The Performance of Two Motivation Measures and Outcome after Alcohol Detoxification

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Abstract — Aims: The aims of this study were to investigate the performance of the treatment version of the Readiness to Change Questionnaire (RCQ[TV]) among individuals currently receiving alcohol detoxification and to develop a treatment version of the Treatment Readiness Tool (TReaT[TV]). Methods: A total of 549 patients (86% men) recruited from two detoxification units were interviewed close to treatment intake and followed up 12 months later. Confirmatory factor analyses and logistic regression analyses were conducted. Results: A modified nine-item version of the RCQ[TV] showed a good fit of the model (CFI = 0.95) and internal consistencies ranging between 0.49 and 0.91. Twelve months later, RCQ-Actors had an odds ratio of 1.95 (95% CI: 1.12–3.37) for being abstinent compared to Precontemplators/Contemplators. The development of the TReaT[TV] resulted in 15 items and 5 scales with a CFI of 0.97 ranging between 0.49 and 0.91. Conclusions: The psychometric properties were modest for the modified RCQ[TV] and good for the TReaT[TV]. Readiness to change and readiness to seek help should be assessed separately among treatment seekers.

INTRODUCTION

Motivation is one of the strongest predictors for treatment success (e.g. Project MATCH Research Group, 1997; Heather et al., 1999; Carbonari and DiClemente, 2000; Edens and Willoughby, 2000; Shen et al., 2000). A variety of measures have been used to assess motivation at treatment entry, e.g. motivation to change drinking and motivation for treatment. These two motivational aspects are not congruent (DiClemente, 1999; Freyer et al., 2005; Heesch et al., 2005), e.g. being ready to change drinking does not necessarily mean being ready to accept treatment and vice versa. This distinction has not been made with any consistency in the literature. One would think that they are differentially successful in predicting certain treatment outcomes, e.g. abstinence versus utilization of formal help.

To investigate this hypothesis, stages of change measures derived from the Trans-Theoretical Model of behaviour change (TTM, Prochaska and DiClemente, 1984; Velicer et al., 1998) appear to be feasible. According to the TTM, individuals go through five motivational stages of intentional behaviour change. They proceed from not thinking about change (Precontemplation), through being ambivalent about change (Contemplation), planning to change (Preparation), manifesting change (Action) and maintaining achieved change (Maintenance). The TTM, particularly its stages of change model, has been in the centre of scientific debate regarding the aims of substance abuse treatment (e.g. West, 2005; Callaghan et al., 2007). Measures that clearly differentiate between motivation to change and motivation for treatment could contribute to better understand motivation in treatment settings. One measure that allows the assessment of readiness to change without including treatment motivation items is the Readiness to Change Questionnaire—Treatment version (RCQ[TV], Heather et al., 1999). It allocates individuals to three stages of behaviour change, and being in Action is associated with better treatment outcome compared to being in Precontemplation or Contemplation. A related measure is the Treatment Readiness Tool (TReaT, Freyer et al., 2004) that allows the allocation of non-treatment-seeking individuals to the three early stages of help-seeking. Similarly, being in Preparation is associated with a higher chance of utilizing help than being in Precontemplation (Freyer et al., 2007). However, the TReaT was developed using a sample of non-treatment seekers. Accordingly, the later stages (Action and Maintenance) of treatment utilization were not considered in that version. To allocate treatment seekers to the stages of help-seeking, the measure requires additional items to enable allocation to Action and Maintenance.

The first aim of the study was to replicate the factorial structure of the RCQ[TV] in a detoxification sample. Although individuals receiving inpatient detoxification were included in the development of the RCQ[TV], they constituted the minority of the sample (8%) in contrast to those in long-term residential rehabilitation and in outpatient treatment. The second aim was to develop a treatment version of the TReaT (TReaT[TV]), by extending the measure by two further stages (Action and Maintenance). The final aim was to test the predictive validity of both measures and their discriminate predictive ability regarding abstinence and utilization of formal help 12 months after detoxification.

