The Therapy Attitudes and Process Questionnaire: A Brief Measure of Factors related to Psychotherapy Appointment Attendance

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Declaration of Interest

No conflicts of interest to be declared.

Abstract

Objectives: Patient non-attendance and dropout remains problematic in mental health settings [1, 2]. The Theory of Planned Behaviour (TPB) has proved useful in understanding such challenges in a variety of healthcare settings, but the absence of an adequate measure has hampered research in mental health. The aim of the current study was to develop and conduct an initial psychometric investigation of a brief measure, the Therapy Attitudes and Process (TAP) Questionnaire, utilising the TPB to understand factors associated with attendance in mental health settings.

Design: A quantitative survey based design was utilised.

Methods: The TAP was administered to 178 adult participants, who were engaged in individual or group psychotherapy. A subsample also provided data to assess validity and reliability.

Results: A four-factor solution was revealed through Exploratory Factor Analysis and accounted for approximately 75% of the variance in scores. Factors corresponded to those predicted by the TPB. Analyses supported the reliability, validity, and internal consistency of the measure.

Conclusions: Results suggest that the TAP may provide a useful measure for examining patients' attitudes and beliefs about attending psychotherapy appointments. The TAP can be used to better understand patients' intentions, attitudes, perceptions of behavioural control, and subjective norms relating to psychotherapy attendance. This understanding may facilitate improved outcomes for patients and clinicians.

Key Points for Decision Makers:

- Non-attendance and dropout is a substantial problem in psychotherapy settings. There is a need to better understand and tailor interventions in accordance with the individual patient barriers.
- The TAP was developed based on the Theory of Planned Behaviour, and is designed to assess attitudes, subjective norms, perceived behavioural control, and behavioural intentions regarding appointment attendance.
- Initial investigation of the TAP indicates it has sound psychometric properties and can be used to increase the delivery of patient centered services

Keywords: Theory of Planned Behaviour, appointment attendance, dropout, adherence, mental health; psychotherapy

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The Therapy Attitudes and Process Questionnaire: A Brief Measure of Factors related to Psychotherapy Appointment Attendance

1. Introduction

Treatment dropout and non-attendance by psychotherapy patients are types of non-adherence, and are a costly problem for both clinicians and patients [3, 4]. Consequences of patient dropout and non-attendance include poorer treatment outcomes, increased burden of disease, loss of income for services, inefficient use of staff time, and longer waiting lists [5]. The aim of this study was to develop and test a brief self-report measure, the Therapy Attitudes and Process Questionnaire (TAP) to identify factors related to patient attendance at scheduled therapy appointments. Such a measure may assist clinicians in understanding patient factors relating to attendance, and allow them to tailor treatment to address the individual's beliefs and barriers identified by the measure.

1.1. Non-attendance and Dropout

Non-attendance refers to patient failure to attend a scheduled appointment. Non-attendance rates in mental health settings have been found to be as high as 60%, with an average of approximately a third of all scheduled appointments not kept [6-8]. Non-attendance is also often the first step towards dropout. Dropout refers to patient termination of treatment prior to completion of a therapy program, measured as either completion of a set number of sessions or by clinician judgment [9, 10]. At least one in five adult patients drop out of psychotherapy and this rate can be substantially higher in some settings [11]. Although various patient, therapeutic, and social characteristics have been associated with increased risk of patient non-attendance and dropout, research is in large part still inconclusive and sometimes even conflicting, particularly with regards to patient characteristics [12, 4]. For example age has been associated with non-attendance in some studies [e.g., 13] but not others

[e.g., 14], as has gender and level of education among others variables [e.g., 12, 14, 13, 15]. This inconsistency in the literature may be in part due to a lack of theory driven approaches to understanding patient attendance and dropout.

1.2. The Theory of Planned Behaviour

Many theories of adherence have been proposed in order to understand patient behaviours within the therapeutic context. One of the most well accepted behavioural theories is the Theory of Planned Behaviour (TPB), which formed the theoretical basis for development of the TAP. The TPB has been shown to be useful for understanding the factors related to engagement in healthcare behaviours [16]. The TPB provides a well-validated model that has been used to explain the relationship between attitude and behaviour, and accounts for the complexity of people's decision making [17]. The TPB asserts that behaviours are precipitated by behavioural intentions (e.g. "I intend to attend the appointment with my psychologist") [18]. Intention to perform a behaviour is the cognitive representation of an individual's willingness and capacity to enact a behaviour, and is considered to be the best predictor of the behaviour occurring. Hence, the stronger a person's intention to perform a specific behaviour, the greater the chance of the behaviour occurring.

