Mindset and effort in restoration of life role outcomes in post-traumatic conditions

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Abstract

In a group of 42 individuals who suffered physical and emotional trauma following motor vehicle or work related accidents a large percentage showed at the initial assessment significant exaggeration of their symptoms as indicated by various measures of symptom validity and effort. Nevertheless these results on Symptom Validity Measures did not correlate with the outcome from subsequent treatment. However a model comprised of RRI-RE positive subscales that initially included demographic and the FailGrp variables was significant (p < .05), retaining pFValues, pBeliefs, pTime, pControl, pDoctors & pAlexithymia as significant predictors. A similar model ultimately retained the negative RRI-RE subscales nFValues, nAcceptance, nResponsibility, nLoss, nIntegration, nStress and nChoice (p < .05). A model including RRI-RE full scales failed to reach overall significance but suggested that numerous scales might contribute to overall outcome as
defined by R-SOPAC total score (based on final loadings).

Introduction

Outcome in a rehabilitative setting can be influenced by a variety of emotional and psychological factors. These can be assessed and addressed in therapeutic interventions by rehabilitative psychologists in an effort to optimize results. Psychopathology is a frequent focus of assessment in many settings, especially given the ubiquitous medico-legal context surrounding injury. An alternative focus on patients’ strengths and weakness may be understood conceptually as an assessment of “resourcefulness” from an emotional and cognitive perspective. The authors have constructed a self-report assessment toward this end. The Resourcefulness for Recovery Inventory—Revised Edition (RRI-RE) comprehensively assesses a wide variety of traits and attitudes that can affect outcome following trauma. The present study sought to determine which RRI scales and subscales were
most closely associated with positive change and adjustment following trauma. A cursory examination of perceived social roles was also undertaken, along with an assessment of symptom exaggeration, for their potential contribution to outcome.
SUBJECTS & METHOD

From an initial pool of over 100 patients, a total of 42 ethnically diverse patients provided data for this study. Patients were assessed and treated by two rehabilitative psychologists following traumatic accidents in the Toronto metropolitan area. The sample was 55% female with a mean age of 45.1 years of age (SD=14.1) and 13.3 years of education (SD=3.2). A total of 37 patients (88%) were recovering from motor vehicle accidents (MVA), two suffered other work-related accidents and three others were not classified.

*Salmon’s (1998) Rehabilitation Checklist (RCL)* was used to assess the importance of prioritized social roles (such as work, social and family relationships, hobbies and recreation, learning/academic studies, etc), along with the *Resourcefulness for Recovery Inventory-Revised Edition* (RRI-RE) to comprehensively measure personal resourcefulness, using 18 bipolar scales measuring both negative and positive aspects of
resourcefulness (e.g., independence vs dependence, positive cognitions vs negative cognitions, etc.). As an outcome measure the Rehabilitation Survey of Problems and Coping (R-SOPAC, Salmon & Celinski, 2002) was used to assess self-reported changes in the level of disability and improvement in coping with symptoms.

To assess effort, a variety of Symptom Validity Tests (SVTs) were employed. Every patient was given the Test of Memory Malingering (TOMM) prior to treatment, and a variety of other SVTs were sparsely employed or available for analysis. These included the Computerized Assessment of Response Bias (CARB), recognition hits from the CVLT II and a newer measure called PsychoAssistant (PA). This computerized instrument employs iconic visual stimuli (presumably over-learned cross-cultural images) in a recognition paradigm that is followed by corrective feedback and retesting in both an uncomplicated and then a purportedly “difficult” condition using “distorted” images accompanied by random feedback. Excellent cross-validation of PA
has been reported against CARB, TOMM and the Word Memory Test (WMT). Due to the relative insensitivity of TOMM and incomplete data for the other effort measures, all available SVT data were used to create a grouping variable to reflect good versus poor effort: FailGrp (coded as a 0 or 1). For some measures (e.g., TOMM) borderline failure was not classified to more accurately assess effort.

The R-SOPAC was given before and after treatment, with change scores subsequently calculated for the 42 patients for whom both measures were available. Linear regression analysis with backwards elimination (to minimize suppression effects) was employed to predict changes in R-SOPAC total score in a variety of models employing other independent variables. Mean replacement was used as needed when list- or pair-wise variable selection produced invalid datasets for these analyses.
RESULTS

Exaggeration was present in this sample. Forty-six percent of patients (N=13) failed the first two TOMM subtests, while 54% (N=15) passed both and 14 (33%) showed uninterpretable TOMM results. On CARB 35% demonstrated poor effort, while 47% of those given the CVLT-II evidenced suspect effort. The rate of clear failure on PsychoAssistant was 37% in this sample. Effect size differences on raw scores for those passing and failing the CVLT were large (Cohen’s $d= .84$) and enormous for CARB ($d= 3.95$). The average effect size for failure rates was 58% across all SVTs, which aggregately accounted for an average of 34% of the variance in failure rate.

Exaggeration defined by FailGrp was weakly (negatively) associated with RRI-RE positive subscales, with the best relationships evidenced by pControl ($\eta^2 = 8\%$) and pAcceptance ($\eta^2 = 6\%$). However, only 22 cases were available for analysis and none reached statistical significance for any RRI-RE scales or subscales comparisons. Similar
nonsignificant results were observed with 21 cases assessed by the RCL, although its three primary social role scales nonetheless accounted for 10-18% of variance. The FailGrp variable was not associated with R-SOPAC total nor any of its three subscales (N=42).

A regression predicting R-SOPAC total change score using RCL social role scales was nonsignificant. However a model comprised of RRI-RE positive subscales that initially included demographic and the FailGrp variables was significant (p < .05), retaining pFValues, pBeliefs, pTime, pControl, pDoctors & pAlexithymia as significant predictors. A similar model ultimately retained the negative RRI-RE subscales nFValues, nAcceptance, nResponsibility, nLoss, nIntegration, nStress and nChoice (p < .05). A model including RRI-RE full scales failed to reach overall significance but suggested that numerous scales might contribute to overall outcome as defined by R-SOPAC total score (based on final loadings).
DISCUSSION

These results are promising but far from conclusive. Although limited in statistical power, they suggest that although symptom exaggeration was evident at the start of treatment, it did not seem to affect outcome as measured by R-SOPAC total score. After attempting to statistically control for it, regression analyses ultimately provided some support for various RRI-RE constructs.

It was not possible to assess the effect of social role self-perceptions on outcome in this design due to a lack of statistical power. It is possible that these variables are related to symptom exaggeration, based on our very limited sample. Our attempt to control for symptom exaggeration was also somewhat limited by the measures available and statistical power to some extent.

The results provide some support for use of the RRI-RE in rehabilitative psychology practices. They are in line with other studies of separate samples.