MATERIALS AND METHODS

Sample

The sample was recruited at two psychiatric alcohol detoxification units from two treatment facilities (Johanna-Odebrecht...
Stiftung Greifswald, Hanse-Klinikum Stralsund) located in Mecklenburg-Western Pomerania, Germany. The scheduled duration of detoxification was 2 weeks. The treatment included medication, groups, physical activity, introduction to self-help groups and individual therapy if indicated. Between October 2004 and July 2005, all 18- to 64-year-old inpatients were asked to consent to an interview. On each working day, the staff of the study was informed by the treatment staff about all new admissions. When possible, patients were approached on the day of their admission. Patients admitted on weekends or on holidays were approached on the next working day. Patients currently suffering from withdrawal symptoms were interviewed soon after regaining their functioning. The local ethics committee of the Ernst-Moritz-Arndt-University of Greifswald approved the study.

Patients treated for illicit drug use only, patients not cognitively or physically capable and patients with insufficient language skills were excluded from the study. A total of 697 admitted inpatients presenting for alcohol detoxification were eligible for the study. Of these, 79.9% (n = 557) gave informed written consent and were interviewed, 13.9% (n = 97) declined participation, 2.9% (n = 20) were discharged early or were transferred, and 3.3% (n = 23) did not participate due to other reasons. After data cleansing, eight participants were excluded from further study participation as they did not complete the baseline interview, resulting in a final sample of 549 cases for the following analyses. Sites 1 and 2 provided 297 and 252 cases, respectively.

For the 12-month follow-up, the participants were contacted by phone or personally to make an appointment for the interview, which was predominately conducted at their homes. Seventeen (3.1%) participants had died. Of the remaining 532 participants, 405 (76.1%) were followed up. The rest either refused further study participation (13.9%, n = 74), could not be reached (7.1%, n = 38), were too ill (2.1%, n = 11) or did not participate due to other reasons (0.8%, n = 4). The interview was conducted on average 391 days after baseline assessment (SD = 27, range: 347–457).

Measures
The study staff conducted standardized and computer-assisted interviews lasting 74 min (SD = 18, range: 40–155) at baseline and 60 min (SD = 21, range: 26–160) at follow-up. The interviews included measures on motivation, drinking, formal help-seeking, alcohol problem severity and demographics.

The RCQ[TV] (Heather et al., 1999) is a 15-item self-report measure that allocates treatment-seeking individuals to three stages of change: Precontemplation, Contemplation and Action. The RCQ[TV] was derived from the RCQ (Rollnick et al., 1992), which in contrast was developed for general hospital inpatients not currently seeking alcohol treatment. The 5-point Likert scale ranges from ‘strongly disagree’ (−2) to ‘strongly agree’ (2). Regarding the RCQ[TV], Heather et al. (1999) reported internal consistency ranging between 0.60 (Contemplation) and 0.70 (Action), and retest reliability ranging between 0.69 (Contemplation) and 0.86 (Action). The predictive validity of the RCQ[TV] was confirmed as individuals allocated to Action at initial assessment were more likely to show a positive treatment outcome after 6 months than those in the earlier stages (Heather et al., 1999). The English–German translation of the 10 items of the RCQ[TV] that are not part of the existing German RCQ (Hannöver et al., 2002) was done by the first author of this article. The German items were then checked and discussed with a native English speaker retranslating the items.

The Treatment Readiness Tool (TReaT, Freyer et al., 2004) is a 12-item self-report measure that allocates individuals to three stages of formal help-seeking: Precontemplation, Contemplation and Preparation. The instruction refers to formal help-seeking for alcohol-related problems including professional treatment and self-help groups. The item response scale is dichotomous (true/not true). Among general hospital inpatients with alcohol problems, the Cronbach’s alphas ranged between 0.80 (Contemplation) and 0.95 (Preparation), and the item-total-correlations within each scale ranged between 0.53 and 0.89. Adequate fit indices supported construct validity. To develop a version of the TReaT that is applicable among treatment seekers, 11 additional items were generated by three experts in the field of alcohol and TTM research. The items were expected to measure Action (e.g. I have been seeking help from others for a short time now, but only half-heartedly) and Maintenance (e.g. for more than a year now seeking and accepting help has been part of my life). For the purpose of this report, an English translation of the 11 items was discussed and reviewed by recognized researchers in the TTM research.