Behavioural intention, and therefore behaviour, is guided by three constructs: attitude toward the behaviour (an individual's evaluation of self-performance of a specific behaviour), subjective norm (an individual's perception of the specific behaviour, as it is influenced by the judgements of significant others), and perceived behavioural control (the individual's perception of how easy of difficult performance of the specific behaviour may be) [19]. These three predictors of intention are formed based on the individual's underlying beliefs in each domain. That is, a person's attitude towards attending therapy is developed based on his/ her behavioural beliefs; subjective norms towards attending therapy are developed based on his/ her normative beliefs; and perceived behavioural control toward attending therapy is

developed based on his/ her control beliefs. Behavioural beliefs correspond to the degree of preference felt for a specific behaviour and produce a positive or negative attitude [e.g. "I find psychotherapy to be unhelpful"; 19]. Normative beliefs correspond to internalized social pressures to engage in the behaviour and the person's motivation to comply with those expectations and produce subjective norms [e.g. "Those people who are important to me would support me attending psychotherapy"; 19] and Control beliefs are one's perceptions of how easy or difficult it is to perform the behaviour and lead to perceived behavioural control [e.g. "I have complete control over whether I attend my psychotherapy sessions"; 19]. In combination, these three constructs lead to the formation of a behavioural intention [20], as displayed in Figure 1.

The TPB has been employed in research predicting health behaviours such as parent's immunization intentions [21], diet [22], and exercise [23]. Support for the TPB has been demonstrated in several meta-analyses including Godin and Kok's [24] research. This meta-analysis found, that across a range of health behaviours in 87 studies, the model accounted for 41% of the variance in behavioural intentions and 34% of the variance in behaviours. Although the TPB has also been used to understand and predict attendance in a variety of healthcare settings [e.g., 25, 26-28], research into the use of the TPB to predict attendance in mental health settings has been limited.

1.3. Using the TPB in Mental Health Settings

According to the TPB, psychological treatment participation can be encouraged by exploring patient beliefs about subjective norms, and perceived behavioural control, in addition to improving attitudes towards treatment [4]. However, research into the utility of the TPB in mental health settings has been hampered by the absence of an empirically validated tool that can be used by clinicians to understand patient attendance guided by the TPB. The only available studies in this area [7, 29] found conflicting results regarding the

utility of a questionnaire based on the TPB for understanding patient attendance behaviours. Furthermore, both studies failed to provide adequate psychometric testing of the newly developed measures, including whether the structure of these questionnaires did in fact reflect the TPB. There is a need in this field for a psychometrically sound questionnaire, with factors that clearly map to the underlying theory. Such as a tool that may be used by clinicians to understand patient attendance as based on the domains of the TPB, and allow clinicians to address various aspects of TPB domains (such as attitude or subjective norms) as part of the clinical intervention.

1.4. The Current Research

The current research describes the development and psychometric evaluation of the Therapy Attitudes and Process questionnaire (TAP). Based on the TPB, it was hypothesized that four factors would emerge from the TAP; attitude, subjective norm, perceived behavioural control, and intention. The reliability, validity, and internal consistency of the measure were also assessed. Additional measures were administered to a subsample of participants to determine convergent and discriminant validity. In accordance with TPB construct descriptions provided by Ajzen (2002, 2006), it was predicted that the total scale would show discriminant validity (non-significant or weak correlation) to symptom distress [as measured by the Kessler-10; 30], and that the Subjective Norm subscale would show moderate convergent validity to perceived social support [as measured by the Multidimensional Scale of Perceived Social Support; 31] and perceived stigma [as measured by the Perceived Devaluation Discrimination Scale; 32]. Furthermore, it was predicted that the attitude subscale would show convergent validity with patient expectations of psychotherapy [as measured by the Milwaukee Psychotherapy Expectations Questionnaire; 33], and the perceived behavioural control subscale would show convergent validity with

locus of control [as measured Rotter's Locus of Control scale; 34]. Due to a lack of similar measures, convergent validity for the Intention subscale could not be assessed.

