Development and validation of the
'Readiness for Therapy Questionnaire (RTQ)'

Abstract:	Background: Motivational factors are generally regarded as an important ingredient for change in therapy. However, there is currently a lack of available instruments that can measure clients' readiness for change in therapy. Aim: The objective of this paper was to create an instrument, readiness for therapy questionnaire (RTQ), which could measure clients' readiness for change. Method: The RTQ was created by researchers following analysis of themes drawn from a review of the literature and interviews with patients at the end of therapy. This included both people who completed therapy and those who dropped-out. As part of the standard assessment process, the RTQ was administered to 349 participants (69.6% female and 30.4% male. Mean age - 37.1; 90.5% Caucasian) who were patients at a psychological therapy service for common mental health difficulties. Result: An initial 12-item scale was reduced down to 6-items. This scale significantly correlated with post-therapy PHQ-9 and GAD-7 scores and changes in these scores across therapy. After controlling for baseline scores and demographic variables, a logistic regression showed that scores on this 6-item measure pre-therapy significantly predicted three outcome variables: completing therapy, being recovered on both PHQ-9 and GAD-7 post-therapy, and having a reliable change in both the PHQ-9 and GAD-7 post-therapy. However, ROC curve analysis showed the measure had poor sensitivity and specificity. Symptom severity did not have a significant impact on motivation to change. Conclusion: The RTQ is potentially a valid measure with useful clinical applications in treatment of common mental health difficulties.

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Conclusion: The RTQ is potentially a valid measure with useful clinical applications in treatment of common mental health difficulties.

Key words: Common Mental Health Difficulties, Motivation, Clinical Outcome, Attrition Rate, Assessment

Introduction

The concept of readiness for change has been known as part of assessing suitability for therapy, and adapting therapy for years (Geller et al., 2005; Geller & Drab, 1999; McConnaughy et al., 1983; Truant, 1999). Despite an anecdotal understanding of 'Whether a patient is ready to engage in therapy", few measures exist (Haggerty et al., 2014; Ogrodniczuk et al., 2009) and there is little research into associations between readiness and therapy outcomes. No specific measures are routinely used to measure this construct in psychological therapy services in the United Kingdom such as Improving Access to Psychological Therapies (IAPT) services which have been established across England, to provide NICE recommended psychological therapies for depression and anxiety disorders (Clark, 2011).

The Transtheoretical model (TTM) of change is a prominent theory that describes motivation for behaviour change. It has been applied to addiction literature (Prochaska et al., 1992)(Prochaska et al., 1992), smoking cessation (DiClemente et al., 1991)(DiClemente et al., 1991), exercise uptake (Marcus et al., 1992) and other problem behaviours (Prochaska et al., 1994).

Literature regarding the application of TTM to readiness for therapy typically focuses on more severe and enduring mental health problems such as eating disorders or addiction. Meta-analyses have yielded inconsistent results when generalising the TTM to readiness for therapy (Rosen, 2000). The use of the TTM to conceptualise readiness for therapy has also been criticised, highlighting that readiness for behaviour change and readiness for therapy are not synonymous constructs. Readiness for therapy is a more complex construct to measure than specific behaviour change (Ogrodniczuk et al., 2009). A review of meta-analyses found some clinically significant associations between stages of change and therapy outcomes (Norcross et al., 2011), again mostly focusing on populations with severe and enduring

mental health difficulties. Indeed, a measure has been developed specifically to measure the stages of change for those with a diagnosis of Anorexia Nervosa (Rieger et al., 2002) and for engagement in psychodynamic psychotherapy for severe depression or anxiety (Laaksonen et al., 2012).

The literature may focus more upon severe and enduring mental health difficulties with regards to readiness due to motivational interviewing techniques finding their roots within addiction treatments (Rollnick & Miller, 1995), thus perpetuating a gap in literature with regards to common mental health problems. Some trials have considered use of motivational interviewing techniques as a precursor to CBT, finding reduced rates of drop out in cases of severe anxiety disorders (Westra et al., 2016; Westra & Norouzian, 2018).

A possible utility of readiness measures include the predictive ability of engagement, or non-engagement with treatment. Current measures of readiness for therapy (Haggert et al., 2014; Ogrodniczuk et al., 2009) do not predict clinical outcomes or engagement with therapy. A semi-structured clinical interview designed to measure 'suitability' for short term cognitive therapies (Safran et al., 1986) have predicted therapy outcomes but not attrition from therapy (Renaud et al., 2014). In the addiction literature, treatment readiness has shown to be predictive of engagement, retention and attrition (Simpson, & Broome, 1998; Brogan et al., 1999). Reliability of current measurement scales have also been reviewed for use for those with dual diagnosis of mental health and addiction (CarloDiClemente et al., 2008; Nidecker et al., 2008). Similarly, attrition was modestly predicted by precontemplation and contemplation stages in those with severe mental health difficulties (Rogers et al., 2001). However, these were for vocational and educational courses, not therapy.

A key clinical considerations for a readiness for therapy measure is the length of the measure (Haggerty et al., 2014). In busy clinical environments the need for shorter measures is an important consideration, with existing measures of readiness for therapy being 20 items

long (Ogrodniczuk et al., 2009) or Safran et al.'s (1986) one hour long semi-structured interview. Additionally, previous literature indicates the usefulness of developing instruments designed more specifically for the population of its intended use (Rieger et al., 2000) as opposed to more generalised measures of change such as the University of Rhode Island Change Assessment (URICA) scale (Dozois et al., 2004).

Converging evidence suggests that an instrument that can help assess readiness for therapy for common mental health difficulties would be of benefit: the relationship between stages of change and clinical outcomes (Norcross et al., 2011) in some clinical populations (i.e. Hudson & Mac Neil, 2018; McHugh, 2007); and reviews of drop out in CBT therapy indicate considering careful patient selection (Fernandez et al., 2015). The benefits of a measure that predicts engagement and attrition (Joe et al., 1998; Westra et al., 2016; Westra & Norouzian, 2018) include adapting limited therapeutic resources to those most likely ('ready') to benefit, increasing overall efficiency of services, and focusing attention on additional support and interventions needed for those not yet at that stage of change.

Two previous measures of readiness for therapy exist for short term evidence-based psychotherapies in mainstream mental health services. However, the measures are time consuming to administer and no research currently has looked at whether or not Ogrodniczuk et al.'s (2009) Readiness for Psychotherapy Index predicts therapy outcomes and Safran et al.'s (1986)'s Readiness for Therapy Questionnaire did not predict attrition rate from therapy (Renaud et al., 2014). This paper describes the development and initial psychometric properties of the Readiness for Therapy Questionnaire (RTQ) in a primary care psychological therapies service. Directions for future research and clinical implications are also considered.

Method

Design

The RTQ was produced by psychological therapists and researchers in collaboration with patients from Talking Change (Solent NHS Trust). Talking Change is the primary care psychological therapy service in Portsmouth, UK. The service is a local Improving Access to Psychological Therapies (IAPT) provider. Talking Change offers a range of evidence-based therapies to adult's experiencing mood and anxiety disorders (see table 1 for a list of therapies offered and diagnoses treated).

The RTQ was developed and validated in five phases across two Quality Improvement Service Evaluations. The evaluations were approved by the Academy of Research & Improvement (Solent NHS Trust) because they were a formal review of the standard clinical practices (e.g., assessing patient readiness for therapy) and usual service procedures (e.g., eliciting patient feedback, analysis of patient data) at Talking Change. All patients in the service are provided with information about the use of their data, including national reporting, and all patients are given the opportunity to opt out and remove their data from such analyses.

Identifying Factors of Readiness for Therapy

In phase one, the research team sought to understand factors associated with readiness for therapy from the patient perspective. Patients who completed therapy or dropped-out before the end of therapy were telephoned as routine service procedure within a month of their discharge and invited to give feedback about the therapy they had received. In line with national IAPT guidance, therapy dropout was classified as a patient who attended two or more therapy sessions and discontinued therapy without providing a reason. Patients who attended two or more sessions and finished therapy on the agreed date were defined

completed (The National Collaborating Centre for Mental Health, 2020). A semi-structured interview was used to elicit patient experience of therapy, their reasons for dropping out (if applicable), and their recommendations for service improvement (see Appendix 1 for questions). Patient feedback was transcribed at the point of collection. The transcriptions obtained from January 2016 to January 2017 were collated, and a thematic analysis was conducted (see Ghaemian, Ghomi, Wrightman, & Ellis-Nee, 2020).

In phase two, the research team reviewed the following databases for published articles between 1988 and January 2017 that validated a measure of readiness for psychological therapy with a clinical population in a mental health setting: Embase, Your Journals@Ovid, and Journals@Ovid Full Text. The search yielded one study by Ogrodniczuk, Joyce and Piper (2009). Ogrodniczuk and colleagues developed a 20-item measure, and proposed four factors associated with readiness for therapy: interest, perseverance, openness and distress.

The research team synthesised their themes with the study by Ogrodniczuk, Joyce and Piper (2009). Twelve themes associated with readiness for therapy were identified. 1) Willingness - an intention to try things even when it feels uncomfortable. 2) Urgency - therapy is needed as soon as possible to reduce suffering. 3) Change - an intention to make positive adjustments. 4) Acceptance - an intention to tolerate difficult thoughts and feelings. 5) Openness - an intention to try things despite initial scepticism. 6) Perseverance - an intention to work through difficulty and continue therapy until the end. 7) Locus of control - responsibility for the outcome of therapy is assumed. 8) Commitment - an intention to practice or complete things in between sessions. 9) Importance - therapy is prioritised and session time is protected. 10) Cognitive Flexibility - an intention to cultivate new perspectives. 11) Expectations - the realistic assumption that the benefits of therapy tend to come over time. 12) Motivation - the decision to attend therapy has been made independently.

The Readiness for Therapy Questionnaire (RTQ)

In phase four, the RTQ was developed by the research team in consultation with the therapists from the clinical teams. As the RTQ was planned to be completed alongside other routine clinical measures, we sought to reduce overall questionnaire burden by developing a measure that would contain fewer items than the measure by Ogrodniczuk and colleagues. (2009).

The RTQ consisted of 12 items, an item per theme, a 5-point Likert scale ranging from strongly disagree (0) to strongly agree (4), and an equal number of alternating forward and reverse scored items. A higher score indicated greater readiness for therapy. We planned to assess if the number of items could be reduced by examining which items were most strongly associated with clinical outcomes. The final 6-item RTQ is shown in figure 1.

Procedure: Examining predictive utility

The GAD-7 (Spitzer et al., 2006) and PHQ-9 (Kroenke et al., 2001) were administered at each therapy session as per routine clinical practice. Therapy engagement (completed or dropped out) was reviewed in addition to clinical outcomes on GAD-7 and PHQ-9 scores from pre-therapy to post-therapy. These clinical outcomes were used to assess whether RTQ scores at pre-therapytreatment predicted therapy dropout and recovery. [1]In line with other IAPT services, recovery or 'below caseness' was defined as scoring ≤ 9 on the PHQ-9 *and* ≤ 7 on the GAD-7 at post-therapytreatment after scoring above these scores on *either* measure at pre-therapy (The National Collaborating Centre for Mental Health, 2020).

Participant Characteristics

All participants received an assessment and a 'provisional diagnosis' by therapists from the clinical teams, using the overview and screener modules of the Structured Clinical

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[1] In 2016 when the study was conducted, IAPT services did not formally administer Anxiety Disorder Specific Measures (ADSM) to determine recovery from anxiety disorders.

Interview for the DSM-IV (APA, 1994) for Axis I disorders (SCID-I; First, Spitzer, Gibbon, & Williams, 1995) and Axis II disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997).

Participants who were provisionally diagnosed with a mood or anxiety disorder and therefore met the referral criteria for treatment within a primary care psychological therapy service were offered treatment in the service. Participants whose main presenting problem was an Axis 2 disorder (e.g., psychotic disorders, personality disorders) were not included in the study, and instead signposted to the local secondary care mental health team.

Data were collected from 349 participants. Participants were 69.6% (n=243) female and 30.4% (n=106) male. Ages ranged from 18–77 with a mean of 37.1 years. Participants reported their ethnicity as follows: 90.5% (n=314), white; 5.7% (n=20), another ethnicity; and 4.3% (n=15) did not report their ethnicity. All participants scored 'above caseness' at pre-therapytreatment. Table 1 displays the therapy type participants received and their provisional diagnosis.

Data Analysis

Participants who had missing data for half or more of the items on the RTQ were excluded (n=15). The sample mode response replaced items of missing data. There was no missing data on the PHQ-9 and GAD-7. Kolmogorov-Smirnov tests were significant for PHQ-9 and GAD-7 total scores, and RTQ total and subscale scores. Kurtosis and skewness was within the normal range on the RTQ, PHQ-9 and GAD-7 (-2 to +2), and the histograms for each measure appeared normal. Thus, the data was declared as normally distributed.

Results

56.2% (*n*=196) of the sample completed therapy and 43.8% (*n*=153) dropped out. 50.1% (*n*=175) of the sample were recovered on both the PHQ-9 and GAD-7 post-therapy. There was a reliable improvement in both the PHQ-9 (reduction of 6 or more points) and GAD-7 (reduction of 4 or more points) for 58.5% (*n*=204) of participants. There was a reliable reduction in both the PHQ-9 (increase of 6 or more points) and GAD-7 (increase of 4 or more points) for only 1.1% (*n*=4) of participants.

Reliability & Scale Reduction

Total scores on the 12-item RTQ ranged from 20 to 48 out of 48 with a mean of 35.5 (*SD*=4.8) a median of 35 and mode of 33. Internal consistency for the total score was acceptable: *α*=.73.

In order to reduce the number of items for the measure, responses to the individual questions were correlated with changes in PHQ-9 and GAD-7 scores across therapy (see table 2).. The PHQ-9 change score significantly correlated with question 2: *r*=-.09, *p*<.05, question 3: *r*=-.13, *p*<.01, question 5: *r*=-.12 , *p*<.05, question 6: *r*=-.09, *p*<.05 and question 9: *r*=-.11, *p*<.05. The GAD-7 change score significantly correlated with question 2: *r*=-.14, *p*<.01, question 3: *r*=-.09, *p*<.05, question 5: *r*=-.11, *p*<.05, question 6: *r*=-.13, *p*<.01, question 8: *r*=-.10, *p*<.05 and question 9: *r*=-.10, *p*<.05. These questions which correlated with both or either change scores where then used to develop a 6-item measure. This is shown in figure 1.

Total scores on the 6-item RTQ ranged from 10 to 24 out of 25 with a mean of 18.4 (*SD*=2.8) a median of 18 and a mode of 17. The Cronbach's alpha for the 6-item measure was *α*=.63. Above .6 has been suggested as acceptable for short measures., and mean inter-item correlation was .24. The correlation with the 12-item measure was high: *r*=.90.

Correlations

Table 3 presents the correlations between the 12-item and 6-item RTQ with PHQ-9 and GAD-7 scores pre-therapy, post-therapy and change scores (post-therapy to pre-therapy). Please note that the correlations are for all participants whether they were deemed completed or dropped out of therapy, as measures were completed at every session.

The 6-item measure was therefore used for the rest of the analyses. Both the 6 and 12-item version did not correlate with pre scores but significantly correlated with pre and change scores for both the PHQ-9 and GAD-7. The correlations for the 6-item measure were slightly higher than for the 12-item version, so the 6-item measure was therefore used for the remaining analyses.