Abstinence 12 months after detoxification was assessed asking how often and how much alcohol was consumed in Month 12 after detoxification. Individuals that consumed alcohol at least once that month were regarded as non-abstainers (0) and those reporting no alcohol consumption that month were classified as abstainers (1).

Formal help-seeking was measured at baseline and at follow-up using 10 items. At baseline, lifetime utilization of help was assessed and at follow-up utilization of help in the past 12 months (since baseline) was assessed. According to Rumpf et al. (1998), 10 items asked for attendance in self-help groups, alcohol information centres, detoxification treatment, outpatient therapy group, inpatient treatment program and counselling by specialists (e.g. psychiatrist, psychologists). Individuals reporting to have utilized help at least once were classified as help seekers (1) and those who had not were classified as non-seekers (0).

Severity of alcohol dependence was measured at baseline using the Severity Scale of Alcohol Dependence (SESA, John et al., 2003). The SESA is a valid self-report instrument that consists of 28 items and seven scales covering the criteria of the alcohol dependence syndrome. The instruction refers to the last drinking episode. Four scales (narrowing of drinking repertoire, somatic withdrawal symptoms, drinking to avoid withdrawal and psychological withdrawal symptoms) use a 5-point Likert scale (never–daily) and three scales (increase of tolerance, extreme increase of tolerance and decrease of tolerance) use a dichotomous response scale (yes/no). For this study the total score was used as a covariate, with a maximum score of 100.

Data analysis
The analyses were conducted using SPSS 15.0 and AMOS 6 (SmallWaters Corp., Chicago, IL, USA). The large sample provided an ideal opportunity to confirm the factor structure underlying each measurement. The Confirmatory Factor Analyses (CFA) followed procedures recommended by Byrne (2001).
Table 1. Item characteristics of the RCQ[TV], n = 529

<table>
<thead>
<tr>
<th>Scale</th>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>$r_{it}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC 4</td>
<td>It’s a waste of time thinking about my drinking because I do not have a problem</td>
<td>-1.17</td>
<td>1.22</td>
<td>1.45*</td>
<td>0.93*</td>
<td>0.39</td>
</tr>
<tr>
<td>8</td>
<td>Giving up or drinking less alcohol would be pointless for me</td>
<td>-1.46</td>
<td>0.86</td>
<td>2.13*</td>
<td>5.02*</td>
<td>0.25</td>
</tr>
<tr>
<td>11</td>
<td>There is nothing seriously wrong with my drinking</td>
<td>-1.17</td>
<td>1.19</td>
<td>1.38*</td>
<td>0.75*</td>
<td>0.50</td>
</tr>
<tr>
<td>12</td>
<td>I am fairly normal drinker</td>
<td>-0.30</td>
<td>1.47</td>
<td>0.18*</td>
<td>-1.48*</td>
<td>0.35</td>
</tr>
<tr>
<td>13</td>
<td>There is nothing really need to change about my drinking</td>
<td>-1.32</td>
<td>1.07</td>
<td>1.83*</td>
<td>2.72*</td>
<td>0.49</td>
</tr>
<tr>
<td>C 2</td>
<td>I enjoy my drinking, but sometimes I drink too much</td>
<td>1.00</td>
<td>1.17</td>
<td>-1.28*</td>
<td>0.84*</td>
<td>0.24</td>
</tr>
<tr>
<td>3</td>
<td>Sometimes I think I should quit or cut down on my drinking</td>
<td>1.44</td>
<td>0.84</td>
<td>-1.87*</td>
<td>3.83*</td>
<td>0.17</td>
</tr>
<tr>
<td>6</td>
<td>My drinking is a problem sometimes</td>
<td>1.44</td>
<td>0.85</td>
<td>-2.20*</td>
<td>5.62*</td>
<td>0.25</td>
</tr>
<tr>
<td>14</td>
<td>I am weighing up the advantages and disadvantages of my present drinking habits</td>
<td>0.29</td>
<td>1.41</td>
<td>-0.48*</td>
<td>-1.11*</td>
<td>0.17</td>
</tr>
<tr>
<td>15</td>
<td>Sometimes I wonder if my drinking is out of control</td>
<td>0.91</td>
<td>1.25</td>
<td>-1.11*</td>
<td>0.16</td>
<td>0.31</td>
</tr>
<tr>
<td>A 1</td>
<td>I am trying to stop drinking or drink less than I used to</td>
<td>1.35</td>
<td>0.95</td>
<td>-1.90*</td>
<td>3.66*</td>
<td>0.48</td>
</tr>
<tr>
<td>5</td>
<td>Anyone can talk about wanting to do something about their drinking, but I am actually doing something about it</td>
<td>1.19</td>
<td>0.95</td>
<td>-1.51*</td>
<td>2.37*</td>
<td>0.57</td>
</tr>
<tr>
<td>7</td>
<td>I am actually changing my drinking habits right now (either cutting down or quitting)</td>
<td>1.45</td>
<td>0.88</td>
<td>-2.13*</td>
<td>4.89*</td>
<td>0.69</td>
</tr>
<tr>
<td>9</td>
<td>I have started to carry out my plan to cut down or quit drinking</td>
<td>1.43</td>
<td>0.90</td>
<td>-2.05*</td>
<td>4.40*</td>
<td>0.74</td>
</tr>
<tr>
<td>10</td>
<td>I am actively working on my drinking problem</td>
<td>1.51</td>
<td>0.80</td>
<td>-2.32*</td>
<td>6.59*</td>
<td>0.71</td>
</tr>
</tbody>
</table>