2. Method

2.1. Participants

Sample size was determined by apriori power analyses based on effect sizes previously reported in the literature. Minimum sample size for the factor analysis was based on Hatcher's [35] recommendation that minimum sample size be at least five times the number of variables in the analysis. For the current study this was determined to be 105 participants (21 variables x 5). The second power analysis was conducted using G*Power version 3.1 [36] to determine the minimum sample size required for the regression and correlation analyses to be conducted on the finalised version of the questionnaire. The power analysis indicated that 67 participants were required, based on a power level of .80 and an estimated medium effect size (d = .30), when employing the traditional .05 criterion of statistical significance.

Participants were 168 adults who were currently engaged in psychotherapy. They were recruited through a University-based outpatient psychology clinic (n = 100, females = 56, males = 43, M = 36.48 years, SD = 13.56) and through emails to university staff and students, posts in online community forums and social media sites (n = 67, females = 55, males = 12, M = 31.76 years, SD = 12.46). The total number of respondents was 178, of which 168 were used in the final analysis. Participants were excluded if they were younger than 18 years of age (n = 2), not currently undergoing therapy (n = 2), or were in a style of therapy other than individual or group (such as family or couples therapy, n = 6). The latter criterion was used to exclude cases in which the participant may not have had complete volitional control over their therapy attendance behaviours. The final sample for the factor

analysis included 111 females and 55 males aged between 18 and 73 years (M = 34.55, SD = 13.29). The majority of the respondents (67.9%) indicated that they had been in previous contact with psychological services before their current period of therapy, with chronicity of difficulties ranging between .058 to 60 years (M = 10.65, SD = 12.78).

2.2. Materials and Measures

2.2.1. Therapy Attitudes and Process Questionnaire (TAP). An original pool of 33 items measuring the four constructs of the TPB was created by modifying items (to reflect therapy attendance behaviours and processes) used in previous questionnaires in the health field [e.g., 37, 21, 38]. We initially considered using grounded theory (a qualitative procedure that attempts to uncover views that participants have about a topic [39]), to develop the questionnaire, but this method is used to develop items in the absence of pre-existing theory and research. Our intention in this study however was to develop a questionnaire that leveraged off evidence regarding the established use of the TPB for understanding healthcare behaviours [see 16, 40, 41], and so this procedure was deemed unnecessary. Rather, from the 33 items modified from previous literature, an expert panel of eight clinical psychologists were asked to rank the top four items that they believed best assessed each of the four constructs of the TPB. These rankings were then combined, with the top five items on each construct to be included in the TAP. Due to tied rankings among items on the perceived behavioural control subscale, seven items were included for this subscale. In addition, due to a convergence of rankings for the four most relevant items on the Intention subscale, only four items were available for inclusion on this subscale. As such the resulting TAP questionnaire contained 21 items.

Attitude towards therapy was measured with five items (e.g. ‘I find therapy to be…’) using 7-point bipolar adjective scales as suggested by Ajzen [19]. Examples of bipolar anchors utilized on the attitude subscale are: *positive-negative* and *beneficial-harmful.*

Subjective norm was measured by five items (e.g. 'Most people whose opinion matters to me think I should attend psychotherapy'), using a 7-point rating scale, with anchors ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Perceived behavioural control was measured by seven items using a combination of 7-point bipolar adjective scales (e.g. *very easy* versus *very difficult*) and 7-point rating scales with anchors ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Intention to attend psychotherapy was assessed by four items rated on a 7-point rating scale with anchors ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

2.2.2. Kessler-10. The Kessler-10 [K-10; 30] is a 10-item questionnaire intended to yield a global measure of psychological distress (e.g. 'In the past 4 weeks, about how often did you feel nervous?') over the last four weeks. Items on the K-10 are measured on a scale ranging from 1 (*none of the time*) to 5 (*all of the time*). Item responses are totalled to produce a total K-10 score for the scale, ranging from 10 – 50, with higher scores indicating higher levels of psychological distress. The measure has demonstrated high internal consistency [α = .84; 42] and predictive validity [predictive accuracy = 76.7%; 42]. Internal consistency in the current study was also high (α = .94).

2.2.3. Multidimensional Scale of Perceived Social Support. The Multidimensional Scale of Perceived Social Support [MSPSS; 31] is a 12-item measure of subjectively assessed social support from family, friends, and significant others (e.g. 'My family really tries to help me'). Response choices for each item range from 1 (*very strongly agree*) to 7 (*very strongly disagree*). Item responses are totalled to produce a total item score for the scale, ranging from 12 – 84. Higher scores are indicative of greater levels of perceived social support for the respondent. The MSPSS has demonstrated high internal consistency (α ranging from .84 to .92) and strong test-retest reliability [.72 to .85; 31]. Cronbach's alpha in the current study was similarly high (α = .93).