Logistic Regression: Predictors of Outcomes

A hierarchical linear regression was conducted to see whether the RTQ and subscale predicted clinical outcome after controlling for demographic variables (gender, age, ethnicity) and baseline PHQ-9 and GAD-7 scores. There were three clinical outcomes analysed separately:

- Therapy completion (completed vs dropped-out).

- Recovered on both the PHQ-9 and GAD-7 post-therapy.

- Having a reliable improvement in scores on both the PHQ-9 and the GAD-7 post-therapy.

There were not enough participants who had a reliable deterioration to see whether the RTQ predicted this. The results are shown in table 4. All outcomes of therapy completion, being recovered post-therapy on both PHQ-9 and GAD-7 and having a reliable improvement in scores on both PHQ-9 and GAD-7 post-therapy were significantly predicted by the 6-item RTQ, after controlling for demographics and baseline PHQ-9 and GAD-7 scores.

Cut off Point: ROC Curve Analysis

ROC curve was used to see if there was a cut-off to predict the clinical outcome variables by scores on the 6-item RTQ. An equal weight was placed on specificity and sensitivity.

For drop out vs. completion of therapy the 6-item RTQ had 59.8% within the ROC curve. The best balance between specificity and sensitivity was achieved by a score of 19 or more which identified those who completed therapy with a sensitivity of .53 and a specificity of .63. For recovery on both PHQ-9 and GAD-7 post-therapy the 6-item RTQ had 60.6% within the ROC curve. The best balance between specificity and sensitivity was achieved by a score of 19 or more which identified those who recovered with sensitivity of .53 and a specificity of .61. For reliable change on both the PHQ-9 and GAD-7 post-therapy the 6-item RTQ had 62.9% within the ROC curve. The best balance between specificity and sensitivity was achieved by a score of 19 or more which identified those who recovered with sensitivity of .57 and a specificity of 62.

Discussion

This study aimed to develop a measure to assess readiness to change prior to psychological therapy and assess its potential utility in predicting clinical outcomes. The development phase suggests acceptability with patients and face validity with clinicians. The results suggest RTQ score could potentially predict whether or not patients are likely to drop out of therapy. Furthermore, high RTQ score significantly predicted recovery, i.e. completing therapy with GAD-7 and PHQ-9 scores within the recovered range, and reliable improvement, a reduction of 6 points on PHQ-9 and 4 points on GAD-7. This result held even after controlling for demographics and baseline symptom severity.

The development of the RTQ was influenced by the Readiness for Psychotherapy Index (Ogrodniczuk et al, 2009) a measure designed for assessing readiness for therapy. To the best of authors' knowledge Readiness for Psychotherapy Index has not yet shown to be a predictor of attrition in therapy or clinical outcome. At 20 items, Readiness for Psychotherapy Index was considered to be too long to use in busy clinical settings, such as the IAPT service, where a number of other measures are required to be administered. Thus, a shorter measure which can be shown to predict clinical outcome and drop out was considered as having better clinical utility. A 12-item RTQ was initially designed and was further shortened to 6-items measure. The shorter version of RTQ showed acceptable reliability and had a slightly stronger correlation with recovery on PHQ-9 & GAD7 in comparison to the 12-item RTQ. The overall RTQ score did not correlate with depression and anxiety symptoms pre-therapy. This suggests a limited impact of symptom severity on motivation to change: a previous study in a primary care psychological therapies service did not show an impact of distress level on initial appointment attendance (Murphy et al., 2013). However RTQ total scores correlates with lower depression and anxiety scores, and total scores correlated with greater reductions in symptomatology across the course of therapy.

The Cronbach's alpha of the 6-item RTQ ($α=.63$) was below the .7 generally suggested as acceptable. However, a low alpha can result from a low number of items such as in this case (Tavakol & Dennick, 2011), the inter item mean correlation of .24 is within the range of .15 to .50 suggested as acceptable by Clark & Watson (1995).

The RTQ total pre-therapy was significantly higher for those with a positive clinical outcome which is in line with previous studies showing a correlation between readiness and outcome in treatment for anorexia nervosa (i.e. Hudson & Mac Neil, 2018; McHugh, 2007) and readiness and engagement/retention for addiction treatment (Joe et al., 1998). Previous studies have found predictors of poor clinical outcome such as personality disorder symptoms

scores (Goddard et al., 2015) and attention control (Buckman et al., 2019), however this is the first time a measure specially about Readiness for Change has been shown to predict clinical outcomes.

However, despite the statistically significant differences in scores on the RTQ based on clinical outcomes, there was poor sensitivity and specificity for the measure in predicting these same outcomes. This was likely due to the small difference between the mean scores of positive and negative clinical outcomes. Thus, it is not possible at this point to develop a cut-off point for the RTQ which could be used to predict positive or negative clinical outcome at the point of assessment. It may therefore be more helpful to use this measure as a continuous measure of readiness with associated score ranges (for example low, average, high), rather than a single cut-off classifying into two binary positive and negative outcomes. Such a use of the RTQ could mean reductions in scores signifies clinical change more than just above or below a cut-off point. The strong correlations between the RTQ and change scores in this study would indicate this as a potential use.

A possible clinical implication of the RTQ measure is to use it in conjunction with a broader clinical assessment of motivation and suitability, and the answers from the questions being used to generate a clinical discussion about potential barriers to therapy and possible ways to overcome these. Alternatively, the RTQ can be used to assess the benefit of offering motivational interviewing as a precursor, or an adjunct, to treatment as usual. MI principles can often be offered as part of treatment as usual, however our results indicate that greater attention to readiness for change and addressing motivational factors can potentially make a significant difference to patients' outcomes. This is consistent with previous research that showed combining MI with evidence based psychological therapies can help reduce drop out and in turn potentially enhance clinical outcomes given the overlap between engaging with, and completing treatment, and clinical recovery (Westra et al., 2016; Westra & Norouzian,

2018). Engaging patients with therapy when they present with complex mental health difficulties can sometimes be extremely challenging for patients and therapists alike. Thus, having the ability to assess capacity and readiness for therapy from the outset could prevent rushing through the process of change, which in turn could affect the alliance, and help with collaboratively agreeing realistic goals from the outset. This is particularly relevant when working with chronic, longstanding and hard to treat clinical presentations such as severe anxiety or depression or anxiety and depression in context of other difficulties such as autism and spectrum disorder, long-term health conditions and Axis II disorders. Further research is needed to look at potential clinical application of RTQ for these presentations.

There are several limitations which need to be considered. This study analysed outcomes from only one service. There was limited ethnic diversity. Future research is needed to determine if the predictive utility of the RTQ varies based on variables such as gender, age and ethnicity. Similarly, it will also be helpful to measure the mean and range of number of sessions attended in future research to see if the application of RTQ is enhanced, in part, as a function of the duration of treatment. The convergent validity of the RTQ compared to the Readiness for Psychotherapy Index (Ogrodniczuk et al, 2009) was not established in this study. Future research should include both measures in order to determine correlations between the two and compare their predictive efficiency. It is unknown if the results would hold for other intervention types, such as computer-based CBT. It might be that the RTQ has different outcomes for different therapies and problems however there was insufficient sample size in the current study to examine such potential differences. It also remains to be seen whether the RTQ predicts clinical outcomes in secondary care or more specialised psychological therapies services. More research is needed in other settings with different clinical populations to see if our result can be replicated. Future research could assess if addressing motivational factors can change the RTQ score and if this leads to

enhance clinical outcomes. Further, it will be helpful to compare the impact of adding MI as precursor to psychological treatment versus addressing RTQ as ongoing part of therapy on clinical outcomes.

Despite these limitations this study has developed a Readiness for Therapy Questionnaire that predicts clinical outcomes in a primary care psychological therapy service. Future research with a larger sample in a range of services would help further demonstrate utility and develop the measure, including trying to increase the sensitivity and specificity to establish a cut-off score.

References

American Psychiatric Association (2004). Diagnostic and Statistical Manual of Mental Disorders (4th ed.). Washington, US: American Psychiatric Association.

Brogan, M. M., Prochaska, J. O., & Prochaska, J. M. (1999). Predicting termination and continuation status in psychotherapy using the transtheoretical model. *Psychotherapy: Theory, Research, Practice, Training*, *36*(2), 105–113. https://doi.org/10.1037/h0087773

Buckman, J. E. J., Saunders, R., Fearon, P., Leibowitz, J., & Pilling, S. (2019). Attentional Control as a Predictor of Response to Psychological Treatment for Depression and Relapse up to 1 year After Treatment: A Pilot Cohort Study. *Behavioural and Cognitive Psychotherapy*, *47*(3), 318–331. https://doi.org/10.1017/S1352465818000590

Clark, D. M. (2011). Implementing NICE guidelines for the psychological treatment of depression and anxiety disorders: The IAPT experience. *International Review of Psychiatry*, *23*(4), 318–327. https://doi.org/10.3109/09540261.2011.606803

DiClemente, C. C., Prochaska, J. O., Fairhurst, S. K., Velicer, W. F., Velasquez, M. M., & Rossi, J. S. (1991). The process of smoking cessation: An analysis of precontemplation, contemplation, and preparation stages of change. *Journal of Consulting and Clinical Psychology*, *59*(2), 295–304.

DiClemente, Carlo C., Nidecker, M., & Bellack, A. S. (2008). Motivation and the stages of change among individuals with severe mental illness and substance abuse disorders.

Journal of Substance Abuse Treatment, *34*(1), 25–35.
https://doi.org/10.1016/j.jsat.2006.12.034

Fernandez, E., Salem, D., Swift, J. K., & Ramtahal, N. (2015). Meta-analysis of dropout from
cognitive behavioral therapy: Magnitude, timing, and moderators. *Journal of
Consulting and Clinical Psychology*, *83*(6), 1108–1122.
https://doi.org/10.1037/ccp0000044

First, M. B., Gibbon, M., Spitzer, R. L., & Williams, J. B. W. (1996). *Structured Clinical
Interview for DSM-IV Axis I Disorders: Clinician Version (SCID-CV): User's Guide*
(1 edition). American Psychiatric Press Inc.

First, M. B., Gibbon, M., Spitzer, R. L., Williams, J. B. W., & Benjamin, L. S. (1997).
*Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II):
User's Guide* (1 edition). American Psychiatric Press Inc.

Geller, J., & Drab, D. L. (1999). The readiness and motivation interview: A symptom-
specific measure of readiness for change in the eating disorders. *European Eating
Disorders Review*, *7*(4), 259–278. https://doi.org/10.1002/(SICI)1099-
0968(199908)7:4<259::AID-ERV295>3.0.CO;2-6

Geller, J., Zaitsoff, S. L., & Srikameswaran, S. (2005). Tracking Readiness and Motivation
for Change in Individuals with Eating Disorders Over the Course of Treatment.
Cognitive Therapy and Research, *29*(5), 611–625. https://doi.org/10.1007/s10608-
005-5774-1

Goddard, E., Wingrove, J., & Moran, P. (2015). The impact of comorbid personality
difficulties on response to IAPT treatment for depression and anxiety. *Behaviour
Research and Therapy*, *73*, 1–7. https://doi.org/10.1016/j.brat.2015.07.006

Haggerty, G., Siefert, C., Stoycheva, V., Sinclair, S. J., Baity, M., Zodan, J., Mehra, A.,
Chand, V., & Blais, M. A. (2014). Determining adolescents' suitability for inpatient
psychotherapy: Utility of the clinician-rated Readiness for Inpatient Psychotherapy
Scale with an adolescent inpatient sample. *Bulletin of the Menninger Clinic*, *78*(4),
349–372. https://doi.org/10.1521/bumc.2014.78.4.349

Hudson, C. C., & Mac Neil, B. A. (2018). Ready or Not: Examining Self-Reported Readiness
for Behavior Change at Intake Assessment for Adults With an Eating Disorder.
Behavior Modification, 0145445518807129.
https://doi.org/10.1177/0145445518807129

Joe, G. W., Simpson, D. D., & Broome, K. M. (1998). Effects of readiness for drug abuse
treatment on client retention and assessment of process. *Addiction; Abingdon*, *93*(8),
1177–1190.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: Validity of a brief
depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–613.

Laaksonen, M. A., Lindfors, O., Knekt, P., & Aalberg, V. (2012). Suitability for Psychotherapy Scale (SPS) and its reliability, validity, and prediction. *British Journal of Clinical Psychology*, *51*(4), 351–375. https://doi.org/10.1111/j.2044-8260.2012.02033.x

Marcus, B. H., Rakowski, W., & Rossi, J. S. (1992). Assessing motivational readiness and decision making for exercise. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, *11*(4), 257–261.

McConnaughy, E. A., Prochaska, J. O., & Velicer, W. F. (1983). Stages of change in psychotherapy: Measurement and sample profiles. *Psychotherapy: Theory, Research & Practice*, *20*(3), 368–375. https://doi.org/10.1037/h0090198

McHugh, M. D. (2007). Readiness for change and short-term outcomes of female adolescents in residential treatment for anorexia nervosa. *International Journal of Eating Disorders*, *40*(7), 602–612. https://doi.org/10.1002/eat.20425

Murphy, E., Mansell, W., Craven, S., Menary, J., & McEvoy, P. (2013). Pilot Study of an Investigation of Psychological Factors Associated with First Appointment Nonattendance in a Low-Intensity Service. *Behavioural and Cognitive Psychotherapy*, *41*(4), 458–469. https://doi.org/10.1017/S1352465812000811

Nidecker, M., DiClemente, C. C., Bennett, M. E., & Bellack, A. S. (2008). Application of the Transtheoretical Model of change: Psychometric properties of leading measures in patients with co-occurring drug abuse and severe mental illness. *Addictive Behaviors*, *33*(8), 1021–1030. https://doi.org/10.1016/j.addbeh.2008.03.012

National Collaborating Centre for Mental Health (2020). The Improving Access to Psychological Therapies Manual. https://www.england.nhs.uk/wp-content/uploads/2020/05/iapt-manual-v4.pdf

Norcross, J. C., Krebs, P. M., & Prochaska, J. O. (2011). Stages of change. *Journal of Clinical Psychology*, *67*(2), 143–154. https://doi.org/10.1002/jclp.20758

Ogrodniczuk, J. S., Joyce, A. S., & Piper, W. E. (2009). Development of the Readiness for Psychotherapy Index. *The Journal of Nervous and Mental Disease*, *197*(6), 427. https://doi.org/10.1097/NMD.0b013e3181a61c56

Prochaska, J. O., Velicer, W. F., Rossi, J. S., Goldstein, M. G., Marcus, B. H., Rakowski, W., Fiore, C., Harlow, L. L., Redding, C. A., & Rosenbloom, D. (1994). Stages of change and decisional balance for 12 problem behaviors. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, *13*(1), 39–46.

