New outcome tools to measure physical, cognitive and emotional impacts of psychotherapy: Psychotrauma versus general adjustment improvement as spin-offs of comprehensive outcome measurement and shared community database

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Introduction

Brief overview

Rehabilitation Outcome Measurement System (ROMS) is a comprehensive clinical-vocational outcome measurement protocol based on well-validated measures in WSIB, MVA, and non-disabled employed and unemployed populations in Ontario. Multiple prior series have demonstrated the ability of varied ROMS measures to differentiate the spectrum of severity levels of psychopathology from no diagnosis to major affective, anxiety and somatoform disorders1,2,3. The current two studies assess one ROMS measure’s sensitivity to client status change over time in direct relation to cognitive behavioural psychotherapy in the context of motor vehicle accident (MVA) patient Physical, Cognitive and Emotional symptoms. The findings provide evidence both of treatment efficacy and ROMS dynamic outcome validity. As suggested by related literature, the second study’s findings also considered the relative efficacy of CBT in treating psychotraumatic versus mood and anxiety based disability maladjustment. Our private clinic, RTW Integrated Mental Health Management (RHIM), uses multidisciplinary assessment for treatment planning and third party entitlement purposes. Our rehabilitation psychologists both assess and treat physical rehabilitation patients with varying levels of functional status, symptom coping, and psychological diagnoses. A psychological private practice also participated.

Hypothesis/ Prediction

We predicted that the Rehabilitation Survey of Problems and Coping (R-SOPAC; 2002) would demonstrate most substantive score reductions (corresponding with improved symptoms) within the Physical Subscale and items, relative to the Physical and Cognitive Subscales and items in both series. In the second series we further considered the potential for cognitive-behavioural intervention to yield differential treatment effects relative to psychotraumatic versus general affective distress.

Method I

Administered the Rehabilitation Outcome Measurement System (ROMS) including the R-SOPAC which is a brief global measure of Physical, Cognitive and Emotional symptoms commonly found in physical and rehabilitation clients, consisting of 26 items, scaled on two distinct dimensions (perceived symptom intensity and perceived symptom coping). A subsample of 59 consecutive rehabilitation based psychological private practice treatment patients demonstrated good sensitivity of the ROMS. Measures were administered upon initial treatment assessment and again at discharge.

Method II

Participants were patients from RHIM (T1-T2, N = 40; T3, N=19) who presented for treatment-based or third-party psychological diagnostic assessment and treatment over a three-year time span. Referrals included motor vehicle accidents (MVA; majority), worker’s compensation and long-term disability contexts. Measures were administered upon initial treatment assessment, at the midpoint of the initial treatment plan (typically 6 to 10 weeks into treatment) and again at discharge.

Results I

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>ES (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Total</td>
<td>59</td>
<td>-43.00</td>
<td>0.79**</td>
</tr>
<tr>
<td>Problems Total</td>
<td>59</td>
<td>-23.08</td>
<td>0.73**</td>
</tr>
<tr>
<td>Coping Total</td>
<td>59</td>
<td>-17.78</td>
<td>0.59**</td>
</tr>
<tr>
<td>Emotional Overall</td>
<td>59</td>
<td>-31.12</td>
<td>0.74**</td>
</tr>
<tr>
<td>Physical Overall</td>
<td>59</td>
<td>-11.58</td>
<td>0.69**</td>
</tr>
<tr>
<td>Cognitive Overall</td>
<td>59</td>
<td>-7.06</td>
<td>0.52**</td>
</tr>
</tbody>
</table>

*Small effect size: r=0.20
**Medium effect size: r=0.50
***Large effect size: r=0.80

Results II

Physical Subdomain

We found statistical significance at the .05 level in the tired, and tension categories, and .05 and .01 significance in the hand category from Time 1 to Time 2 and Time 2 to Time 3.

Cognitive Subdomain

We did not find any significant improvement in the cognitive subdomain over time.

Emotional Subdomain

We found statistical significance at the .05 level in nightmares, nervousness, and self-confidence and at the .05 and .01 level in anger, upsetting, and driving categories. This suggests that the psychotrauma focus of the psychotherapy was effective in improving symptoms in the targeted areas.

Discussion

Implications

Findings support the R-SOPAC as a sensitive measure of psychotherapeutic outcome across two significant but distinct treatment samples relative to emotional, physical and cognitive symptoms. Substantial effect size (approaching .80-strong) was demonstrated especially for the Overall measure and Emotional subscale, and moderately for the Physical subscale which is important in rehabilitation and chronic disease management conditions. The suggested capacity of the R-SOPAC to discern between psychotherapeutic impact on trauma versus general distress symptoms is a promising and important feature. Although not shown in the more aggregated subscale measures here, the distinct Emotional (Physical and Cognitive) Coping subscale has a Satisfactory Coping benchmark reference to facilitate treatment discharge decisions in the face of continuing persistent symptoms. In this manner, coupled with role disability (RCL) and pre/post activities of daily living (R-ADLS) measurement, ROMS measured outcomes are highly functionally oriented.

Conclusions

This study informs: (a) The relevance and importance of distinct trauma/general distress measurement in mental health populations and (b) further validity analysis of a brief yet comprehensive outcome measurement tool. It may also lead support to importance of an accessible, shared database of mental health data, which is currently under development at the University of Toronto Scarborough, as a collective ROMS-based scientific and clinical data repository.

References