PC = Precontemplation, C = Contemplation, AC = Action, SD = standard deviation, $r_{it}$ = item-total-correlation, aSD = 0.106, bSD = 0.212, *significantly different from normal distribution, $P < 0.05$.

The first step involved fitting the rotating of four alternative models. The Null model is not proposed as a serious model, it rather provides a baseline against which the other models will be compared. It proposes that all items are independent, and no latent factors exist. The single-factor model that proposes a single latent factor will account for all correlations between the variables. The multiple-factor model proposes the existence of multiple correlated factors. The hierarchical model proposes the existence of multiple factors with one underlying second-order factor. Maximum likelihood estimation was applied to all four models. The $\chi^2$/df ratio and four goodness-of-fit statistics were computed: Comparative Fit Index (CFI), Standardized Root Mean squared Residual (SRMR), Normed Fit Index (NFI) and Adjusted Goodness-of-Fit Index (AGFI). In contrast to the RCQ[TV], the factorial dimensions of the TReaT[TV] had first to be explored using an exploratory factor analysis (EFA). Principal axis factoring and varimax rotation was used. The predictive validity of the RCQ[TV] and the TReaT[TV] was calculated using logistic regressions with abstinence and help-seeking as the criterion, respectively. In conformity with the quick method (Rollnick et al., 1992), individuals were allocated to the stages based on their highest scale score. In the case of between-scale ties, individuals are allocated to the one further along on the motivational process. In the case of zero scores on all three TReaT scales participants were assigned to Precontemplation. Sample differences were calculated using $t$- and $\chi^2$-tests. Cases with missing values were excluded listwise, resulting in 529 cases for the RCQ[TV] analyses and 512 cases for the TReaT[TV] analyses. Mean imputation by gender was applied for missing SESA values.

RESULTS

Sample description
Most of the participants were male (86.3%, n = 474) and the mean age of the sample was 42.9 years (SD = 8.7). The majority of the sample did not have an intimate partner (55.6%, n = 303), had 10 years or more of school education (56.3%, n = 308) and were job seekers (63.3%, n = 345). The mean score of the SESA was 48.2 (SD = 23.3), and had sought formal help for their alcohol problem in the past. Eighty-six percent (n = 472) of the participants reported that they were receiving alcohol detoxification on their own demand. The mean length of the detoxification treatment was 12.6 days (SD = 6.2, range: 1–42). Individuals at Site 2 were more severely dependent on alcohol than individuals at Site 1 (t$_{SESA}$ = 2.38, df = 480, $P = 0.018$), and their treatment took longer (t = 8.30, df = 472, $P < 0.001$). No other site differences were found. Follow-up participants and non-participants did not differ regarding any of these baseline characteristics. Also, no significant differences in dropout by site were found.