Prochaska, James O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist*, *47*(9), 1102–1114. https://doi.org/10.1037/0003-066X.47.9.1102

Renaud, J., Russell, J. J., & Myhr, G. (2014). Predicting Who Benefits Most From Cognitive-Behavioral Therapy for Anxiety and Depression. *Journal of Clinical Psychology*, *70*(10), 924–932. https://doi.org/10.1002/jclp.22099

Rogers, E. S., Martin, R., Anthony, W., Massaro, J., Danley, K., Crean, T., & Penk, W. (2001). Assessing Readiness for Change Among Persons with Severe Mental Illness. *Community Mental Health Journal*, *37*(2), 97–112. https://doi.org/10.1023/A:1002705614293

Rollnick, S., & Miller, W. R. (1995). What is Motivational Interviewing? *Behavioural and Cognitive Psychotherapy*, *23*(4), 325–334. https://doi.org/10.1017/S135246580001643X

Rosen, C. S. (2000). Is the sequencing of change processes by stage consistent across health problems? A meta-analysis. *Health Psychology*, *19*(6), 593–604. https://doi.org/10.1037/0278-6133.19.6.593

Safran, J. D., Vallis, T. M., Segal, Z. V., & Shaw, B. F. (1986). Assessment of core cognitive processes in cognitive therapy. *Cognitive Therapy and Research*, *10*(5), 509–526. https://doi.org/10.1007/BF01177815

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Truant, G. S. (1999). Assessment of Suitability for Psychotherapy. *American Journal of Psychotherapy*, *53*(1), 17–34. https://doi.org/10.1176/appi.psychotherapy.1999.53.1.17

Westra, H. A., Constantino, M. J., & Antony, M. M. (2016). Integrating motivational interviewing with cognitive-behavioral therapy for severe generalized anxiety disorder: An allegiance-controlled randomized clinical trial. *Journal of Consulting and Clinical Psychology*, *84*(9), 768–782. https://doi.org/10.1037/ccp0000098

Westra, H. A., & Norouzian, N. (2018). Using Motivational Interviewing to Manage Process Markers of Ambivalence and Resistance in Cognitive Behavioral Therapy. *Cognitive Therapy and Research*, *42*(2), 193–203. https://doi.org/10.1007/s10608-017-9857-6

Data Transparency

Three of the current authors of this manuscript are currently preparing a qualitative paper where the data has been extracted from the same sample as this manuscript albeit with a

different focus. The qualitative paper is currently being finalised but has not yet been submitted for journal review. The current manuscript is looking at the validity of RTQ and whether or not RTQ can predict outcome and drop out whereas the qualitative paper is focusing on patients' subjective experience of therapy and reasons for discontinuation from therapy.

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Figure 1

The 6-item Readiness for Therapy Questionnaire (RTQ)

An asterisk indicates items reverse scored.

<u>**Readiness for Therapy Questionnaire (RTQ)**</u>

Q1: It's essential that I work on my problems as soon as possible because they are affecting the quality of my life

Strongly agree   Agree   Undecided   Disagree   Strongly disagree

*Q2: I like to do things the way I've always done them and I don't want to change

Strongly agree   Agree   Undecided   Disagree   Strongly disagree

*Q3: If I'm sceptical about something, I'm not willing to try it

Strongly agree   Agree   Undecided   Disagree   Strongly disagree

Q4: Even if therapy becomes difficult, I will stick with it to the end

Strongly agree   Agree   Undecided   Disagree   Strongly

disagree

Q5: In between the sessions, I will dedicate time to regularly practice the things I learn in therapy

Strongly agree   Agree   Undecided   Disagree   Strongly disagree

*Q6: I won't attend therapy if I have something more pressing or interesting planned

Strongly agree   Agree   Undecided   Disagree   Strongly disagree

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Table 1.

Therapy Type and Diagnosis of Sample

Therapy Received	%	n=
Brief psychodynamic psychotherapy	0.6	2
Cognitive Behaviour Therapy (CBT)	31.8	111
Counselling for Depression	13.2	46
Couples Therapy for Depression	0.3	1
Eye Movement Desensitisation and Reprocessing	3.4	12
Guided Self Help (Book)	7.7	27
Interpersonal Psychotherapy (IPT)	1.1	4
Other High Intensity (not specified above)	8.3	29
Other Low Intensity	33.5	117
Problem descriptor		
F32 - Depressive episode	47.9	167
F33 - Recurrent depressive disorder	4.6	16
F40.0 - Agoraphobia	0.3	1
F40.1 - Social phobias	5.2	18
F40.2 - Specific (isolated) phobias	0.9	3
F41.0 - Panic disorder [episodic paroxysmal anxiety]	2.9	10
F41.1 - Generalized anxiety disorder	15.2	53
F42 - Obsessive-compulsive disorder	2	7
F43 - Reaction to severe stress, and adjustment disorder	3.7	13
F43.1 - Post-traumatic stress disorder	16.3	57
F45.2 - Illness anxiety disorder	0.6	2
F45.22- Body Dysmorphic Disorder	0.3	1

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F51- Insomnia	0.3	1

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Table 2.

Correlations between the 12-item RTQ with PHQ-9 and GAD-7 change scores

Item	PHQ-9 Change Score	GAD-7 Change Score
Q1: I'm not willing to try something difficult or uncomfortable even if it could help me.	-.03	-.06
Q2: It's essential that I work on my problems as soon as possible because they are affecting the quality of my life.	-.09*	-.14**
Q3: I like to do things the way I've always done them and I don't want to change.	-.13**	-.09*
Q4: I'm willing to learn how to tolerate difficult thoughts and feelings.	-.04	-.07
Q5: If I'm sceptical about something, I'm not willing to try it.	-.12*	-.11*
Q6: Even if therapy becomes difficult, I will stick with it to the end.	-.09*	-.13**
Q7: I'm hoping my therapist will fix me.	-.01	.01
Q8: In between the sessions, I will dedicate time to regularly practice the things I learn in therapy.	-.06	-.10*
Q9: I won't attend therapy if I have something more pressing or interesting planned.	-.11*	-.10*
Q10: I'm open to thinking more flexibly about strongly held beliefs if it could help me.	-.07	-.07
Q11: I'm not willing to continue with therapy unless I see benefits straight away.	-.05	-.06
Q12: I have made my own decision to come to therapy because I feel it will help me.	-.05	-.07

Note. Change scores from post-therapy to pre-therapy.
* $p< .05$, ** $p<.001$

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Table 3.

Correlations between the 12-item and 6-item RTQ with PHQ-9 and GAD-7 scores pre-therapy, post-therapy and change scores

Measure	12-item RTQ	6-item RTQ
Pre-therapy PHQ-9	-.07	-.06
Pre-therapy GAD-7	-.09	-.05
Post-therapy PHQ-9	-.18***	-.20***
Post-therapy GAD-7	-.21***	-.21***
PHQ-9 Change Score	-.14**	-.17**
GAD-7 Change Score	-.16**	-.19***

Note. One-tailed Pearson's correlations. Change scores from post-therapy to pre-therapy.
*p<.05, **p<.01, ***p<.001

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Table 4.

Regression results: Pre-therapy 6-item RTQ predicting therapy completion, post therapy reliable improvement and recovery on PHQ-9 and

GAD-7 post-therapy.

	Therapy completion: (Dropped out) vs. Completed	Post-therapy Recovered on both PHQ-9 and GAD-7: (Not recovered) vs. Recovered	Post-therapy Reliable Improvement on both PHQ-9 and GAD-7: (No Improvement) vs. Improvement
6-item RTQ **Overall Model** *n* % of variance explained (Cox & Snell R Square-Nagelkerke R Square) % correctly identified *M(SD)*	349 10.3-13.7% 63.9% Completed: 18.8 (2.8) Dropped out: 17.8 (2.8)	349 12.1-16.2% 67.6% Recovered: 18.9 (2.7) Not recovered: 17.8 (2.8)	349 9.2-12.4% 62.2% Reliable improvement: 19.1 (2.8) No reliable improvement: 17.9

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Individual Predictors (B)	Wald	Exp (B)	Sig	Wald	Exp (B)	Sig	Wald	Exp (B)	Sig
								(2.7)	
6-item RTQ	8.51	1.13	$p<.01$	9.77	1.14	$p<.01$	16.56	1.19	$p<.001$
Gender (Female)	3.14	.64	NS	.51	.84	NS	.56	1.21	NS
Age	13.49	1.03	$p<.001$	3.06	1.02	NS	.66	1.01	NS
Ethnicity (White) vs. BME, Mixed, Not stated	.72	.81	NS	3.17	.70	NS	.68	.80	NS
Pre PHQ-9 score	4.83	.94	$p<.05$	10.94	.91	$p<.001$	4.27	1.06	$p<.05$
Pre GAD-7 score	.27	.98	NS	.67	.97	NS	2.16	1.05	NS

Note: Dummy variables are shown in brackets.

NS = Non-significant.

6

Development and validation of the

'Readiness for ~~Treatment~~ Therapy Questionnaire (RTQ)~~: Version 1~~'

~~19th~~ December 2019

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Abstract

Background: Motivational factors are generally regarded as an important ingredient for change in ~~psycho~~therapy. However, there is currently a lack of available instruments that can measure clients' readiness for change in therapy.

Aim: The objective of this paper was to create an instrument, readiness for therapy questionnaire (RTQ), which could measure clients' readiness for change.

Method: The RTQ was created by researchers following analysis of themes drawn from a review of the literature and interviews with patients at the end of therapy. This included both people who completed therapy and those who dropped-out~~dropping out of therapy and review of the literature~~. As part of the standard assessment process, the RTQ ~~along with psychometric measures~~ was administered to 349 participants (69.6% female and 30.4% male. Mean age - 37.1; 90.5% Caucasian) who were patients at a psychological therapy service for common mental health difficulties.

Result: ~~A factor analysis identified no reliable subscales of the RTQ, total scores had acceptable reliability~~An initial~~original~~ ~~12 item~~12-item scale was reduced down to ~~6 item~~6-items. ~~; α=.73. RTQ total~~This scale significantly correlated with ~~post-treatment~~post-therapy PHQ-9 and GAD-7 scores and changes in these scores across therapy. After controlling for baseline scores and demographic variables, ~~In~~ a logistic regression showed that~~,~~ ~~total RTQ score~~scores on this 6-item measure pre-therapy significantly predicted three outcome

variables: completing therapy, being recovered on both PHQ-9 and GAD-7 post-therapy, and having a reliable change in both the PHQ-9 and GAD-7 post-therapy. a positive clinical outcome (completing therapy and being below caseness on GAD-7 and PHQ-9), after controlling for baseline scores and demographics. However, ROC curve analysis showed the measure had poor sensitivity (.55) and specificity (.61). Symptom severity did not have a significant impact on motivation to change.

Conclusion: The RTQ is potentially a valid measure with useful clinical applications in treatment of common mental health difficulties.

Key words: Common Mental Health Difficulties, Motivation, Clinical Outcome, Attrition Rate, Assessment

Introduction

The concept of readiness for change has been known as part of assessing suitability for therapy, and adapting therapy for years (Geller et al., 2005; Geller & Drab, 1999; McConnaughy et al., 1983; Truant, 1999). Despite an anecdotal understanding of 'Whether a patient is ready to engage in therapy", few measures exist (Haggerty et al., 2014; Ogrodniczuk et al., 2009) and there is little research into associations between readiness and therapy outcomes. No specific measures are routinely used to measure this construct in psychological therapy services in the United Kingdom such as Improving Access to Psychological Therapies (IAPT) services which have been established across England, to provide NICE recommended psychological therapies for depression and anxiety disorders (Clark, 2011).

The concept of readiness for change has been used as part of assessing suitability for therapy, and adapting psychotherapy for years (Geller et al., 2005; Geller & Drab, 1999; McConnaughy et al., 1983; Truant, 1999). Despite an anecdotal understanding of 'Whether a patient is ready to engage in psychotherapy", (Haggerty et al., 2014; Ogrodniczuk et al., 2009)there is little research into associations between readiness and therapy outcomes, and no specific measures used in modern day psychological therapy servicesThe concept of readiness for change has been used as part of assessing suitability for therapy, and adapting psychotherapy for years (Geller et al., 2005; Geller & Drab, 1999; McConnaughy et al., 1983; Truant, 1999). Despite an anecdotal understanding of 'Whether a patient is ready to engage in psychotherapy", (Haggerty et al., 2014; Ogrodniczuk et al., 2009)there is little research into associations between readiness and therapy outcomes, and no specific measures used in modern day psychological therapy services. (Clark, 2011). The Transtheoretical model (TTM) of change is a prominent theory that within literature for health behaviours and literature supports the utility of the Transtheoretical model to describes motivation for

behaviour change. The Transtheoretical Model described specific "Stages of change" with preceding precontemplation, contemplation and preparation stages occurring before behaviour change in subsequent action and maintenance (Glanz et al., 2015; James O. Prochaska et al., 1992).The Transtheoretical modelIt has been applied to addiction literature (James O. Prochaska et al., 1992)(James O. Prochaska et al., 1992), smoking cessation (C. C. DiClemente et al., 1991)(C. C. DiClemente et al., 1991), exercise uptake (Marcus et al., 1992) and other problem behaviours (Prochaska et al., 1994).

Literature regarding the application of Transtheoretical modelTTM to readiness for therapy is more inconsistent, and samples largelytypically focuses on consist of more severe and enduring mental health problems such as eating disorders or addiction. Meta-analyses have yielded inconsistent results when generalising the Transtheoretical modelTTM to readiness for therapy (Rosen, 2000). The use of the Transtheoretical modelTTM to conceptualise readiness for therapy has also been criticised, highlighting that readiness for behaviour change and readiness for therapy are not synonymous constructs. , and arguing that Rreadiness for therapy is a more complex construct to measure than specific behaviour change (Ogrodniczuk et al., 2009). A more recent review of meta-analyses found some clinically significant associations between stages of change and therapy outcomes (Norcross et al., 2011), again mostly however, more than half of the studies evaluated utilisedfocusing on samplespopulations –with of severe and enduring mental health difficulties. IIndeed, a measure has been developed specifically to measure the stages of change for those with a diagnosis of Anorexia Nervosa (Rieger et al., 2002) and for engagement in psychodynamic psychotherapy for severe depression or anxiety (Laaksonen et al., 2012). H, however, no literature appears tono measure exists for readiness for short term therapy for common mental health problems such as depression or anxiety.

~~Readiness for change is a concept investigated across psychology and health disciplines.~~ ~~The Transtheoretical Model described specific "Stages of change" with preceding precontemplation, contemplation and preparation stages occurring before behaviour change in subsequent action and maintenance (Glanz et al., 2015; James O. Prochaska et al., 1992).~~

~~Research supports stages of change being associated with behaviour change across a range of health behaviours; addiction (James O. Prochaska et al., 1992), smoking cessation (C. C. DiClemente et al., 1991), exercise uptake (Marcus et al., 1992) and other problem behaviours (Prochaska et al., 1994).~~

~~Meta-analyses initially yielded inconsistent results when generalising the Transtheoretical model to psychotherapy (Rosen, 2000), with more recent analyses finding clinically significant associations between stages of change and therapy outcomes (Norcross et al., 2011). These results, however, are generalised across a range of diagnoses including addiction and eating disorders, and less than half of the studies evaluated relating to mood disorders specifically. (Brogan et al., 1999) found specific stages of change predicted attrition in a small sample size. Similarly, attrition was modestly predicted by precontemplation and contemplation stages in those with severe mental health difficulties (Rogers et al., 2001). However, these were for vocational and educational courses and not psychotherapy and some analysis did not achieve statistical significance.~~

~~Current instruments utilise samples of those with severe mental health difficulties. Instruments measuring readiness for anorexia nervous have been shown to help with outcomes (i.e. Hudson & Mac Neil, 2018; McHugh, 2007). In addiction treatment readiness being predictive of engagement and retention (Simpson, & Broome, 1998) and reliability of current measurement scales have been reviewed for use in dual diagnosis (Carlo C. DiClemente et al., 2008; Nidecker et al., 2008). Overlaps may exist with instruments designed to measure 'suitability' for short term cognitive therapies (Safran et al., 1986) and~~

which predicted therapy outcomes but not attrition. Hence further research is required to develop instruments to measure readiness to change in short term psychotherapies for depression and anxiety

The literature may focus more upon severe and enduring mental health difficulties with regards to readiness due to Investigations into readiness and mental health have focussed primarily on addiction, with motivational interviewing techniques finding their roots within addiction treatments (Rollnick & Miller, 1995), thus perpetuating a gap in literature with regards to common mental health problems. Motivational interviewing is a collaborative method of helping clients address ambivalence towards change and eliciting and enhancing internal motivation and engagement with process of change (Rollnick & Miller, 1995). Some trials have considered use of motivational interviewing techniques as a precursor to CBT, finding reduced rates of drop out in cases of severe anxiety disorders (Westra et al., 2016; Westra & Norouzian, 2018). There remains a gap in research on readiness and therapy outcomes in common mental health problems.