2.2.4. Perceived Devaluation-Discrimination Scale. The Perceived Devaluation-Discrimination Scale [PDDS; 32] is a 12-item scale that measures public stigma about how people perceive psychological illness. Items are measured using a non-numbered scale ranging from *strongly agree* to *strongly disagree*, with statements about the extent to which an individual believes most people will discriminate against a psychiatric patient (e.g. 'Most people think less of a person who has been in a psychiatric hospital'). All items are scored (range between 27 – 72) so that a high score indicates a belief that discrimination will occur in regard to former psychiatric patients. The scale has shown good internal consistency overall [α = .78; 43] and satisfactory construct validity [43]. Internal consistency in the current study was high (α = .89).

2.2.5. Milwaukee Psychotherapy Expectations Questionnaire. The Milwaukee Psychotherapy Expectations Questionnaire [MPEQ; 33] is a 13-item instrument that measures patient expectations about the components and effects of therapy (e.g. 'My therapist will be sympathetic'). The responses consist of Likert scales with anchors ranging from 0 (*not at all*) to 10 (*very much so*). This questionnaire has demonstrated good internal consistency [α > .85; 33] and strong test-retest reliability over a one-week test period [r = .83; 33]. Internal consistency in the current study was high (α = .90).

2.2.6. Rotter's Locus of Control Scale. Rotter's Locus of Control Scale [Rotter's LOC; 34] is one of the most common scales measuring an individual's locus of control with 29 items, including six filler items. Respondents are given the choice of two statements and are required to select the statement they agree with the most (e.g. 'What happens to me is my own doing' versus 'Sometimes I feel that I don't have enough control over the direction my life is taking'). Item responses are totalled to produce a total score for the scale, ranging from 0 – 23. Higher scores are indicative of an external locus of control, while lower scores are indicative of an internal locus of control. Test-retest reliability after a one-month test period

[r varying between .49 to .83; 44] and internal consistency [.80; 45] have been found to be satisfactory. Cronbach's alpha in the current study was similarly satisfactory (α = .73).

2.2.8. Other Variables. Chronicity was measured in years by participants recording how long they had been experiencing the difficulties that made them seek psychotherapy. Previous contact with psychological services was measured by participants reporting whether they had received therapy in the past.

2.3. Procedure

Ethical approval was granted from the University Human Research Ethics Committee prior to study commencement. Participants provided informed consent (either by paper or online), following which all participants were administered the TAP. A subsample of 69 participants (online sample) completed the other five measures of convergent and discriminant validity in addition to the TAP. Eighteen participants completed both online and paper versions (with no time interval in between), to allow for equivalence checks between the two data collection modes to be conducted. Among these 18 participants the order of the paper and the online versions were counterbalanced to control for order.

Participants from the clinic subsample were administered the TAP at the end of each of their first six appointments. The multiple administrations of the TAP in this sample were used to evaluate the test-retest reliability of the measure. The first two administrations (sessions one and two) of the TAP were used to calculate test-retest reliability. Of the 99 participants from the clinic sample, 51 completed the questionnaire at both time points.

3. Results

Data were analysed using SPSS version 21 [46] and Amos version 22 [47]. For ease of interpretation and so that all items entered into the EFA utilised a uniform response scale, linear transformations were conducted on items originally measured on bipolar adjective

scales (ranging -3 to +3). As such, for all analyses each item scale ranged from +1 to +7. Items were then summed to obtain factor scores.

3.1. Equivalence of Measures

Equivalence checks were performed on the total TAP scores between the paper and online versions for those participants who completed both versions. A strong positive correlation was found ($r = .84$, $p < .001$), and supported equivalence between the two modes of delivery.

3.2. Data Screening and Assumptions

Data were examined for normality, linearity, and multicollinearity using the guidelines proposed by Tabachnick and Fidell [48]. No notable violations of assumptions were found. Descriptive statistics and bivariate correlations between items are displayed in Table 1.

The data was screened for univariate and multivariate outliers. No univariate outliers were found. Multivariate normality was assessed using Mahalanobis Distance scores. Of the 168 cases, 21 were identified as multivariate outliers. To test the impact of these multivariate outliers, the factor analysis was run with and without the cases. There were no substantive differences between results from these analyses. As they were not impacting on inferential decisions the multivariate outliers were retained for completeness [48].

