patient HRQoL at each of the time periods predicted caregiver depression at the same time periods.

Results

- At baseline, the overall model significantly predicted caregiver depression, $F(8, 105) = 2.62, p = .012, R^2 = .18$. Only Patient mental health, $p = .021, \beta = -.34$ was a significant unique predictor.
- At 2 months, the overall model significantly predicted caregiver depression, $F(8, 101) = 3.21, p = .003, R^2 = .22$. Only patient mental health, $p = .016, \beta = -.36$, was a significant unique predictor.
- At 4 months, the overall model predicting caregiver depression was significant, $F(8, 98) = 2.70, p = .010, R^2 = .19$, and no factors uniquely predicted caregiver depression, all $ps > .05$.

Results (Cont.)

Baseline		
Predictor	Beta	p-value
PT Physical Functioning	-0.017	0.894
PT Role Limitations: Physical	0.167	0.169
PT Role Limitations: Emotional	-0.160	0.195
PT Vitality	0.138	0.351
PT Mental Health	-0.339	0.021
PT Social Functioning	-0.054	0.675
PT Pain	-0.196	0.111
PT General Health	0.054	0.664

2 months		
Predictor	Beta	p-value
PT Physical Functioning	-0.129	0.300
PT Role Limitations: Physical	0.269	0.043
PT Role Limitations: Emotional	-0.134	0.346
PT Vitality	0.019	0.898
PT Mental Health	-0.364	0.016
PT Social Functioning	-0.176	0.174
PT Pain	-0.034	0.766
PT General Health	0.177	0.145

4 months		
Predictor	Beta	p-value
PT Physical Functioning	0.011	0.937
PT Role Limitations: Physical	0.014	0.926
PT Role Limitations: Emotional	-0.174	0.242
PT Vitality	-0.080	0.630
PT Mental Health	-0.200	0.236
PT Social Functioning	-0.144	0.306
PT Pain	0.004	0.973
PT General Health	0.054	0.703

Discussion

- Results suggest that TBI patient HRQoL can predict caregiver depression among Latin American caregivers before and during the first 4 months after hospital discharge.
- Across all three time points, caregiver depression was significantly predicted by patient HRQoL.
- These findings suggest that within the cultural framework in Latin America, there is a strong relationship between functional and psychological impairments after TBI and depression in caregivers.
- The results highlight the importance of uncovering these relational distinctions and may infer early detection of mental health needs and psychological intervention considerations for Latin American caregiver.
- Acute TBI rehabilitation services in Latin America, and potentially in other similar global regions, should include depression treatment for caregivers, particularly if the individual with TBI has mental health issues themselves.

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