A possible utility of readiness measures include the predictive ability of engagement, or non-engagement with treatment. Current measures of readiness for therapy (Haggert et al., 2014; Ogrodniczuk et al., 2009) do not predict clinical outcomes or engagement with therapy. A semi-structured clinical interview designed to measure 'suitability' for short term cognitive therapies (Safran et al., 1986) have predicted therapy outcomes but not attrition from therapy (Renaud et al., 2014). (Renaud et al., 2014)the (Prochaska et al., 1988)In the addiction literature, treatment readiness has shown to be predictive of engagement, retention and attrition (Simpson, & Broome, 1998; Brogan et al., 1999). Reliability of current measurement scales have also been reviewed for use for those with dual diagnosis of mental health and addiction (Carlo C. DiClemente et al., 2008; Nidecker et al., 2008). designed to measure 'suitability' for short term cognitive therapies

(Safran et al., 1986) Similarly, attrition was modestly predicted by precontemplation and contemplation stages in those with severe mental health difficulties (Rogers et al., 2001). However, these were for vocational and educational courses, not therapy.

A key cClinical considerations for a readiness for therapy measure would include practical considerations such ais the length of the measure (when administering measures in a clinical setting. Highlighted by Haggerty et al., (2014). Iin busy clinical environments the need for shorter measures which are easily calculated is an important consideration, with existing measures of readiness for therapy being 20 items long (Ogrodniczuk et al., 2009).) or Safran et al.'s (1986) one hour long semi-structured interview. Additionally, previous literature indicates the usefulness of developing instruments designed more specifically for the population of its intended use (Rieger et al., 2000) as opposed to more generalised measures of change such as the University of Rhode Island Change Assessment (URICA) scale (Dozois et al., 2004).

Converging evidence suggests that an instrument that can help assess readiness for change therapy for common mental health difficulties would be of benefit: the relationship between stages of change and clinical outcomes (Norcross et al., 2011) in some clinical populations (i.e. Hudson & Mac Neil, 2018; McHugh, 2007); and reviews of drop out in CBT therapy indicate considering careful patient selection (Fernandez et al., 2015). The benefits of a measure that predicts engagement and attrition (Joe et al., 1998; Westra et al., 2016; Westra & Norouzian, 2018) include adapting limited therapeutic resources to those most likely ('ready') to benefit, increasing overall efficiency of services, and focusing attention on additional support and interventions needed for those not yet at that stage of change.

To the authors knowledge there is no current Two previous measuremeasures of readiness for treatment therapy exist for short term evidence-based psychotherapies in mainstream mental health services. However, the measures are time consuming to administer

and no research currently has looked at whether or not Ogrodniczuk et al.'s (2009) Readiness for Psychotherapy Index predicts therapy outcomes and . ~~This paper describes the development and initial psychometric properties of the Readiness for Treatment Questionnaire~~Safran et al.'s (1986)'s Readiness for Therapy Questionnaire ~~(RTQ) in a primary care psychological therapies service. Directions for future research and clinical implications are also considered.~~ did not predict attrition rate from therapy (Renaud et al., 2014). This paper describes the development and initial psychometric properties of the ~~Readiness for Treatment Questionnaire~~Readiness for Therapy Questionnaire (RTQ) in a primary care psychological therapies service. Directions for future research and clinical implications are also considered.

Method

Design

The RTQ was produced by psychological therapists and researchers in collaboration with patients from Talking Change (Solent NHS Trust). Talking Change is the primary care psychological therapy service in Portsmouth, UK. The service is a local Improving Access to Psychological Therapies (IAPT) provider. Talking Change offers a range of evidence-based therapies ~~(e.g., Cognitive Behavioural Therapy,)~~ ~~Eye Movement Desensitisation and Reprocessing)~~ , ~~Couples Therapy for Depression and Interpersonal Psychotherapy, see table 1 for list of therapies offered)~~ to adult's experiencing ~~sufferers of common mental health difficulties (depression~~ mood and anxiety disorders~~)~~. ~~(e.g., depression, generalised anxiety disorder;~~ see table 1 for a list of therapies offered and diagnoses treated).

The RTQ was developed and validated in five phases across two Quality Improvement Service Evaluations. The evaluations were approved by the Academy of Research & Improvement (Solent NHS Trust) ~~a~~because they were ~~as a~~ formal review of the

standard clinical practices (e.g., assessing patient readiness for therapy) and usual service procedures (e.g., eliciting patient feedback, analysis of patient data) at Talking Change. All patients in the service are provided with information about the use of their data, including national reporting, and all patients are given the opportunity to opt out and remove their data from such analyses.

Identifying Factors of Readiness for ~~Treatment~~Treatmenttherapy

In phase one, the research team sought to understand factors associated with readiness for therapy from the patient perspective. Patients who completed therapy or dropped-out before the end of therapy were telephoned as routine ~~usual~~ service procedure within a month of their discharge and invited to give feedback about the therapy they had received. ~~This~~In line with ~~other~~ national IAPT guidance~~services~~, therapy dropout was classified as a patient who attended two or more therapy sessions and discontinued therapy without providing a reason. ~~P; whereas~~ patients who attended two or more sessions and finished therapy on the agreed date were defined completed (The National Collaborating Centre for Mental Health, 2020). ~~This~~ A ~~was a~~ semi-structured interview ~~using~~ was used to elicit patient experience of therapy, their reasons for dropping out (if applicable), and their recommendations for service improvement ~~questions around experiences of therapy, reasons for dropping out of therapy and what could be improved in the service~~ (see Appendix 1 for questions). Patient feedback was transcribed at the point of collection. The transcriptions obtained from January 2016 to January 2017 were collated, and a thematic analysis was conducted (see Ghaemian, Ghomi, Wrightman, & Ellis-Nee, 2020)~~, this is being written up as separate paper.~~.

In phase two, the research team reviewed the following databases for published articles between 1988 and January 2017 that validated a measure of readiness for psychological therapy with a clinical population in a mental health setting: Embase, Your Journals@Ovid,

and Journals@Ovid Full Text. The search yielded one study by ~~Ogrodniczuk, Joyce and Piper (2009)~~Ogrodniczuk, Joyce and Piper (2009). Ogrodniczuk and colleagues developed a 20-item measure, and proposed four factors associated with readiness for therapy: i~~I~~nterest,~~;~~ p~~P~~erseverance,~~;~~ o~~O~~penness~~;~~ and d~~D~~istress.

The research team synthesised their themes with the study by ~~Ogrodniczuk, Joyce and Piper (2009)~~Ogrodniczuk, Joyce and Piper (2009). Twelve ~~factors~~ themes associated with readiness for therapy were identified.~~:~~ 1) "Willingness"~~;~~ -~~;~~ an intention to try things even when it feels uncomfortable.~~;~~ 2) "Urgency"~~;~~ -~~;~~ therapy is needed as soon as possible to reduce suffering.~~;~~ 3) "Change"~~;~~ -~~;~~ an intention to make positive adjustments.~~;~~ 4) "Acceptance"~~;~~ -~~;~~ an intention to tolerate difficult thoughts and feelings.~~;~~ 5) "Openness"~~;~~ -~~;~~ an intention to try things despite initial scepticism.~~;~~ 6) "Perseverance"~~;~~ -~~;~~ an intention to work through difficulty and continue therapy until the end.~~;~~ 7) "Locus of control"~~;~~ -~~;~~ responsibility for the outcome of therapy is assumed.~~;~~ 8) "Commitment"~~;~~ -~~;~~ an intention to practice or complete things in between sessions.~~;~~ 9) "Importance"~~;~~ -~~;~~ therapy is prioritised and session time is protected.~~;~~ 10) "Cognitive Flexibility"~~;~~ -~~;~~ an intention to cultivate new perspectives.~~;~~ 11) "Expectations"~~;~~ -~~;~~ the realistic assumption that the benefits of therapy tend to come over time.~~;~~ ~~and~~ 12) "Motivation"~~;~~ -~~;~~ the decision to attend therapy has been made independently.

The ~~Readiness for Treatment Questionnaire~~Readiness for Therapy Questionnaire (RTQ)

In phase four, the ~~Readiness for Treatment Treatment Questionnaire (~~RTQ~~)~~ was developed by the research team in consultation with the therapists from the clinical teams. As the RTQ was planned to be completed alongside othe~~a~~ routine ~~battery of other~~ clinical measures, we sought to reduce overall questionnaire burden by developing a measure that

would contain fewer~~less~~ items ~~and be faster to complete~~ than the measure by Ogrodniczuk and colleagues. (2009).

The RTQ ~~was comprised~~consisted of ~~The~~ 12~~-item~~ -items, ~~measure comprised of~~ an item per theme~~factor~~, a 5-point Likert scale ranging from strongly disagree (0) to strongly agree~~,~~ (4), and an equal number of alternating forward and reverse scored~~.~~ items. A higher score indicated greater readiness for therapy. We planned to assess if the number of items could be reduced by examining which items were most strongly associated with clinical outcomes. The final 6-item RTQ is shown in figure 1.

Procedure: Examining ~~the~~ predictive utility

~~Participants referred to the service who consented for their data to be used for this service evaluation completed the RTQ at the start of therapy~~ ~~along with the~~tThe GAD-7 (Spitzer et al., 2006) and PHQ-9 (Kroenke et al., 2001) ~~which are used~~wereas administered at each therapy session as ~~part of~~per routine clinical practice. ~~Clinical records were~~Therapy engagement~~outcome~~ ~~kept on outcome of therapy~~ (completed or dropped -out) was reviewed in addition to clinical outcomes on ~~and~~ GAD-7 and PHQ-9 scores from ~~pre-treatment~~pre-therapy to ~~post-treatment~~post-therapy. ~~at the end of therapy.~~ ~~This was~~These clinical outcome~~is~~ were u~~as then u~~sed to ~~see~~ assess whether RTQ scores at pre~~-therapy~~-therapy~~reatment~~~~herapy~~~~treatment~~~~herapy~~ predicted therapy drop-out ~~from therapy~~ and ~~clinical outcome. Recovery~~recovery. [1]In line with other IAPT services, R~~r~~ecovery or 'below caseness' was defined as scoring ≤ 9 on the PHQ-9 *and* ~~also scoring~~ ≤ 7 on the GAD-7 at post-~~treatment.~~ therapy~~reatment~~treatment after scoring above these scores on *either* measure at ~~pre-treatment~~pre-therapy (The National Collaborating Centre for Mental Health, 2020).

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[1] In 2016 when the study was conducted, IAPT services did not formally administer Anxiety Disorder Specific Measures (ADSM) to determine recovery from~~or~~ anxiety disorders.

Therapy completion was defined as attending at least two sessions in line with IAPT guidelines (National Collaborating Centre for Mental Health, 2019). The reliability of the scale and a factor analysis of the RTQ was also conducted using this data.

Participant Characteristics

All participants received an assessment and a 'provisional diagnosis' by therapists from the clinical teams, using the overview and screener modules of the Structured Clinical Interview for the DSM-IV (APA, 1994) for Axis I disorders (SCID-I; First, Spitzer, Gibbon, & Williams, 1995) and Axis II disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997).

Participants who were provisionally diagnosed with an Axis 1 disordera mood or anxiety disorder and therefore met the referral criteria for treatment within a primary care psychological therapy service were offered treatment in the service.included in the study; Pwhereas participants provisionally diagnosedwhose main presenting problem was with an Axis 2 disorder (e.g., psychotic disorders, personality disorders) were not included in the study, and instead signposted to the local secondary care mental health team.

Data wereas collected forfrom a total of 349 participants. TheParticipants reportedwere sample was 69.6% (*n*=243) female and 30.4% (*n*=106) male. Ages ranged from 18 to 77 with a mean of 37.1 years. Participants reported their ethnicity as follows: 90.5% (*n*=314)), reported their ethnicity as white,; 5.7% (*n*=20)), as another ethnicity; and 4.3% (*n*=15) did not report their ethnicity. All AAll participants were scored 'above caseness' at pre-treatmentpre-therapytreatmentabove caseness on the PHQ (9+), the GAD-7 (7+) or both. scales pre therapy. Table 1 displays the therapy type participants received and their provisional diagnosis given as part of their treatment.

The PHQ-9 and GAD-7 were completed at every session, this allowed for changes over time to be analysed for both those who completed and dropped out.

Data Analysis

Participants ~~Any individuals~~ who had missing data for half or more of the items on the RTQ were excluded (*n*=15). ~~Remaining missing data levels were low: 4 to 9 individuals missing a response per item on the RTQ, there was no missing data on the PHQ-9 and GAD-7.~~ The ~~For these items the individual data was replaced with the~~ sample mode response~~.~~ replaced items of missing data. There was no missing data on the PHQ-9 and GAD-7. Kolmogorov-Smirnov tests were significant for PHQ-9 and GAD-7 total scores, and ~~as well as~~ RTQ total and subscale scores. ~~However a large sample size can result in a significant result on this despite normal distribution. Further statistics demonstrated that~~ ~~kurtosisk~~Kurtosis and skewness was within the normal range on the RTQ, PHQ-9 and GAD-7 ~~for these variables~~ (-2 to +2), and the histograms ~~appeared~~ for each measure appeared normal. Thus, the data was declared ~~, thus the data was analysed~~ as normally distributed. ~~We assessed the reliability of the RTQ and proceeded with a factor analysis.~~

Results

~~Participant Characteristics~~

~~Data was collected for a total of 349 participants. The sample was 69.6% (*n*=243) female and 30.4% (*n*=106) male. Ages ranged from 18 to 77 with a mean of 37.1 years. 90.5% (*n*=314) reported their ethnicity as white, 5.7% (*n*=20) as another ethnicity and 4.3% (*n*=15) did not report their ethnicity. All participants were above caseness on the PHQ (9+), the GAD-7 (7+) or both scales pre therapy. Table 1 displays the therapy type received and provisional diagnosis given as part of their treatment.~~

~~Overall,~~ 56.2% (*n*=196) of the sample completed therapy and 43.8% (*n*=153) dropped out. 50.1% (*n*=175) of the sample were recovered on both the PHQ-9 (9 or less) and

GAD-7 (7 or less) post treatmentpost-therapy. There was a reliable reduction improvement in both the PHQ-9 (reduction of 6 or more points) and GAD-7 (reduction of 4 or more points) for 58.5% (*n*=204) of participants. There was a reliable reduction in both the PHQ-9 (increase of 6 or more points) and GAD-7 (increase of 4 or more points) for only 1.1% (*n*=4) of participants.