3.3. Exploratory Factor Analysis (EFA)

3.3.1. Initial Analysis. Given that the TAP was a newly developed measure, EFA was selected as the most appropriate option for exploration of the questionnaire structure. Principle Axis Factoring (PAF) resulted in four factors with eigenvalues exceeding 1, which explained 47.35%, 11.45%, 6.09%, and 3.6% of the variance respectively. An inspection of the scree plot revealed a break after the fourth factor. To aid in the interpretation of these four factors, rotation by Promax was performed. The rotated solution revealed the presence of

simple structure [49], with all four factors showing a number of strong loadings and all variables, but one, loading only one factor. The interpretation of the four factors was consistent with the four constructs of the TPB.

3.3.2. Reducing the item pool. After conducting the initial EFA, the four highest loading items were selected from each of the four extracted factors to construct shorter scales aimed at ease of administration in clinical settings. Analyses were also run with two and three items per factor, however, it was found the factor structure was most stable and interpretable, and internal consistency highest, with a four item per factor solution. The final scale consisted of 16 items (Appendix A) and was subjected to another EFA, as well as reliability and validity analyses.

3.3.3. Factor Analysis of the final scale. PAF revealed the presence of four factors with eigenvalues exceeding 1, which explained 51.27%, 12.79%, 6.62%, and 4.53% of the variance respectively. An inspection of the scree plot revealed a clear break after the fourth factor. Communalities for the four-factor solution ranged from .48 to .92 (Table 2). Promax rotation revealed simple structure [49], with all four factors showing a number of strong loadings and all variables, but one, loaded by only one factor. The item "I think I can attend my psychotherapy sessions" loaded on both Factor 2 and Factor 4. One item (item 4) resulted in a factor loading greater than 1. Given that an oblique rather than orthogonal rotation was used, and that all assumptions for the analysis had been met, this loading was not deemed to be problematic [50].

The interpretation of the four factors was consistent with the four constructs of the TPB. Factor 1, termed Subjective Norm, loaded items focused on patient perceptions of how the important people in their life feel about them attending psychotherapy. Factor 2, Intention, loaded items relating to patients' intentions to attend and continue psychotherapy. Factor 3, Attitude, loaded items focused on patients' attitudes and beliefs towards

psychotherapy. Factor 4, Perceived Behaviour Control, loaded on patients' perceptions of control over attending psychotherapy. Correlations between the factors ranged from .38 to .70.

3.4. Reliability Analyses

3.4.1. Internal Consistency. Table 3 presents the alpha reliability coefficients for the TAP total scale and subscales. The item identified in the factor analysis with multiple factor loadings, "I think I can attend my psychotherapy sessions", was included in the reliability analyses for both factors. The decision was made that this item best fit in Factor 4 due to making the most positive contribution to this factor's coefficient alpha size [51]. The item also best fit with this factor with regards to the theoretical structure of the TAP.

3.4.2. Test-Retest Reliability. Test-retest reliability was established with Intraclass Correlation Coefficients for 51 participants' scores on the TAP taken one week apart. Reliability coefficients for the total TAP and its subscales are provided in Table 3.

3.5. Validity Analyses

3.5.1. Convergent Validity. Convergent validity was assessed for three of the four subscales of the TAP separately. Table 4 shows the correlations found between the TAP subscales with related clinical measures. A moderate positive correlation was found between the MPEQ total scores and the Attitude subscale. The PDDS total scores showed a weak negative correlation with the scores on the Subjective Norm subscale. The Subjective Norm subscale, however, moderately correlated positively with scores on the MSPSS scale. The Perceived Behavioural Control subscale showed a moderate negative correlation with Rotter's LOC. This correlation was in the expected direction, demonstrating that high perceived behavioural control was associated with an internal rather than external locus of control.

3.5.2. Discriminant Validity. Discriminant validity was assessed by correlating TAP total scores with total scores on the K-10. A moderate negative correlation was found, indicating that TAP scores were not completely independent from symptom distress.

4. Discussion

The aim of the current study was to develop a brief questionnaire to measure therapy attitudes and process (TAP) related to attendance of psychotherapy appointments. A high proportion of patients fail to attend these appointments [52] and appointment non-attendance has detrimental financial impacts for health systems [53]. The TAP is a 16-item questionnaire whose development was based on the TPB, which has been shown to predict attendance in healthcare settings. Using the TAP to identify patients in health care settings who are more likely to not attend psychotherapy appointments may generate considerable savings in the health system by enabling clinicians to either intervene and address patients' concerns about psychotherapy or consider referral to other treatment options.