The RCQ[TV]

Factorial structure and item properties of the original RCQ[TV]. For the independence model (null model), a $\chi^2$-value of 2424.07 was obtained (df = 105, $\chi^2$/df = 23.09, $P < 0.001$). The single-factor model ($\chi^2$/df = 6.40, $P < 0.001$, CFI = 0.79, NFI = 0.76, AGFI = 0.80, SRMR = 0.09) and the hierarchical model for which all residual variances were constrained to be equal ($\chi^2$/df = 6.19, CFI = 0.80, NFI = 0.77, AGFI = 0.81, SRMR = 0.09) provided poor fits. Of all four models, the three-factor model provided the best fit, but it was still far from satisfactory ($\chi^2$/df = 6.09, CFI = 0.81, NFI = 0.78, AGFI = 0.81, SRMR = 0.08). Thus, the factorial structure of the RCQ[TV] could not be confirmed in a detoxification sample. We assumed that some of the items may not be as good as others in terms of suitability and clarity. For each item, skewness, kurtosis, corrected item-total-correlation and item difficulty were calculated (Table 1). None of the items were normally distributed.

Factorial structure and reliability of the revised RCQ[TV]. To improve the factorial structure of the RCQ[TV] we excluded those two items of each scale with the lowest item-total-correlations (items 1, 3, 5, 8, 12, 14). The revised three-factor model of the RCQ[TV] provided a better fit of the data.
individuals with complete data for the modified nine-item version of the RCQ[TV] (contemplation (0.72, 0.49 and 0.91 were obtained. Reliability coefficients of 0.62, 0.37 and 0.86. Using each scale ranged between: 0.37–0.49 (Precontemplation), 0.18–0.29 (Contemplation) and 0.69–0.78 (Action). Accordingly, the Cronbach’s alphas were 0.62, 0.37 and 0.86. Using the Spearman–Brown formula to correct for the length of test, reliability coefficients of 0.72, 0.49 and 0.91 were obtained.

RCQ[TV] stage and abstinence 12 months later. All individuals with complete data for the modified nine-item version of the RCQ[TV] (n = 538) were allocated to the stages: 2.2% Precontemplation (n = 12), 15.4% Contemplation (n = 83) and 82.3% Action (n = 443). Of these, 393 cases had complete follow-up data regarding abstinence. Dropout at follow-up was not differential by the RCQ[TV] stage (χ² = 0.36, df = 2, P = 0.83). There was a positive association between the stage of change and abstinence in Month 12 after detoxification (χ² = 8.70, df = 2, P = 0.013, Cramer’s V = 0.15). Half of the individuals initially in Action were abstinent (55.2%, n = 179) compared to 37.7% of the Contemplators (n = 23) and 25.0% (n = 2) of the Precontemplators. Controlling for site, age, gender and severity of alcohol dependence, a logistic regression analysis predicting abstinence in Month 12 after detoxification was conducted. Due to the small numbers of Precontemplators and Contemplators, both stages were collapsed. The analysis revealed that individuals initially in Action had a higher odds ratio (OR = 1.95, 95% CI: 1.12–3.37, P = 0.018) of being abstinent than Precontemplators/Contemplators. None of the covariates reached significance.

The TReaT[TV]

Factorial dimensions and item properties of the TReaT[TV]. Approximately 40% of the cases (n = 212) were randomly excluded from the EFA as a holdout sample for the CFA, resulting in a total of 300 cases for the EFA. No significant differences were found on measures of alcohol use or basic demographic characteristics between the EFA and CFA samples. With a criterion of eigenvalues ≥ 1.00, a five-factor solution was obtained. The five factors accounted for 62.4% total variance explained. Assignment of items to factors was based on their highest loading exceeding 0.30. Factors 1, 3 and 5 confirmed the three-factor structure of the original TReaT, with four items each and eigenvalues ranging between 1.00 (Precontemplation) and 6.94 (Preparation). Factor 2 had an eigenvalue of 4.31 and accounted for 19.6% of the total variance explained. This factor included all six items intended to measure maintenance. Factor 4 had an eigenvalue of 1.32 and accounted for 6.3% of the total variance explained. It included all five items intended to measure action.