Reliability & Factor StructureScale Reduction

Total scores on the 12--item RTQ total ranged from 20 to 48 out of 48 with a mean of 35.5 (*SD*=4.8) a median of 35 and mode of 33. Internal consistency for the total score was acceptable: *α*=.73.

In order to reduce the number of items for the measure, responses to the individual questions were correlated with changes in PHQ-9 and GAD-7 scores across therapy (see table 2).. The PHQ-9 change score significantly correlated with question 2: *r*=-.09, *p*<.05, question 3: *r*=-.13, *p*<.01, question 5: *r*=-.12 , *p*<.05, question 6: *r*=-.09, *p*<.05 and question 9: *r*=-.11, *p*<.05. The GAD-7 change score significantly correlated with question 2: *r*=-.14, *p*<.01, question 3: *r*=-.09, *p*<.05, question 5: *r*=-.11, *p*<.05, question 6: *r*=-.13, *p*<.01, question 8: *r*=-.10, *p*<.05 and question 9: *r*=-.10, *p*<.05. These questions which correlated with both or either change scores where then used to develop a 6-item measure. This is shown in figure 1.

Total scores on the 6-item6-item RTQ ranged from 10 to 24 out of 25 with a mean of 18.4 (*SD*=2.8) a median of 18 and a mode of 17. The Cehronbach's alpha for the 6--item measure was *α*=.63. Above .6 has been suggested as acceptable for short measures., and mean inter-item correlation was .24. The correlation with the 12--item measure was high: *r*=.90. The factor structure of the 12 items of the RTQ was analysed using Principal Component analysis with Varimax rotation. Subscales were identified if individual items loaded onto only one item at least .4 in line with the suggestion of Stevens (2012). This identified two

factors explaining together 43.2% of the variance for all the variables. Table 2 displays the factor loadings for the items onto the three factors. Cronbach's alpha for total score was acceptable: α=.73, however it was in the questionable range for subscale 1 (α=.66), subscale 2 α=.61) and subscale 3 (α=.61). These factors were therefore deemed not to be reliable and the total score only was used for the remaining analyses.

Correlations

Table 323 presents the correlations between the 12-item and 6-item RTQ with PHQ-9 and GAD-7 scores pre-therapy, post-therapy and change scoresbetween RTQRTQ-6 scores total score, RTQ /Perseverance factor and GAD-7 and PHQ-9 scores pre therapy, post therapy and change scores (post post therapy to pre therapy scores). Please note that the correlations are for all participants whether they were deemed completed or dropped out of therapy, as measures were completed at every session.

The 6-item measure was therefore used for the rest of the analyses. Both the 6 and 12 item12-item version did not correlate with pre scores but significantly correlated with pre and change scores for both the PHQ-9 and GAD-7. The correlations for the 6 item6-item measure were slightly higher than for the 12-item version, so the 6-item measure was therefore used for the remaining analyses.

RTQ scores by Clinical Outcome

Initially the authors had planned to look at disengagement from therapy and recovery (defined as being ≥ 10 on the PHQ-9 and ≥ 8 on the GAD-7 at the end of therapy) as two separate variables. However, there was considerable overlap between the variables: 92.2% (n=141) of those who disengaged did not recover, and 93.1% (n=163) of those who completed had recovered. These two variables were therefore combined into one variable

which essentially represented an intent to treat analysis whereby those who disengaged were assume to have a poor clinical outcome.

A poor clinical outcome was therefore defined as dropping out of therapy (regardless of clinical outcome) or completing therapy but not being recovered on both the PHQ-9 and GAD-7: 53.3% (*n*=186) of participants fell into this category. A positive clinical outcome was defined as both completing therapy and being recovered on both the PHQ-9 and GAD-7 post-therapy, 46.7% (n=163) of participants fell into this category.

Logistic Regression: Predictors of Outcomes

A hierarchical linear regression was conducted to see whether the RTQ and subscale predicted clinical outcome after controlling for demographic variables (gender, age, ethnicity) and baseline PHQ-9 and GAD-7 scores. There were three clinical outcomes analysed separately:

- Therapy completion (completed vs dropped-out).

- Being below cut-off for Rrecovered on both the PHQ-9 and GAD-7 post therapypost-therapy.

- Having a reliable reductionimprovement in scores on both the PHQ-9 and the GAD-7 post therapypost-therapy.

There were not enough participants who had a reliable deterioration to see whether the RTQ predicted this. The results are shown in table 434. All outcomes of therapy completion, being recovered post therapypost-therapy on both PHQ-9 and GAD-7 and having a reliable changeimprovement in scores on both PHQ-9 and GAD-7 post therapypost-therapy were significantly predicted by the 6 item6-item RTQ, Positive clinical outcome was significantly predicted by higher RTQ total scores after controlling for demographics and baseline PHQ-9 and GAD-7 scores.

Cut off Point: ROC Curve Analysis

ROC curve was used to see if there was a cut-off to predict the clinical outcome variables by scores on the 6- item RTQby RTQ total. An equal weight was placed on specificity and sensitivity.

For positive clinical outcome vs. poor clinicaldrop out vs. completion of therapy outcome the 6-item RTQ -6 total had 60.659.8% within the ROC curve. The best balance between specificity and sensitivity was achieved by a score of 36-19 or more which identified those who had a positive clinical outcomecompleted therapy with a sensitivity of .553 and a specificity of .631. This means that this score on the RTQ correctly identified 55% of those who had a positive outcome, but incorrectly identified 44% of those who had a negative clinical outcome as going to have a positive outcomeFor recovery on both PHQ-9 and GAD-7 post therapypost-therapy the 6-item RTQ-6 had 60.6%. within the ROC curve. The best balance between specificity and sensitivity was achieved by a score of 19 or more which identified those who recovered with sensitivity of .53 and a specificity of .61. For reliable change on both the PHQ-9 and GAD-7 post therapypost-therapy the 6-item RTQ-6 had 62.9% within the ROC curve. The best balance between specificity and sensitivity was achieved by a score of 19 or more which identified those who recovered with sensitivity of .57 and a specificity of 62.

Discussion

This study aimed to develop a measure to assess readiness to change prior to psychological therapy and assess its potential utility in predicting clinical outcomes. The development phase suggests acceptability with patients and face validity with clinicians. Reliability was low but acceptable given that this is a 6-item measure. The results also suggest RTQ score could potentially predict whether or not patients are likely to drop out of

therapy. Furthermore, high RTQ score significantly predicted recovery, i.e. completing therapy with GAD-7 and PHQ-9 scores within the recovered range, and reliable improvement, a reduction of 6 points on PHQ-9 and 4 points on GAD-7. This result held even after controlling for demographics and baseline symptom severity.

The development of the RTQ was influenced by the Readiness for Psychotherapy Index (Ogrodniczuk et al, 2009) a measure designed for assessing readiness for therapy. To the best of authors' knowledge Readiness for Psychotherapy Index has not yet shown to be a predictor of attrition in therapy or clinical outcome. At 20 items, Readiness for Psychotherapy Index was considered to be too long to use in busy clinical settings, such as the IAPT service, where a number of other measures are required to be administered. Thus, a shorter measure which can be shown to predict clinical outcome and drop out was considered as having better clinical utility. A 12-item12-item RTQ was initially designed and was further shortened to 6 item6-items measure. The shorter version of RTQ showed acceptable reliability and had a slightly stronger correlation with recovery on PHQ9PHQ-9 & GAD7 in comparison to the 12 item12-item RTQ.   This study aimed to develop a measure to assess readiness to change prior to psychological therapy and assess its potential utility in predicting clinical outcomes. The development phase suggests acceptability with patients and face validity with clinicians. Reliability was acceptable for the measure total score, and the results suggest correlation with clinical outcome.   Thus, RTQ could potentially predict whether or not patients are likely to drop out of therapy (i.e. 'persevere'). Furthermore, high RTQ score significantly predicted positive clinical outcome, completing therapy with GAD-7 and PHQ-9 scores within the recovered range. This result held even after controlling for demographics and baseline symptom severity.

The overall RTQ score did not correlate with depression and anxiety symptoms pre-treatmentpre-therapy. This suggests a limited impact of symptom severity on motivation to

change: a previous study in a primary care psychological therapies service did not show an impact of distress level on initial appointment attendance (Murphy et al., 2013). However post-treatment RTQ total scores correlates with lower depression and anxiety scores, and total scores correlated with greater reductions in symptomatology across the course of therapy.: a previous study in a primary care psychological therapies service did not show an impact of distress level on initial appointment attendance (Murphy et al., 2013). However post-treatment RTQ total scores correlates with lower depression and anxiety scores, and total scores correlated with greater reductions in symptomatology across the course of therapy.

The Cronbach's alpha of of the 6 item6-item RTQ (α=.63) was below the .7 generally suggested as acceptable. However, a low alpha can result from a low number of items such as in this case (Tavakol & Dennick, 2011), the inter item mean correlation of .24 is within the range of .15 to .50 suggested as acceptable by Clark & Watson (1995).

The current study could not look into clinical outcomes and drop out as separate variables due to the considerable overlap between these variables with most that dropped out not recovering on the PHQ-9 and GAD-7 and most that completed recovering on these measures. The RTQ total pre therapypre-therapy waswere significantly higher post-treatment for those with a positive clinical outcome which is in line with previous studies showing a correlation between readiness and outcome in treatment for anorexia nervosa (i.e. Hudson & Mac Neil, 2018; McHugh, 2007) and readiness and engagement/retention for addiction treatment (Joe et al., 1998). Previous studies have found predictors of poor clinical outcome such as personality disorder symptoms scores (Goddard et al., 2015)Previous studies have found predictors of poor clinical outcome such as personality disorder symptoms scores (Goddard et al., 2015) and attention control (Buckman et al., 2019)(Buckman et al., 2019),

however this is the first time a measure specially about Readiness for Change has been shown to predict clinical outcomes.

However, despite the statistically significant differences in scores on the RTQ based on clinical outcomes, there was poor sensitivity and specificity for the measure, in predicting these same outcomes. This was likely due to the, and there was a small difference between the mean scores of positive and negative clinical outcomes. Thus, it is not possible at this point to develop a cut-off point for the RTQ which could be used to predict positive or negative clinical outcome at the point of assessment. It may therefore be more helpful to use this measure as a continuous measure of readiness with associated score ranges (for example low, average, high), rather than a single cut-off classifying into two binary positive and negative outcomes. Such a use of the RTQ could mean reductions in scores signifies clinical change more than just above or below a cut-off point. The strong correlations between the RTQ and change scores in this study would indicate this as a potential use.

A possible clinical implication of the RTQ measure is to use it in conjunction with a broader clinical assessment of motivation and suitability, and the answers from the questions being used to generate a clinical discussion about potential barriers to therapy and possible ways to overcome these. Alternatively, the RTQ can be used to assess the benefit of offering motivational interviewing as a precursor, or an adjunct, to treatment as usual. MI principles can often be offered as part of treatment as usual, however our results indicate that greater attention to readiness for change and addressing motivational factors can potentially make a significant difference to patients' outcomes. This is consistent with previous research that showed combining MI with evidence based psychological therapies can help reduce drop out and in turn potentially enhance clinical outcomes given the overlap between engaging with, and completing treatment, and clinical recovery (Westra et al., 2016; Westra & Norouzian, 2018). Engaging patients with therapy when they present with complex mental health

difficulties can sometimes be extremely challenging for patients and therapists alike. Thus, having the ability to assess capacity and readiness for therapy from the outset could prevent rushing through the process of change, which in turn could affect the alliance, and help with collaboratively agreeing realistic goals from the outset. This is particularly relevant when working with chronic, longstanding and hard to treat clinical presentations such as severe anxiety or depression or anxiety and depression in context of other difficulties such as autism and spectrum disorder, long-term health conditions and Axis II disorders. Further research is needed to look at potential clinical application of RTQ for these presentations.

There are a number ofseveral limitations which need to be considered. This study analysed outcomes from only one service. There was limited ethnic diversity. Future research is needed to determine if the predictive utility of the RTQ ariesvaries based on variables such as gender, age and ethnicity. Similarly, it will also be helpful to measure the mean and range of number of sessions attended in future research to see if the application of RTQ is enhanced, in part, as a function of the duration of treatment. The convergent validity of the RTQ compared to the Readiness for Psychotherapy Index (Ogrodniczuk et al, 2009) was not established in this study. Future research should include both measures in order to determine correlations between the two and compare their predictive efficiency. It is unknown if the results would hold for other intervention types, such as computer-based CBT. It might be that the RTQ has different outcomes for different therapies and problems however there was insufficient sample size in the current study to examine such potential differences. It also remains to be seen whether the RTQ predicts clinical outcomes in secondary care or more specialised psychological therapies services. More research is needed in other settings with different clinical populations to see if our result can be replicated. Future research could assess if addressing motivational factors can change the RTQ score and if this leads to enhance clinical outcomes. Further, it will be helpful to compare the impact of adding MI as

precursor to psychological treatment versus addressing RTQ as ongoing part of therapy on clinical outcomes.

Despite these limitations this study has developed a ~~readiness for treatment questionnaire~~Readiness for Therapy Questionnaire that predicts clinical outcomes in a primary care psychological therapy service. Future research with a larger sample in a range of services would help further demonstrate utility and develop the measure, including trying to increase the sensitivity and specificity to establish a cut-off score.

References

American Psychiatric Association (2013). Diagnostic and statistical manual of mental health disorders (5th ed.). Washington, US: American Psychiatric Publishing.

Brogan, M. M., Prochaska, J. O., & Prochaska, J. M. (1999). Predicting termination and continuation status in psychotherapy using the transtheoretical model. *Psychotherapy: Theory, Research, Practice, Training, 36*(2), 105–113. https://doi.org/10.1037/h0087773

Buckman, J. E. J., Saunders, R., Fearon, P., Leibowitz, J., & Pilling, S. (2019). Attentional Control as a Predictor of Response to Psychological Treatment for Depression and Relapse up to 1 year After Treatment: A Pilot Cohort Study. *Behavioural and Cognitive Psychotherapy, 47*(3), 318–331. https://doi.org/10.1017/S1352465818000590

Clark, D. M. (2011). Implementing NICE guidelines for the psychological treatment of depression and anxiety disorders: The IAPT experience. *International Review of Psychiatry, 23*(4), 318–327. https://doi.org/10.3109/09540261.2011.606803

DiClemente, C. C., Prochaska, J. O., Fairhurst, S. K., Velicer, W. F., Velasquez, M. M., & Rossi, J. S. (1991). The process of smoking cessation: An analysis of precontemplation, contemplation, and preparation stages of change. *Journal of Consulting and Clinical Psychology*, *59*(2), 295–304.