The TAP was purposely developed drawing on TPB based questionnaires from other health settings, and designed to be suitable to the mental health setting by making use of expert clinical opinion to modify items. Our results indicate that the revised 16-item TAP adequately reflects the constructs of the TPB in relation to psychotherapy appointment attendance. The measure also demonstrates strong psychometric properties, including excellent internal consistency and temporal stability. The magnitude of the TAP test-retest correlations were comparable to those reported for other self-report measures relating to psychotherapy, such as the MSPSS [31], and the MPEQ [33]. Furthermore, the equivalence demonstrated between the online and paper based delivery modalities indicate that the TAP may be delivered by online means with stability in psychometric properties maintained.

Importantly, this result indicates that the TAP may be a useful measure to assess likely patient attendance for both face-to-face and online modalities of psychotherapy.

A series of validity analyses supported the convergent validity of the Perceived Behavioural Control and Attitudes subscales. Discriminant validity between the TAP total scale and symptom distress was partially supported, with a moderate negative correlation between The TAP and the K-10 indicating that whilst the TAP measures constructs distinct to symptom distress, common variance (approximately 32%) also exists. It is possible that this may be due to the help negation process. Help negation refers to the inverse relationship that has been observed to exist between psychological distress and help-seeking intention [54], where high levels of psychological distress may influence individuals to discount the benefit of helpseeking. As such, it is possible that higher scores on the K-10, which is indicative of psychological distress, are associated with lower scores on the TAP, indicating more negative beliefs and attitudes toward attending psychotherapy. This explanation is consistent with the significant negative correlations found between the Attitude, Perceived Behavioural Control, and Subjective Norms subscales with the K-10, indicating that greater psychological distress was associated with more negative attitudes, lower perceived behavioural control, and more negative subjective norms toward attending therapy. This finding suggests that patients who are suffering from high levels of psychological distress may need additional support and encouragement to attend psychotherapy appointments.

Convergent validity of the Subjective Norm subscale was investigated through comparison to the PDDS and MSPSS. The predicted negative relationship between the PDDS and the Subjective Norm subscale was not found, indicating independence of the subscale to patient perceptions of stigma. Indeed, only weak correlations were found between the PDDS and all TAP scales, indicating that the constructs measured by the TAP are not strongly related to an individual's perceptions of stigma toward mental illness, again suggesting that

the TAP may be uniquely tapping important attitudes that influence patients' attendance at psychotherapy appointments. Support for the convergent validity of the Subjective Norm subscale was however found in the comparison to the measure of perceived social support (MSPSS), which is consistent with considerable evidence of the role of such support in making positive healthcare choices [55-57].

The TAP may be used clinically to identify specific factors and/ or items in which a patient's scores may be lower than his/ her other responses or a comparative reference group, to facilitate discussion and intervention to improve the patient's attitudes towards therapy (such as why they might think is harmful), subjective norms (addressing perceptions that his/ her involvement in therapy is not supported by significant others, or tailoring interventions to improve the subjective norms experienced by the individual), and/ or perceptions of behavioural control (challenging or identifying strategies to increase an individual's perceptions of the degree of control they have over their therapy attendance behaviours). Using the TAP to encourage discussion and elicit feedback from the patient in session may facilitate early intervention on factors related to patient attendance and dropout, and enable development of structured, theory driven methods to prevent non-attendance at psychotherapy appointments.

Beyond the psychotherapy room, the TAP may also be useful in research settings as an additional tool for understanding and comparing attendance and dropout related factors across patient populations and treatment contexts. That is, the measure may be useful in comparing the way in which such as perceptions of behavioural control, subjective norms and attitudes towards behaviour impact on attendance and engagement across treatment modalities such as face-to-face behavioural interventions, medication based interventions, and the more recently available online interventions.

4.1. Limitations

The strengths of the TAP should be considered within the context of a number of limitations. Items for the TAP were developed based on previous literature and clinician opinion. Arguably, the additional use of patient opinion for item generation may have provided further insight into factors impacting patient attendance at psychotherapy appointments. However, the decision to develop the TAP using a theory driven approach was made in line with the goal of leveraging off the substantial evidence base already in existence for the use of the TAP in understanding healthcare behaviours. However, further research is required to examine the extent to which the TBP adequately explains patient attendance of appointments in mental health settings.