Including all 512 cases, the item-total-correlations within each factor ranged between: 0.75–0.85 (Precontemplation), 0.52–0.70 (Contemplation), 0.81–0.88 (Preparation), 0.27–0.46 (Action) and 0.62–0.86 (Maintenance). For economic reasons, those items with the lowest item-total-correlation in each scale were excluded (items 1, 8, 12, 15, 17, 19, 20, 21); three items per scale were retained.

Factorial structure and reliability of the TReaT[TV]. The CFA was conducted using the remaining 15 items and the holdout sample of 212 cases. For the independence model a χ²-value of 2182.40 was obtained (df = 105, χ²/df = 20.79, P < 0.001). The single-factor model (χ²/df = 14.00, P < 0.001, CFI = 0.44, NFI = 0.42, AGFI = 0.44, SRMR = 0.17) and the hierarchical model for which all residual variances were constrained to be equal (χ²/df = 4.27, P < 0.001, CFI = 0.86, NFI = 0.83, AGFI = 0.75, SRMR = 0.21) provided poor fits. The five factor model depicted in Fig. 2 provided the best fit (χ²/df = 1.81, P < 0.001, CFI = 0.97, NFI = 0.94, AGFI = 0.88, SRMR = 0.06).

Using all 512 cases, skewness, kurtosis and corrected item-total-correlation were calculated for each of the 15 items (Table 2). The items were not normally distributed. The corrected item-total-correlations ranged between 0.38 and 0.92, and Cronbach’s alphas were 0.90 (Precontemplation), 0.82 (Contemplation), 0.92 (Preparation), 0.59 (Action) and 0.94 (Maintenance).

TReaT[TV] stage and help-seeking in the following 12 months. All individuals with complete data for the 15-item TReaT[TV] (n = 518) were allocated to the stages: 4.6% Precontemplation (n = 24), 4.1% Contemplation (n = 21), 51.4% Preparation (n = 266), 10.6% Action (n = 55) and 29.3% Maintenance (n = 152). Of these, 383 cases had complete follow-up data regarding help-seeking. There were slightly more individuals in the early TReaT[TV] stages among those that dropped out at follow-up compared to the participants (χ² = 9.32, df = 4, P = 0.054). A positive association between the TReaT[TV] stage and help-seeking in the 12 months following detoxification was found (χ² = 22.54, df = 4, P < 0.001, Cramer’s V = 0.24): 41.7% (n = 5) of the Precontemplators utilized help, followed by 64.7% (n = 11) of the Contemplators, 74.7% (n = 145) of the Preparators, 80.5% (n = 33) of the Actors and 89.9% (n = 107) of the Maintainers.

To test the TReaT[TV] stage as a predictor for future help-seeking, a logistic regression analysis was conducted. It controlled for site effects, age, gender, prior help-seeking
and severity of alcohol dependence. Precontemplators and Contemplators were collapsed. Maintenance was the reference category. The analysis revealed that in addition to prior help-seeking and severity of alcohol dependence, the TReaT[TV] stage was a significant predictor. Precontemplators/Contemplators had a significantly decreased chance of seeking help compared to individuals initially in Maintenance (OR = 0.17, 95% CI: 0.06–0.45, \( P < 0.001 \)). A non-significant trend in the same direction was found for Preparators (OR = 0.50, 95% CI: 0.24–1.03, \( P = 0.061 \)). No significant differences were found for individuals initially in Action.

**RCQ[TV] versus TReaT[TV]**

To rule out that both measures assess the same, between-scale correlations of the two measures and two multivariate logistic regression analyses were calculated. Pearson’s correlations between the parallel scales ranged between \( r = −0.03 \) (Contemplation) and 0.33 (Precontemplation). There was no significant correlation between RCQ[TV] Action and TReaT[TV] Action or Maintenance. A positive correlation (\( r = 0.19 \)) was found between TReaT[TV] Action and RCQ[TV] Precontemplation (Table 3).