DiClemente, Carlo C., Nidecker, M., & Bellack, A. S. (2008). Motivation and the stages of change among individuals with severe mental illness and substance abuse disorders. *Journal of Substance Abuse Treatment*, *34*(1), 25–35. https://doi.org/10.1016/j.jsat.2006.12.034

Fernandez, E., Salem, D., Swift, J. K., & Ramtahal, N. (2015). Meta-analysis of dropout from cognitive behavioral therapy: Magnitude, timing, and moderators. *Journal of Consulting and Clinical Psychology*, *83*(6), 1108–1122. https://doi.org/10.1037/ccp0000044

Geller, J., & Drab, D. L. (1999). The readiness and motivation interview: A symptom-specific measure of readiness for change in the eating disorders. *European Eating Disorders Review*, *7*(4), 259–278. https://doi.org/10.1002/(SICI)1099-0968(199908)7:4<259::AID-ERV295>3.0.CO;2-6

Geller, J., Zaitsoff, S. L., & Srikameswaran, S. (2005). Tracking Readiness and Motivation for Change in Individuals with Eating Disorders Over the Course of Treatment. *Cognitive Therapy and Research*, *29*(5), 611–625. https://doi.org/10.1007/s10608-005-5774-1

Goddard, E., Wingrove, J., & Moran, P. (2015). The impact of comorbid personality difficulties on response to IAPT treatment for depression and anxiety. *Behaviour Research and Therapy*, *73*, 1–7. https://doi.org/10.1016/j.brat.2015.07.006

Haggerty, G., Siefert, C., Stoycheva, V., Sinclair, S. J., Baity, M., Zodan, J., Mehra, A., Chand, V., & Blais, M. A. (2014). Determining adolescents' suitability for inpatient psychotherapy: Utility of the clinician-rated Readiness for Inpatient Psychotherapy Scale with an adolescent inpatient sample. *Bulletin of the Menninger Clinic*, *78*(4), 349–372. https://doi.org/10.1521/bumc.2014.78.4.349

Hudson, C. C., & Mac Neil, B. A. (2018). Ready or Not: Examining Self-Reported Readiness for Behavior Change at Intake Assessment for Adults With an Eating Disorder. *Behavior Modification*, 0145445518807129. https://doi.org/10.1177/0145445518807129

Joe, G. W., Simpson, D. D., & Broome, K. M. (1998). Effects of readiness for drug abuse treatment on client retention and assessment of process. *Addiction; Abingdon*, *93*(8), 1177–1190.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–613.

Laaksonen, M. A., Lindfors, O., Knekt, P., & Aalberg, V. (2012). Suitability for Psychotherapy Scale (SPS) and its reliability, validity, and prediction. *British Journal of Clinical Psychology*, *51*(4), 351–375. https://doi.org/10.1111/j.2044-8260.2012.02033.x

Marcus, B. H., Rakowski, W., & Rossi, J. S. (1992). Assessing motivational readiness and decision making for exercise. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association, 11*(4), 257–261.

McConnaughy, E. A., Prochaska, J. O., & Velicer, W. F. (1983). Stages of change in psychotherapy: Measurement and sample profiles. *Psychotherapy: Theory, Research & Practice, 20*(3), 368–375. https://doi.org/10.1037/h0090198

McHugh, M. D. (2007). Readiness for change and short-term outcomes of female adolescents in residential treatment for anorexia nervosa. *International Journal of Eating Disorders, 40*(7), 602–612. https://doi.org/10.1002/eat.20425

Murphy, E., Mansell, W., Craven, S., Menary, J., & McEvoy, P. (2013). Pilot Study of an Investigation of Psychological Factors Associated with First Appointment Nonattendance in a Low-Intensity Service. *Behavioural and Cognitive Psychotherapy, 41*(4), 458–469. https://doi.org/10.1017/S1352465812000811

Nidecker, M., DiClemente, C. C., Bennett, M. E., & Bellack, A. S. (2008). Application of the Transtheoretical Model of change: Psychometric properties of leading measures in patients with co-occurring drug abuse and severe mental illness. *Addictive Behaviors, 33*(8), 1021–1030. https://doi.org/10.1016/j.addbeh.2008.03.012

Norcross, J. C., Krebs, P. M., & Prochaska, J. O. (2011). Stages of change. *Journal of Clinical Psychology, 67*(2), 143–154. https://doi.org/10.1002/jclp.20758

Ogrodniczuk, J. S., Joyce, A. S., & Piper, W. E. (2009). Development of the Readiness for Psychotherapy Index. *The Journal of Nervous and Mental Disease, 197*(6), 427. https://doi.org/10.1097/NMD.0b013e3181a61c56

Prochaska, J. O., Velicer, W. F., Rossi, J. S., Goldstein, M. G., Marcus, B. H., Rakowski, W., Fiore, C., Harlow, L. L., Redding, C. A., & Rosenbloom, D. (1994). Stages of change and decisional balance for 12 problem behaviors. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association, 13*(1), 39–46.

Prochaska, James O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47*(9), 1102–1114. https://doi.org/10.1037/0003-066X.47.9.1102

Renaud, J., Russell, J. J., & Myhr, G. (2014). Predicting Who Benefits Most From Cognitive-Behavioral Therapy for Anxiety and Depression. *Journal of Clinical Psychology, 70*(10), 924–932. https://doi.org/10.1002/jclp.22099

Rogers, E. S., Martin, R., Anthony, W., Massaro, J., Danley, K., Crean, T., & Penk, W. (2001). Assessing Readiness for Change Among Persons with Severe Mental Illness. *Community Mental Health Journal, 37*(2), 97–112. https://doi.org/10.1023/A:1002705614293

Rollnick, S., & Miller, W. R. (1995). What is Motivational Interviewing? *Behavioural and Cognitive Psychotherapy*, *23*(4), 325–334. https://doi.org/10.1017/S135246580001643X

Rosen, C. S. (2000). Is the sequencing of change processes by stage consistent across health problems? A meta-analysis. *Health Psychology*, *19*(6), 593–604. https://doi.org/10.1037/0278-6133.19.6.593

Safran, J. D., Vallis, T. M., Segal, Z. V., & Shaw, B. F. (1986). Assessment of core cognitive processes in cognitive therapy. *Cognitive Therapy and Research*, *10*(5), 509–526. https://doi.org/10.1007/BF01177815

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Truant, G. S. (1999). Assessment of Suitability for Psychotherapy. *American Journal of Psychotherapy*, *53*(1), 17–34. https://doi.org/10.1176/appi.psychotherapy.1999.53.1.17

Westra, H. A., Constantino, M. J., & Antony, M. M. (2016). Integrating motivational interviewing with cognitive-behavioral therapy for severe generalized anxiety disorder: An allegiance-controlled randomized clinical trial. *Journal of Consulting and Clinical Psychology*, *84*(9), 768–782. https://doi.org/10.1037/ccp0000098

Westra, H. A., & Norouzian, N. (2018). Using Motivational Interviewing to Manage Process Markers of Ambivalence and Resistance in Cognitive Behavioral Therapy. *Cognitive Therapy and Research*, *42*(2), 193–203. https://doi.org/10.1007/s10608-017-9857-6

–American Psychiatric Association (2004). Diagnostic and Statistical Manual of Mental Disorders (4th ed.). Washington, US: American Psychiatric Association.

Brogan, M. M., Prochaska, J. O., & Prochaska, J. M. (1999). Predicting termination and continuation status in psychotherapy using the transtheoretical model. *Psychotherapy: Theory, Research, Practice, Training*, *36*(2), 105–113. https://doi.org/10.1037/h0087773

Buckman, J. E. J., Saunders, R., Fearon, P., Leibowitz, J., & Pilling, S. (2019). Attentional Control as a Predictor of Response to Psychological Treatment for Depression and Relapse up to 1 year After Treatment: A Pilot Cohort Study. *Behavioural and Cognitive Psychotherapy*, *47*(3), 318–331. https://doi.org/10.1017/S1352465818000590

Clark, D. M. (2011). Implementing NICE guidelines for the psychological treatment of depression and anxiety disorders: The IAPT experience. *International Review of Psychiatry*, *23*(4), 318–327. https://doi.org/10.3109/09540261.2011.606803

DiClemente, C. C., Prochaska, J. O., Fairhurst, S. K., Velicer, W. F., Velasquez, M. M., & Rossi, J. S. (1991). The process of smoking cessation: An analysis of

precontemplation, contemplation, and preparation stages of change. *Journal of Consulting and Clinical Psychology*, *59*(2), 295–304.

DiClemente, Carlo C., Nidecker, M., & Bellack, A. S. (2008). Motivation and the stages of change among individuals with severe mental illness and substance abuse disorders. *Journal of Substance Abuse Treatment*, *34*(1), 25–35. https://doi.org/10.1016/j.jsat.2006.12.034

Fernandez, E., Salem, D., Swift, J. K., & Ramtahal, N. (2015). Meta-analysis of dropout from cognitive behavioral therapy: Magnitude, timing, and moderators. *Journal of Consulting and Clinical Psychology*, *83*(6), 1108–1122. https://doi.org/10.1037/ccp0000044

First, M. B., Gibbon, M., Spitzer, R. L., & Williams, J. B. W. (1996). *Structured Clinical Interview for DSM-IV Axis I Disorders: Clinician Version (SCID-CV): User's Guide* (1 edition). American Psychiatric Press Inc.

First, M. B., Gibbon, M., Spitzer, R. L., Williams, J. B. W., & Benjamin, L. S. (1997). *Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II): User's Guide* (1 edition). American Psychiatric Press Inc.

Geller, J., & Drab, D. L. (1999). The readiness and motivation interview: A symptom-specific measure of readiness for change in the eating disorders. *European Eating Disorders Review*, *7*(4), 259–278. https://doi.org/10.1002/(SICI)1099-0968(199908)7:4<259::AID-ERV295>3.0.CO;2-6

Geller, J., Zaitsoff, S. L., & Srikameswaran, S. (2005). Tracking Readiness and Motivation for Change in Individuals with Eating Disorders Over the Course of Treatment. *Cognitive Therapy and Research*, *29*(5), 611–625. https://doi.org/10.1007/s10608-005-5774-1

Goddard, E., Wingrove, J., & Moran, P. (2015). The impact of comorbid personality difficulties on response to IAPT treatment for depression and anxiety. *Behaviour Research and Therapy*, *73*, 1–7. https://doi.org/10.1016/j.brat.2015.07.006

Haggerty, G., Siefert, C., Stoycheva, V., Sinclair, S. J., Baity, M., Zodan, J., Mehra, A., Chand, V., & Blais, M. A. (2014). Determining adolescents' suitability for inpatient psychotherapy: Utility of the clinician-rated Readiness for Inpatient Psychotherapy Scale with an adolescent inpatient sample. *Bulletin of the Menninger Clinic*, *78*(4), 349–372. https://doi.org/10.1521/bumc.2014.78.4.349

Hudson, C. C., & Mac Neil, B. A. (2018). Ready or Not: Examining Self-Reported Readiness for Behavior Change at Intake Assessment for Adults With an Eating Disorder. *Behavior Modification*, 0145445518807129. https://doi.org/10.1177/0145445518807129

Joe, G. W., Simpson, D. D., & Broome, K. M. (1998). Effects of readiness for drug abuse treatment on client retention and assessment of process. *Addiction; Abingdon, 93*(8), 1177–1190.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606–613.

Laaksonen, M. A., Lindfors, O., Knekt, P., & Aalberg, V. (2012). Suitability for Psychotherapy Scale (SPS) and its reliability, validity, and prediction. *British Journal of Clinical Psychology, 51*(4), 351–375. https://doi.org/10.1111/j.2044-8260.2012.02033.x

Marcus, B. H., Rakowski, W., & Rossi, J. S. (1992). Assessing motivational readiness and decision making for exercise. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association, 11*(4), 257–261.

McConnaughy, E. A., Prochaska, J. O., & Velicer, W. F. (1983). Stages of change in psychotherapy: Measurement and sample profiles. *Psychotherapy: Theory, Research & Practice, 20*(3), 368–375. https://doi.org/10.1037/h0090198

McHugh, M. D. (2007). Readiness for change and short-term outcomes of female adolescents in residential treatment for anorexia nervosa. *International Journal of Eating Disorders, 40*(7), 602–612. https://doi.org/10.1002/eat.20425

Murphy, E., Mansell, W., Craven, S., Menary, J., & McEvoy, P. (2013). Pilot Study of an Investigation of Psychological Factors Associated with First Appointment Nonattendance in a Low-Intensity Service. *Behavioural and Cognitive Psychotherapy, 41*(4), 458–469. https://doi.org/10.1017/S1352465812000811

Nidecker, M., DiClemente, C. C., Bennett, M. E., & Bellack, A. S. (2008). Application of the Transtheoretical Model of change: Psychometric properties of leading measures in patients with co-occurring drug abuse and severe mental illness. *Addictive Behaviors, 33*(8), 1021–1030. https://doi.org/10.1016/j.addbeh.2008.03.012

National Collaborating Centre for Mental Health (2020). The Improving Access to Psychological Therapies Manual. https://www.england.nhs.uk/wp-content/uploads/2020/05/iapt-manual-v4.pdf

Norcross, J. C., Krebs, P. M., & Prochaska, J. O. (2011). Stages of change. *Journal of Clinical Psychology, 67*(2), 143–154. https://doi.org/10.1002/jclp.20758

Ogrodniczuk, J. S., Joyce, A. S., & Piper, W. E. (2009). Development of the Readiness for Psychotherapy Index. *The Journal of Nervous and Mental Disease, 197*(6), 427. https://doi.org/10.1097/NMD.0b013e3181a61c56

Prochaska, J. O., Velicer, W. F., Rossi, J. S., Goldstein, M. G., Marcus, B. H., Rakowski, W., Fiore, C., Harlow, L. L., Redding, C. A., & Rosenbloom, D. (1994). Stages of change and decisional balance for 12 problem behaviors. *Health Psychology: Official Journal*

of the Division of Health Psychology, American Psychological Association, 13(1), 39–46.

Prochaska, James O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47*(9), 1102–1114. https://doi.org/10.1037/0003-066X.47.9.1102

Renaud, J., Russell, J. J., & Myhr, G. (2014). Predicting Who Benefits Most From Cognitive-Behavioral Therapy for Anxiety and Depression. *Journal of Clinical Psychology, 70*(10), 924–932. https://doi.org/10.1002/jclp.22099

Rogers, E. S., Martin, R., Anthony, W., Massaro, J., Danley, K., Crean, T., & Penk, W. (2001). Assessing Readiness for Change Among Persons with Severe Mental Illness. *Community Mental Health Journal, 37*(2), 97–112. https://doi.org/10.1023/A:1002705614293

Rollnick, S., & Miller, W. R. (1995). What is Motivational Interviewing? *Behavioural and Cognitive Psychotherapy, 23*(4), 325–334. https://doi.org/10.1017/S135246580001643X

Rosen, C. S. (2000). Is the sequencing of change processes by stage consistent across health problems? A meta-analysis. *Health Psychology, 19*(6), 593–604. https://doi.org/10.1037/0278-6133.19.6.593

Safran, J. D., Vallis, T. M., Segal, Z. V., & Shaw, B. F. (1986). Assessment of core cognitive processes in cognitive therapy. *Cognitive Therapy and Research, 10*(5), 509–526. https://doi.org/10.1007/BF01177815

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine, 166*(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Truant, G. S. (1999). Assessment of Suitability for Psychotherapy. *American Journal of Psychotherapy, 53*(1), 17–34. https://doi.org/10.1176/appi.psychotherapy.1999.53.1.17

Westra, H. A., Constantino, M. J., & Antony, M. M. (2016). Integrating motivational interviewing with cognitive-behavioral therapy for severe generalized anxiety disorder: An allegiance-controlled randomized clinical trial. *Journal of Consulting and Clinical Psychology, 84*(9), 768–782. https://doi.org/10.1037/ccp0000098

Westra, H. A., & Norouzian, N. (2018). Using Motivational Interviewing to Manage Process Markers of Ambivalence and Resistance in Cognitive Behavioral Therapy. *Cognitive Therapy and Research, 42*(2), 193–203. https://doi.org/10.1007/s10608-017-9857-6

Data Transparency

Three of the current authors of this manuscript are currently preparing a qualitative paper where the data has been extracted from the same sample as this manuscript albeit with a different focus. The qualitative paper is currently being finalised but has not yet been submitted for journal review. The current manuscript is looking at the validity of RTQ and whether or not RTQ can predict outcome and drop out whereas the qualitative paper is focusing on patients' subjective experience of therapy and reasons for discontinuation from therapy.