Additional investigation of the validity of the TAP is also warranted, given that one of the predictions of validity (convergent between Subjective Norm and PDDS) was not supported, and the predicted discriminant validity of the total scale (from symptom distress) was only partially supported. Future research should focus on examining the relationships between these constructs further, such as the role of stigma on an individual's behavioural intentions. Similarly, it would be of interest to conduct a confirmatory factor analysis of the TAP on an independent sample and examine the predictive validity of the TAP across different mental heath care settings and modalities.

4.2. Conclusions

The TAP was developed as a brief measure to aid understanding of patient factors related to therapy attendance and dropout to provide clinicians with important information regarding patients' attitudes, intentions, perceptions of control, and perceived subjective norms relating to psychotherapy. In contrast to other measures such as the Session Rating Scale [58] that attempt to monitor patient engagement and satisfaction in order to promote better outcomes, the TAP captures not only what is happening in therapy, but also what is

happening for the patient outside of therapy. The findings of the present study suggest the TAP may be a promising tool for better understanding the patient factors related to psychotherapy attendance.

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Appendix A

The Therapy Attitudes and Process Questionnaire (16 item version)

1. I find psychotherapy to be:

Negative						*Positive*
-3	-2	-1	0	+1	+2	+3

2. Those people who are important to me would support me attending psychotherapy

Strongly Disagree						*Strongly Agree*
1	2	3	4	5	6	7

3. I intend to continue my psychotherapy programme

Strongly Disagree						*Strongly Agree*
1	2	3	4	5	6	7

4. I intend to attend my next psychotherapy session

Strongly Disagree						*Strongly Agree*
1	2	3	4	5	6	7

5. I have complete control over whether I attend psychotherapy sessions

Strongly Disagree						*Strongly Agree*
1	2	3	4	5	6	7

6. Those people who are important to me would want me to attend psychotherapy

Strongly Disagree						*Strongly Agree*
1	2	3	4	5	6	7

7. I find attending psychotherapy to be:

Bad						*Good*
-3	-2	-1	0	+1	+2	+3

8. I find attending psychotherapy to be:

Unpleasant						*Pleasant*
-3	-2	-1	0	+1	+2	+3

9. Most people who are important to me would approve of my attending psychotherapy

Strongly Disagree						*Strongly Agree*
1	2	3	4	5	6	7

10. I am confident that I can attend my psychotherapy sessions

Strongly Disagree						*Strongly Agree*
1	2	3	4	5	6	7

11. I will attend my next psychotherapy session

Strongly Disagree						*Strongly Agree*
1	2	3	4	5	6	7

12. It is mostly up to me whether I attend my next psychotherapy session

Strongly Disagree						*Strongly Agree*
1	2	3	4	5	6	7

13. I find attending psychotherapy to be:

Harmful						*Beneficial*
-3	-2	-1	0	+1	+2	+3

14. It is likely that I will attend my next psychotherapy session

Highly Unlikely						*Highly Likely*
1	2	3	4	5	6	7

15. Those people who are important to me would approve of me attending psychotherapy

Strongly Disagree						*Strongly Agree*
1	2	3	4	5	6	7

16. I think I can attend my psychotherapy sessions

Strongly Disagree						*Strongly Agree*
1	2	3	4	5	6	7

TPB Scale Items
Att: 1, 7, 8, 13 (all items on this scale are required to be rescaled to a 1-7 scale before addition or interpretation)
SN: 2, 6, 9, 15
Int: 3, 4, 11, 14
PBC: 5, 10, 12, 16