The TReaT[TV] was tested as predictor for abstinence in Month 12 after detoxification (\( n = 378 \)) and the RCQ[TV] was tested as predictor for utilization of help (\( n = 398 \)). Covariates were included as reported above. In these analyses neither the TReaT[TV] nor the RCQ[TV] were significant predictors.

**DISCUSSION**

The study investigated the performance of two motivation measures that separately assess readiness to change (RCQ[TV]) and readiness to seek help (TReaT[TV]) in a detoxification sample. The psychometric properties were rather modest for a modified 9-item version of the RCQ[TV] and satisfactory for the new 15-item treatment version of the TReaT. Predictive validity was demonstrated for both measures. As expected, the modified RCQ[TV] predicted abstinence, whereas the

Table 2. Item characteristics of the TReaT[TV], \( n = 512 \)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness(^a)</th>
<th>Kurtosis(^b)</th>
<th>( r_{it} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>2  It’s nobody’s business what I do with my life</td>
<td>0.16</td>
<td>0.37</td>
<td>1.86(^*)</td>
<td>1.46(^*)</td>
<td>0.76</td>
</tr>
<tr>
<td></td>
<td>3  I do not think that other people can help me</td>
<td>0.15</td>
<td>0.36</td>
<td>1.96(^*)</td>
<td>1.86(^*)</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>4  I do not think treatment will work for me</td>
<td>0.13</td>
<td>0.33</td>
<td>2.25(^*)</td>
<td>3.06(^*)</td>
<td>0.83</td>
</tr>
<tr>
<td>C</td>
<td>5  Treatment may help but I’m not yet ready for it</td>
<td>0.23</td>
<td>0.42</td>
<td>1.31(^*)</td>
<td>−0.28</td>
<td>0.66</td>
</tr>
<tr>
<td></td>
<td>6  I eventually may want help but not now</td>
<td>0.24</td>
<td>0.43</td>
<td>1.22(^*)</td>
<td>−0.52(^*)</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>7  I’m uncertain about the need for treatment</td>
<td>0.19</td>
<td>0.40</td>
<td>1.56(^*)</td>
<td>0.43(^*)</td>
<td>0.65</td>
</tr>
<tr>
<td>P</td>
<td>9  I have decided to seek appropriate treatment</td>
<td>0.88</td>
<td>0.32</td>
<td>−2.39(^*)</td>
<td>3.71(^*)</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>10 I want to talk to somebody now about my problems</td>
<td>0.89</td>
<td>0.31</td>
<td>−2.54(^*)</td>
<td>4.49(^*)</td>
<td>0.87</td>
</tr>
<tr>
<td></td>
<td>11 I think I need help</td>
<td>0.89</td>
<td>0.31</td>
<td>−2.51(^*)</td>
<td>4.32(^*)</td>
<td>0.83</td>
</tr>
<tr>
<td>A</td>
<td>13 I have been grudgingly accepting help for a short time now</td>
<td>0.46</td>
<td>0.50</td>
<td>0.14</td>
<td>−1.99(^*)</td>
<td>0.42</td>
</tr>
<tr>
<td></td>
<td>14 For a short time now I have been accepting help but I have not</td>
<td>0.49</td>
<td>0.50</td>
<td>0.04</td>
<td>−2.01(^*)</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>16 I have been seeking help for a short time now but only half-heartedly</td>
<td>0.23</td>
<td>0.42</td>
<td>1.26(^*)</td>
<td>−0.42(^*)</td>
<td>0.42</td>
</tr>
<tr>
<td>M</td>
<td>18 I have been accepting help for a long time</td>
<td>0.36</td>
<td>0.48</td>
<td>0.57(^*)</td>
<td>−1.68(^*)</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>22 I have been accepting help for more than a year now</td>
<td>0.33</td>
<td>0.47</td>
<td>0.73(^*)</td>
<td>−1.47(^*)</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>23 For more than a year now seeking and accepting help has been part of my life</td>
<td>0.35</td>
<td>0.48</td>
<td>0.64(^*)</td>
<td>−1.59(^*)</td>
<td>0.92</td>
</tr>
</tbody>
</table>

PC = Precontemplation, C = Contemplation, P = Preparation, AC = Action, M = Maintenance, SD = standard deviation.
\(^a\)SD = 0.108, \(^b\)SD = 0.215, corr \( r_{it} \) = corrected item-total-correlation, \(^*\)significantly different from normal distribution, \( P < 0.05 \).
TReaT[TV] predicted formal help-seeking 12 months after detoxification.