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3   **Figure 1**
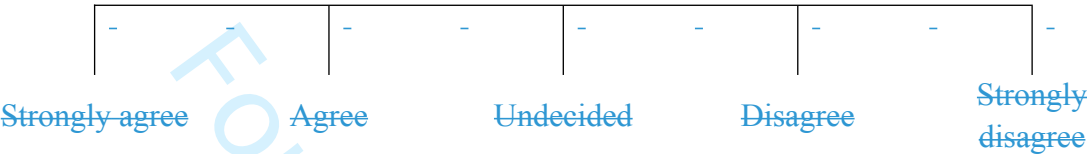4
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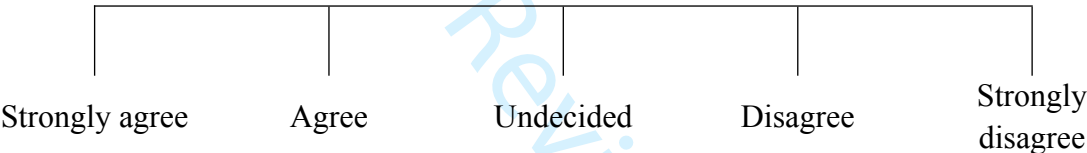6   *The 6 and 12-item Readiness for ~~Treatment~~ Therapy Questionnaire (RTQ)*
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8   *~~Questions in bold are included in the 6 item version.~~ An asterisk indicates items reverse*
9
10   *scored.*
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13   **Readiness for ~~Treatment TherepayTherapy~~ Questionnaire (RTQ): Version 1**
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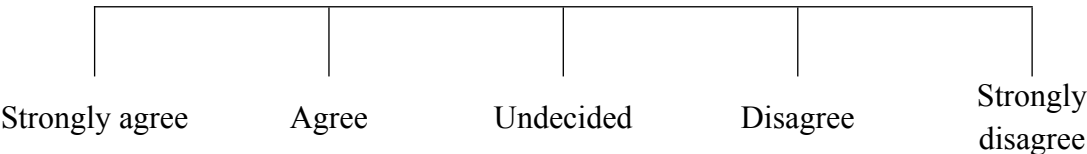16   ~~*Q1: (Q1) I'm not willing to try something difficult or uncomfortable even if it could help me~~
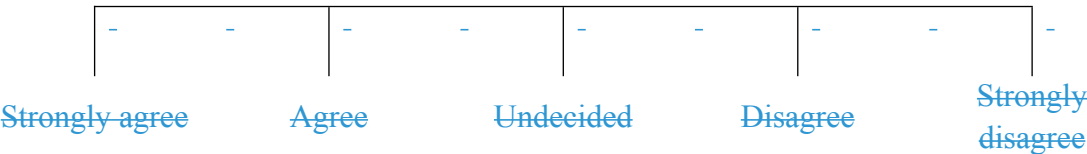17
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22   ~~Strongly~~
23   ~~Strongly agree   Agree   Undecided   Disagree   disagree~~
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28   **Q12: (Q2) It's essential that I work on my problems as soon as possible**
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30   **because they are affecting the quality of my life**
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35   Strongly
36   Strongly agree   Agree   Undecided   Disagree   disagree
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41   ***Q23: (Q3) I like to do things the way I've always done them and I don't want to change**
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46   Strongly
47   Strongly agree   Agree   Undecided   Disagree   disagree
48
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52   ~~Q4: (Q4) I'm willing to learn how to tolerate difficult thoughts and feelings~~
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57   ~~Strongly~~
58   ~~Strongly agree   Agree   Undecided   Disagree   disagree~~
59
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*Q35: (Q5) If I'm sceptical about something, I'm not willing to try it

| Strongly agree | Agree | Undecided | Disagree | Strongly disagree |

Q46: (Q6) Even if therapy becomes difficult, I will stick with it to the end

| Strongly agree | Agree | Undecided | Disagree | Strongly disagree |

Q7: (Q7) I'm hoping my therapist will fix me

| Strongly agree | Agree | Undecided | Disagree | Strongly disagree |

Q58: (Q8) In between the sessions, I will dedicate time to regularly practice the things I learn in therapy

| Strongly agree | Agree | Undecided | Disagree | Strongly disagree |

*Q69: (Q9) I won't attend therapy if I have something more pressing or interesting planned

| Strongly agree | Agree | Undecided | Disagree | Strongly disagree |

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Q10: (Q10) I'm open to thinking more flexibly about strongly held beliefs if it could help me

| - | - | - | - | - | - | - | - | - |

Strongly agree   Agree   Undecided   Disagree   Strongly disagree

*Q11: (Q11) I'm not willing to continue with therapy unless I see benefits straight away

| - | - | - | - | - | - | - | - | - |

Strongly agree   Agree   Undecided   Disagree   Strongly disagree

Q12: (Q12) I have made my own decision to come to therapy because I feel it will help me

| - | - | - | - | - | - | - | - | - |

Strongly agree   Agree   Undecided   Disagree   Strongly disagree

Table 1.

Therapy Type and Diagnosis of Sample

Therapy Received	%	n=
Brief psychodynamic psychotherapy	0.6	2
Cognitive Behaviour Therapy (CBT)	31.8	111
Counselling for Depression	13.2	46
Couples Therapy for Depression	0.3	1
Eye Movement Desensitisation and Reprocessing	3.4	12
Guided Self Help (Book)	7.7	27
Interpersonal Psychotherapy (IPT)	1.1	4
Other High Intensity (not specified above)	8.3	29
Other Low Intensity	33.5	117
Problem descriptor		
F10.2 - Alcohol dependence	0.3	1
F32 - Depressive episode	35.847.9	16725
F33 - Recurrent depressive disorder	3.44.6	162
F40.0 - Agoraphobia	0.3	1
F40.1 - Social phobias	5.24.6	186
F40.2 - Specific (isolated) phobias	0.96	32
F41.0 - Panic disorder [episodic paroxysmal anxiety]	2.964	109
F41.1 - Generalized anxiety disorder	15.20.69	415337
F41.2 - Mixed anxiety and depressive disorder	1.79	67
F41.9 - Anxiety disorder, unspecified	0.3	1
F42 - Obsessive-compulsive disorder	1.792	767
F43 - Reaction to severe stress, and adjustment disorder	0.33.7	131

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F43.1 - Post-traumatic stress disorder	~~10.9~~16.3	~~389~~57
F45.2 - ~~Hypochondriacal~~ Illness anxiety disorder	0.6~~5~~	2
~~F99 - Mental disorder, not otherwise specified~~	~~2.0~~4	~~79~~
~~Z63.4 - Disappearance and death of family member~~	~~0.6~~8	~~23~~
~~No diagnosis~~F45.22- Body Dysmorphic Disorder	~~23.98~~0.3	~~908~~31
F51- Insomnia	0.3	1

Table 2.

Correlations between the 12-item RTQ with PHQ-9 and GAD-7 change scores

Item	PHQ-9 Change Score	GAD-7 Change Score
Q1: I'm not willing to try something difficult or uncomfortable even if it could help me.	-.03	-.06
Q2: It's essential that I work on my problems as soon as possible because they are affecting the quality of my life.	-.09*	-.14**
Q3: I like to do things the way I've always done them and I don't want to change.	-.13**	-.09*
Q4: I'm willing to learn how to tolerate difficult thoughts and feelings.	-.04	-.07
Q5: If I'm sceptical about something, I'm not willing to try it.	-.12*	-.11*
Q6: Even if therapy becomes difficult, I will stick with it to the end.	-.09*	-.13**
Q7: I'm hoping my therapist will fix me.	-.01	.01
Q8: In between the sessions, I will dedicate time to regularly practice the things I learn in therapy.	-.06	-.10*
Q9: I won't attend therapy if I have something more pressing or interesting planned.	-.11*	-.10*
Q10: I'm open to thinking more flexibly about strongly held beliefs if it could help me.	-.07	-.07
Q11: I'm not willing to continue with therapy unless I see benefits straight away.	-.05	-.06

3

Q12: I have made my own decision to come to therapy because I feel it will help me.   -.05   -.07

Table 3.2̶3̶

Correlations between the 12-item RTQ̶and 6-item RTQ with PHQ-9 and GAD-7 scores pre-therapy, post-therapy and change scores 12 and 6 item versions and GAD-7 and PHQ-9 scores

Measure	*12-item RTQ*	*6-item RTQ*
Pre-therapy PHQ-9	-.07	-.06
Pre-therapy GAD-7	-.09	-.05
Post-therapy PHQ-9	-.18***	-.20***
Post-therapy GAD-7	-.21***	-.21***
PHQ-9 Change Score	-.14**	-.17**
GAD-7 Change Score	-.16**	-.19***

4

-	RTQ: 12-item Total	RTQ: 6-item
Pre PHQ	-.07	-.06
Pre GAD	-.09	-.05
Post PHQ	-.18***	-.20***
Post GAD	-.21***	-.21***
PHQ Change Score	-.14**	-.17**
GAD Change Score	-.16**	-.19***

Correlations are one-tailed Pearson's correlations

*p<.05, **p<.01, ***p<.001

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Table 4.34

Regression results: Pre-therapy 6-item RTQ 6 item predicting therapy completion, post therapy reliable improvement and recovery on PHQ-9 and GAD-7 post-therapy.

	Therapy completion: (Dropped out) vs. Completed	Post-t Therapy Recovered on both PHQ-9 and GAD-7: (Not recovered) vs. Recovered	Post-t Therapy Reliable Improvement on both PHQ-9 and GAD-7: (No Improvement) vs. Improvement
6-item RTQ 6 Item Total **Overall Model** *n* % of variance explained (Cox & Snell R Square-Nagelkerke R Square) % correctly identified *M(SD)*	349 10.3-13.7% 63.9% Completed: 18.8 (2.8) Dropped out: 17.8 (2.8)	349 12.1-16.2% 67.6% Recovered: 18.9 (2.7) Not recovered: 17.8 (2.8)	349 9.2-12.4% 62.2% Reliable improvement: 19.1 (2.8) No reliable improvement: 17.9

6

	(2.7)

Individual Predictors (B)	Wald	Exp (B)	Sig	Wald	Exp (B)	Sig	Wald	Exp (B)	Sig
6-item RTQ ~~Tota 6 iteml~~	8.51	1.13	$p<.01$	9.77	1.14	$p<.01$	16.56	1.19	$p<.001$
Gender (Female)	3.14	.64	NS	.51	.84	NS	.56	1.21	NS
Age	13.49	1.03	$p<.001$	3.06	1.02	NS	.66	1.01	NS
Ethnicity (White) vs. BME, Mixed, Not stated	.72	.81	NS	3.17	.70	NS	.68	.80	NS
Pre PHQ-9 score	4.83	.94	$p<.05$	10.94	.91	$p<.001$	4.27	1.06	$p<.05$
Pre GAD-7 score	.27	.98	NS	.67	.97	NS	2.16	1.05	NS

~~NS= Non-significant.~~

Note: Dummy variables are shown in brackets.
NS = Non-significant.

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3   **Reviewer: 1**
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5   Comment: There are a few small typos that need addressing e.g. missing words.
6
7   Response:
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9   _____
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11   Comment: The Introduction made the case for the need for the measure but I was left a little
12   unclear whether the stages proposed by the Prochaska et al transtheoretical model were
13   excluded from the development of the RTQ or fed into it. Either way, might be useful to be
14   clearer on this as it covers a chunk of the Intro and is probably the best known theory of
15   readiness to change for most of the readers. Is it relevant or has it been excluded due to lack of
16   empirical support or application to this patient group?
17
18
19   Response:
20   We have agreed this comment a useful consideration to better the flow of this paper. We have
21   changed the introduction to include a more focussed critique around the evidence base for the
22   Transtheoretical model for readiness for psychotherapy more specifically. This offers a more
23   coherent introduction as to why the Transtheoretical model, although a prominent model in
24   readiness literature for behaviour change, was not included in development of the RTQ.
25   Specific reasons are presented such as existing literature samples consisting primarily of more
26   severe and enduring mental health, which may not be generalisable to common mental health
27   problems.
28
29
30   *"The Transtheoretical model of change is a prominent theory within literature for*
31   *health behaviours and literature supports the utility of the Transtheoretical model to*
32   *describe motivation for behaviour change."*
33
34   We highlight the reasons for not including this in the development of the RTQ more clearly
35   and sooner within the introduction. Specific reasons are presented such as existing literature
36   samples consisting primarily of more severe and enduring mental health, which may not be
37   generalisable to common mental health problems.
38
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40   *"Literature regarding the application Transtheoretical model to readiness for*
41   *psychotherapy is more inconsistent, and samples largely consist of more severe and*
42   *enduring mental health problems such as eating disorders or addiction."*
43
44   *"The literature may focus more upon severe and enduring mental health difficulties*
45   *with regards to readiness due to motivational interviewing techniques finding their*
46   *roots within addiction treatments (Rollnick & Miller, 1995), thus perpetuating a gap in*
47   *literature with regards to common mental health problems."*
48
49   *"The use of the Transtheoretical model to conceptualise readiness for psychotherapy*
50   *has also been criticised, highlighting that readiness for behaviour change and*
51   *readiness for psychotherapy are not synonymous constructs, and arguing that*
52   *readiness for psychotherapy is a more complex construct to measure than specific*
53   *behaviour change (Ogrodniczuk et al., 2009)."*
54
55   Therefore, in answer to the question posed in this comment: "Is it relevant or has it been
56   excluded due to lack of empirical support or application to this patient group?" The

transtheoretical model was not used to develop the RTQ due to both, lack of empirical support and previous measures based upon the transtheoretical model, not being generalisable to this client group.

Comment: Not sure if the Ethical Statement wasn't visible to the reviewers (often excluded as can identify authors) but will assume that more detail was provided and Editor can assess this.

Response: As stated in the manuscript "the evaluations were approved by the Academy of Research & Improvement (Solent NHS Trust) as a formal review of the standard clinical practices (e.g., assessing patient readiness for therapy) and "service procedures (e.g., eliciting patient feedback, analysis of patient data) at Talking Change. All patients in the service are provided with information about the use of their data, including national reporting, and all patients are given the opportunity to remove their data from such analyses."
This NHS Trust approval was sufficient for the purposes of this project.

