Social Problem Solving Among Individuals with TBI: Relationships with QOL, Executive Functioning, and Integration

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Abstract

Objective: Traumatic brain injuries (TBIs) affect millions of Americans each year, and have significant human and economic costs. Executive functioning and social problem solving (SPS) are known to impact clinically-relevant outcomes among patients who have experienced mild TBIs. The purpose of the present study was to examine these relationships in a sample of individuals with severe TBIs. We tested the relationship between SPS and a specific clinical outcome (quality of life), and whether SPS mediated the relationship between executive functioning and community integration (a second outcome).

Design: Individuals with severe TBIs (N=35) were recruited from a day treatment center and participate in a brief assessment. Participants completed the following measures: Wisconsin Card Sorting Task (executive functioning), Social Problem Solving Inventory Revised-Short Form, Community Integration Questionnaire, and the WHO Quality of Life-BREF. Hierarchical regression analyses were used to test the hypotheses.

Results: As hypothesized, participants who scored higher in social problem solving abilities reported significantly higher levels in their quality of life (F[3,33] = 7.66, p<.001). However, social problem solving did not appear to mediate the relationship between executive functioning and community integration (F[1,33] = 0.35, p=.585).

Conclusions: The results of this study supported the hypothesis that social problem solving is positively correlated with quality of life in patients who have suffered a TBI. Rehabilitation programs for severe traumatic brain injury might benefit from considering the effect social problem solving orientation and style might have on the quality of life of their patients.

Executive Functioning

Executive dysfunction has been repeatedly documented in traumatic brain injury (TBI), and is reported as one of the more common difficulties facing this population (Bamdad, Ryan, & Wardan, 2003). Deficits in executive functioning (i.e., the integration of several cognitive skills required to adapt to novel situations and pursue life goals; Lezak, 1982) limit an individual’s ability to modify behavior to suit environmental demands.

Executive dysfunction thus creates a major obstacle to the development of independent living skills and community re-entry, and has been implicated in poor social outcomes following a brain injury — specifically, difficulty maintaining the work force (Tate, Fenelon, & Warden, 2003). Previous findings have shown that executive functioning remains a strong predictor of community integration (an indicator of quality of life).

Hypotheses

Hypothesis 1: SPS and Quality of Life. It was predicted that total social problem solving score (as measured by the Social Problem Solving Inventory-Revised, Short Form) would explain a significant amount of the variance in quality of life. We also predicted that total social problem solving score would be positively associated with quality of life, and that the specific component of negative problem orientation would be negatively correlated with quality of life. This hypothesis was tested using a hierarchical linear regression.

Hypothesis 2: Mediation Effect of SPS. It was hypothesized that total social problem solving score would mediate the relationship between executive functioning and community integration (as measured with the Wisconsin Card Sorting Task and community integration, as seen in previous research (Muscara, Catroppa, & Anderson, 2008)). This hypothesis was tested using the method proposed by Baron & Kenny (1986).

Hypotheses

1. SPS and Quality of Life (F[3,33]=7.66, p<.001).
2. As a result, gender and age were included as covariates in subsequent hierarchical regressions.

Conclusion

The results of this study support the hypothesis that social problem solving, or the ability to approach problems positively in a rational and planned manner, is positively associated with self-reported quality of life in patients who have suffered a TBI. Further, findings in this study did not replicate previous work (e.g., Muscara, Catroppa, & Anderson, 2008), as social problem solving did not mediate the relationship between executive functioning and community integration in our sample.

Conclusion

The Relationship Between Problem Solving and Quality of Life

The Results of a Study Showed That Social Problem Solving, or the Ability to Approach Problems Positively in a Rational and Planned Manner, is Positively Associated with Self-reported Quality of Life in Patients who have suffered a TBI. However, findings in this study did not replicate previous work (e.g., Muscara, Catroppa, & Anderson, 2008), as social problem solving did not mediate the relationship between executive functioning and community integration in our sample.