In our sample, the factorial structure of the original RCQ[TV] could not be confirmed. Low corrected item-total-correlations predominately in the Contemplation scale suggested that single items did not work well. After dropping the two items with the lowest item-total-correlations from each scale, a better fit of the model was obtained. However, in contrast to Heather et al. (1999) the reliability and the item-total-correlations of the Contemplation scale were still unsatisfactory. We rule out that the discrepancy was caused by the translation of the RCQ[TV] into German, as it was checked and discussed with a native speaker. We assume that a combination of both the setting and the timing of assessment early in the process of detoxification may have caused the rather poor scale properties. The instability of patients undergoing detoxification, in particular early in treatment, may affect evaluation and readiness. Thus, the RCQ[TV] should be applied with caution among inpatients receiving detoxification. For the same reason, we restrict our conclusions regarding the predictive validity of the modified RCQ[TV] to having confirmed findings from previous studies that demonstrated a positive impact of readiness to change on treatment success (e.g. Project MATCH Research Group, 1997; Heather et al., 1999; Carbonari and DiClemente, 2000; Edens and Willoughby, 2000).

In accordance with the RCQ[TV], we also developed a treatment version of the TReaT[TV], which allows the allocation of individuals to the stages Action and Maintenance in addition to the three early stages. This amplification of the TReaT appeared and proved to be essential when allocating treatment seekers as opposed to non-treatment seekers to the stages of help-seeking. The factorial structure and the reliability of the TReaT[TV] were good. The weakest scale properties were found for the Action scale, which might be due to the complexity of the items.

Of the initial five action items, three items that express doubt about currently seeking help showed the best item-total-correlations and were retained for the scale. This confirms the assumption of the TTM that in the Action stage ‘... returning to the old pattern [e.g. refraining from seeking help] is often easier than sustaining a new pattern [e.g. seeking help]’ (DiClemente, 2003, p. 29). Individuals in Action still have some doubts about seeking help even though they are already doing so. The positive correlation with the Precontemplation scale of the RCQ[TV] possibly captures the ambivalence of the Action scale. Items identifying convinced actors are needed. The TReaT[TV] showed good predictive validity regarding future help-seeking. Maintainers were more likely to utilize help than Precontemplators/Contemplators. Thus, the measure may provide helpful information for stage tailored counselling to enhance motivation to seek after care.

In line with our underlying hypothesis (readiness to change and readiness to seek help are not congruent), low correlations between the parallel scales of both measures indicate that these measures are rather independent. Notably, these correlations were even lower than those reported for non-treatment seekers (Freyer et al., 2005). Furthermore, neither the TReaT[TV] was a significant predictor for abstinence nor was the modified RCQ[TV] for future utilization of help.

Regarding both measures, the vast majority of individuals receiving detoxification were allocated to the advanced stages (Preparation or higher). This may be due to the high proportion of individuals receiving detoxification on their own demand. In contrast to non-treatment settings, treatment settings require the RCQ[TV] to distinguish among the advanced stages, in particular when applying stage tailored interventions.

The limitations of this study include the insufficient numbers of Precontemplators and Contemplators that impeded the investigation of longitudinal differences between these two early stages. Furthermore, we solely relied on self-report. To get valid responses to scale items, the study staff postponed interviews when the participants obviously were under the influence. The treatment staff informed the study staff about the patients’ withdrawal symptoms and mental state.

Despite the limitations, this study separately investigated readiness to change and readiness to seek help and their differential impact on treatment success. As expected, treatment motivation was related to help-seeking, whereas behaviour change motivation predicted abstinence. Future research is needed to further identify differences in promising motivation patterns that predict treatment success and self-change among treatment seekers and non-treatment seekers.

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REFERENCES