Comment: Much of the analysis is described as being based on recovery defined by PHQ-9 and GAD-7 scores, if the standard IAPT method using ADSMs is not applied it might be useful to specifically state this. I am not a stats expert but there are presumably some weaknesses to relying on recovery alone that could have been eliminated by using reliable recovery? So recovery alone will not tell us anything about the amount of change and would include people who could have only improved by one or two points As a clinician considering using the tool, one of my first question would be on whether the RTQ predicts reliable improvement? And does it tell us anything about the likelihood of reliable deterioration?

Response: In the method section we have explained more clearly how recovery was defined in IAPT at the time of the study, and have provided a supplementary footnote.

In line with other IAPT services, recovery or 'below caseness' was defined as scoring ≤ 9 on the PHQ-9 and ≤ 7 on the GAD-7 at post-treatment after scoring above either measure at pre-treatment (The National Collaborating Centre for Mental Health, 2020).

Footnote: In 2016 when the study was conducted, the service~~theIAPT services~~ did not formally administer Anxiety Disorder Specific Measures (ADSM) to determine recovery for anxiety disorders.

In terms of deterioration we have now added this to the results: "*There was a reliable reduction in both the PHQ-9 (increase of 6 or more points) and GAD-7 (increase of 4 or more points) for only 1.1% (n=4) of participants.*" However we have added also added to the results that "*There were not enough participants who had a reliable deterioration to see whether the RTQ predicted this.*"

Comment: Patients are categorised as completing therapy or dropping out – would be good to define these. Was this in terms of therapist views? How did this map onto IAPT End stages? So was a mutually agreed termination classed as dropping out? Was dropping out define by therapist on a specific criteria?

Response: In the method section we have explained more clearly how therapy dropout and completed therapy was defined.

In line with other IAPT services, therapy dropout was classified as a patient who attended two or more therapy sessions and discontinued therapy without providing a reason; whereas patients who attended two or more sessions and finished therapy on the agreed date were defined completed (The National Collaborating Centre for Mental Health, 2020).

Comment: In terms of the two factors that were identified but not used, did they make any theoretical sense or hang together as sensible factors based on the themes identified in phase 1 or 2?

Response: In response to other comments we have now removed the factor analysis and instead focus on trying to shortening the measure to 6 items.

Comment: I would have liked a little more info on the scoring e.g. identify which ones are reverse scored, clear text to explain what higher score represents. Text says on p11 'high RTQ scores significantly predicted positive outcome' but would be good to just provide additional sentence earlier and then maybe identify reverse scored items in the appendix on the scale? P12 line 13 needs rephrasing as currently might be interpreted as meaning that RTQ was assessed post-treatment when it doesn't mean that.

Response: In the method section we have made the paragraph clearer to describe the properties of the 12-item RTQ, noting which items were forward and reverse scored. We have illustrated items that were reverse scored in figure 1.

The RTQ consistedwas comprised of 12 items, an item per factor, a 5-point Likert scale ranging from strongly disagree (0) to strongly agree (4), and an equal number of alternating forward and reverse scored items. A higher score indicated greater readiness for therapy.

Comment: P12 line 13 needs rephrasing as currently might be interpreted as meaning that RTQ was assessed post-treatment when it doesn't mean that.

Response: This has now been addressed and 'post-treatment' has been take out.

Comment: The text on page 10 states that Table 3 presents RTQ/Perseverance correlations but it doesn't – assume these were removed due to lack of reliability so text just needs tweaking.

Response: We are no longer reporting on subscales scores so this comment is no longer applicable.

Comment: The results identify poor sensitivity and specificity for the measure which is somewhat worrying and not explained in any detail- either why this might be the case or the implications of this were it to be used in clinical practice? Any ideas on why this is so poor but it can still predict positive outcome on the regression?

Response: We have now amended paragraph 2 of page 17 of discussion to discuss this. It now reads:

However, despite the statistically significant differences in scores on the RTQ based on clinical outcomes, there was poor sensitivity and specificity for the measure in predicting these same outcomes. This was likely due to the small difference between the mean scores of positive and negative clinical outcomes. Thus, it is not possible at this point to develop a cut-off point for the RTQ which could be used to predict positive or negative clinical outcome at the point of assessment. It may therefore be more helpful to use this measure as a continuous measure of readiness with associated score ranges (low, average, high), rather than a single cut-off classifying into two binary positive and negative outcomes. Such a use of the RTQ could mean reductions in scores signifies clinical change more than just above or below a cut-off point. The strong correlations between the RTQ and change scores in this study would indicate this as a potential use.

Comment: I think this is a very interesting paper and would like to see the queries/comments addressed and published somewhere. Might have made sense to publish it alongside the other paper described if a journal would be willing to do this.

Response: The Therapy Discontinuation in Primary Care Study has already been published in in the Cognitive Behvaioural Therapy Journal as it was submitted around the same time as this paper.

https://www.cambridge.org/core/journals/the-cognitive-behaviour-therapist/article/therapy-discontinuation-in-a-primary-care-psychological-service-why-patients-drop-out/8F1B8ED5953F7CEDB7B8CF12F8931437

Reviewer: 2

Comment: 1.   The authors write that "there is no current measure of readiness for treatment, for short term, evidence based psychotherapies for depression or anxiety disorders in mainstream mental health services" though they subsequently discuss a published measure that assesses readiness for treatment in the methods section, the Readiness for Psychotherapy Index. This measure should be discussed earlier. How does this measure improve upon this other existing measure?

Response: We have tried to improve on the Readiness for Psychotherapy Index as the original validation paper (Ogrodniczuk et al, 2009) presented a factor analysis and reliability, it did not analyse whether this predicted clinical outcomes. We also cite Safran and colleagues (1986) semi-structured clinical interview as an existing measure, however, similarly it has not shown to predict attrition from therapy (Renaud et al., 2014).

The Readiness for Psychotherapy Index is also 20 items and Safran and colleagues (1986) clinical interview takes approximately one hour to administer. We originally submitted a shorter 12 item version, however based on this comment we have decided Iin thise revision we

have to shortened the RTQ this further to a 6 items version which predicts outcomes with a similar level as the 12 item version. We therefore feel Tthis is significantly shorter version improves onthan the Readiness for Psychotherapy Index. As a result of this change we have removed looking at subscales as part of this paper.

Please note that the shorter item has a Cronbach's alpha slightly below .7, however we had added to the discussion:

The Cronbach's alpha of of the 6 item RTQ (α=.63) was below the .7 generally suggested as acceptable. However, a low alpha can result from a low number of items such as in this case (Tavakol & Dennick, 2011), the inter item mean correlation of .24 is within the range of .15 to .50 suggested as acceptable by Clark & Watson (1995).

We have updated the introduction to advise of the measure developed by Ogrodniczuk et al. (2009):

> "Two previous measures of readiness for therapy exist for short term evidence-based psychotherapies in mainstream mental health services. However, the measures are time consuming to administer and no research currently has looked at whether or not Ogrodniczuk et al.'s (2009) Readiness for Psychotherapy Index predicts therapy outcomes and Safran et al.'s (1986)'s Readiness for Therapy Questionnaire did not predict attrition rate from therapy (Renaud et al., 2014).

Comment: 2.   They identify 12 themes from the RPI (see above), then come up with one item for each theme for their new measure. This seems an odd approach. Are some themes more important than others? Perhaps additional items are needed for each theme, which would be more sound, psychometrically. As it reads, it is a very heterogeneous measure, which is perhaps why it did not perform very well.

Response: In the method section we have explained more clearly why the RTQ initially consisted of 12 items. *In this revision, the RTQ is 6-items and retains predictive power of the 12-item version*

As the RTQ was planned to be completed alongside othera routine battery of other clinical measures, we sought to reduce overall questionnaire burden by developing a measure that would contain fewerless items and be faster to complete than the measure by Ogrodniczuk and colleagues.

We proceed to say:

We planned to assess if the number of items could be reduced by examining which items were most strongly associated with clinical outcomes.

Comment: 3. Sample characteristics, including N, should be presented in the methods. They could present a bit more about the participants. Did they meet diagnostic criteria for anything? Were exclusionary criteria used?

Response: We have now moved the participants characteristics to the methods. In our original submission in table 1 we have already presented the problem descriptor which is used in IAPT .. We have also added the inclusion criteria was being above caseness on the PHQ-9 or GAD-7 (or both) before therapy.

In the method section we have provided further information about the study's inclusion and exclusion criteria.

All participants received an assessment and a 'provisional diagnosis' by therapists from the clinical teams, using the overview and screener modules of the Structured Clinical Interview for the DSM-IV (APA, 1994) for Axis I disorders (SCID-I; First, Spitzer, Gibbon, & Williams, 1995) and Axis II disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997).

Participants who were provisionally diagnosed with an Axis 1 disorder and therefore met the referral criteria for treatment within a primary care psychological therapy service were included in the study; whereas participants ~~provisionally diagnosed~~whose main presenting problem with an Axis 2 disorder (e.g., psychotic disorders, personality disorders) were not included in the study, and instead signposted to the local secondary care mental health team.

Comment: 4. For the correlational analyses, the authors should examine all participants who initiated treatment, rather than just treatment completers (eg using maximum likelihood estimation). The effects of the RTQ predicting change on these outcomes were pretty small, even among completers (r's <.20).

Response: The PHQ-9 and GAD-7 were completed at every session, so the correlations were already for both those who were deemed completed and those dropped out. We have now added to the method section to make this clearer:

"The PHQ-9 and GAD-7 were completed at every session, this allowed for changes over time to be analysed for both those who completed and dropped out".

We have also added to the correlations section of the results:
"Please note that the correlations are for all participants whether they were deemed completed or dropped out of therapy, as measures were completed every session."

Comment: 5. Table 4 is confusing. The heading should actually describe the analysis (predictors of clinical outcome), and it's not clear what is meant by % of poor or positive clinical outcomes correctly identified. Those data should probably be removed.

Response: For this table (now changed to table 3 due to other changes made), we have changed the title to:

Regression results: Pre-therapy RTQ 6 item predicting therapy completion, post therapy reliable improvement and recovery on PHQ-9 and GAD-7 post-therapy.

We have also changed '% of poor or positive clinical outcomes correctly identified' to simply '% correctly identified' to make this clearer.

Due to other comments we have also changed this table to show results for the regression for 3 separate analysis. In the initial paper we had one outcome variable combining two variables. We have now separated this to look at therapy completion, recovery and reliable change.

_____

Comment: 6.   Did scores on the RTQ predict attrition?

Response: In the original paper we presented a single variable which combined being below recovery cut off as well as drop off, however we appreciate this is perhaps unclear. We have therefore re-done the analysis to look at 3 variables separately: therapy completion, recovery and reliable change.

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Comment: 7.   The ROC analyses did not yield results that were especially impressive for this measure in predicting positive outcome. This makes it seem to have little clinical utility.

Response: We have now added the following section to the discussion in relation to this and another reviewers point to be clear about the lack of a clinical cut off, and possible use for this as a range of scores instead:

However, despite the statistically significant differences in scores on the RTQ based on clinical outcomes, there was poor sensitivity and specificity for the measure in predicting these same outcomes. This was likely due to the small difference between the mean scores of positive and negative clinical outcomes. Thus, it is not possible at this point to develop a cut-off point for the RTQ which could be used to predict positive or negative clinical outcome at the point of assessment. It may therefore be more helpful to use this measure as a continuous measure of readiness with associated score ranges (low, average, high), rather than a single cut-off classifying into two binary positive and negative outcomes. Such a use of the RTQ could mean reductions in scores signifies clinical change more than just above or below a cut-off point. The strong correlations between the RTQ and change scores in this study would indicate this as a potential use.

Reviewer: 3

Comment: 1. There are a total of 366 diagnoses listed in Table 1 but only 349 participants, suggesting that some participants likely had multiple diagnoses. Can the authors specify the mean number of diagnoses per participant?

Response: Thank you for spotting this. The participants do not have more than one diagnosis: this was an error. We believe this occurred because we had not updated the diagnosis numbers after removing those with missing data. We have now correct this and the total adds up to 149.

Comment: Furthermore, a significant number of participants (23.9%) appear to have no diagnosis. It seems important for the authors to comment on a sizable portion of their sample being without diagnosis given that the paper aims to develop an instrument suitable for depressed and anxious populations.

Response: We have since reviewed participants with a missing diagnosis. The data was originally extracted from IAPTus reporting, and we suspected that cases of missing diagnoses were likely due to the therapists forgetting to formally register the diagnosis in the appropriate tab. We have since reviewed the SCID assessments of these cases and have identified the diagnoses.

Comment: 2. In the Method (Design) section, the authors note that Talking Change offers a range of evidence-based therapies but provide only a single example in parentheses. Please consider including a few more examples or citing Table 1 here.

Response: We have added to the method '(e.g., Cognitive Behavioural Therapy, Eye Movement Desensitisation and Reprocessing, Couples Therapy for Depression and Interpersonal Psychotherapy, see table 1 for list of therapies offered)'.

Comment: 3. What were the mean and the range of the number of treatment sessions attended across the psychotherapies? Is it possible that the predictive utility of the RTQ may vary, in part, as a function of the duration of treatment? Several items on the measure (e.g., 6 – intention to work through difficulty and continue therapy until the end; 8 – intention to practice or complete things in between sessions; 11 – realistic assumption that the benefits of therapy tend to come over time) suggest that there is a temporal element to overall treatment readiness (i.e., the patient is willing to work/persevere through treatment over time). Given that in the current study treatment completion is defined as attending at least two sessions, to contextualize the results it would help to know how many sessions were typically attended.

Response: It was not possible to identify mean and the range of number of sessions for those who participated in the research. We have highlighted this as a suggestion for future research.

Comment: 4. In the results section (pg 10, line 19), the authors refer to RTQ/Perseverance factor. It is not clear what this is referring to given that in the preceding section they conclude that the factors were deemed unreliable and that only total scores will be used in subsequent analyses. Similarly, on pg 11, line 3, they mention the use of a subscale in the context of a hierarchical linear regression.

Response: In response to other comments, we are no longer looking at subscales so this has been addressed.

Comment: 5. Administration of the RTQ alongside established measures of treatment readiness (e.g., Readiness for Psychotherapy Index, which appears to have been considered in the development of the RTQ) would have enhanced this paper by providing data on convergent validity. The authors should discuss efforts to establish convergent and divergent validity for this instrument in the context of limitations and future directions.

Response: We have now added to the limitations section of the discussion:

The convergent validity of the RTQ compared to the Readiness for Psychotherapy Index (Ogrodniczuk et al, 2009) was not established in this study. Future research should include both measures in order to determine correlations between the two and compare their predictive efficiency.

Comment: In the abstract, the questionnaire is referred to as the Readiness for Therapy Questionnaire, but in the title and throughout the paper it is called the Readiness for Treatment Questionnaire.

Response: We have now used the name the 'Readiness for Therapy Questionnaire' consistently throughout the manuscript.

Comment: Pg 4, line 52, remove period after "specifically".

Response: We have made this change.

Comment: Pg 5, line 17, remove author's first name and middle initial from citation ("Carlo C.")

Response: We have made this change.

Comment: Pg 5, lines 52-59, semicolons make this somewhat difficult to read. Use of semicolons in general throughout the manuscript somewhat reduces its clarity.

Response: The semi-colons mentioned have been removed; and semi-colons throughout the manuscript have been reduced.

Comment: Table 4, gender row appears to have a numerical type-o (3.3.36).

Response: Apologies for our initial error. The numbers in what was table 4 (now table 3) have now been changed completely due to new statistics completed so this typoe is no longer present.