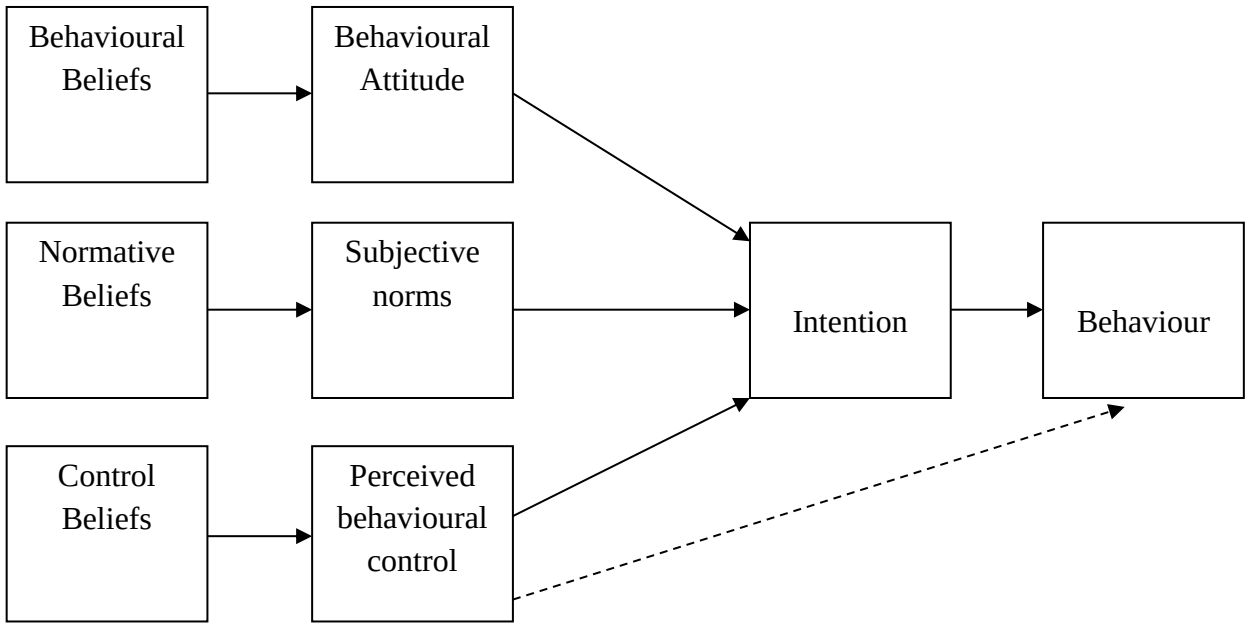

Figure 1. The Theory of Planned Behaviour

Table 1

Bivariate Correlations Between the 21 TAP Items[1]

	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17	T18	T19	T20	T21
T1	1.00	.34	.44	.45	.45	.30	.30	.84	.62	.25	.54	.54	.57	.41	.07	.82	.14	.60	.42	.34	.57
T2		1.00	.37	.28	.41	.28	.78	.40	.30	.79	.31	.39	.42	.15	.43	.41	.27	.34	.36	.73	.34
T3			1.00	.38	.49	.41	.37	.55	.47	.39	.62	.44	.60	.44	.18	.56	.43	.53	.54	.44	.66
T4				1.00	.76	.40	.27	.53	.31	.28	.58	.61	.64	.41	.13	.55	.32	.46	.54	.36	.69
T5					1.00	.44	.40	.57	.34	.43	.61	.50	.80	.39	.15	.57	.36	.41	.67	.48	.68
T6						1.00	.25	.34	.27	.31	.63	.58	.45	.63	.02	.41	.34	.34	.36	.34	.57
T7							1.00	.39	.23	.82	.34	.38	.42	.20	.58	.37	.34	.29	.35	.83	.39
T8								1.00	.66	.35	.63	.67	.70	.37	.15	.86	.18	.66	.54	.43	.67
T9									1.00	.26	.49	.42	.43	.35	.16	.58	.14	.69	.30	.29	.44
T10										1.00	.40	.43	.46	.24	.53	.35	.30	.29	.40	.88	.39
T11											1.00	.60	.69	.64	.06	.64	.42	.60	.56	.43	.83
T12												1.00	.61	.49	.20	.67	.31	.47	.50	.44	.68
T13													1.00	.46	.16	.68	.43	.53	.77	.54	.76
T14														1.00	-.04	.46	.43	.39	.35	.33	.69
T15															1.00	.13	.15	.12	.21	.56	.09
T16																1.00	.23	.63	.56	.42	.68
T17																	1.00	.25	.45	.39	.47
T18																		1.00	.36	.34	.54
T19																			1.00	.49	.66
T20																				1.00	.51
T21																					1.00
M	6.08	6.01	5.62	6.23	6.37	6.00	5.89	6.20	5.57	5.99	6.15	6.23	6.39	6.27	5.35	6.20	5.24	5.53	6.28	5.91	6.38
SD	1.13	1.40	1.66	1.30	1.28	1.47	1.39	1.21	1.45	1.38	1.16	1.20	1.11	1.24	1.63	1.19	1.66	1.50	1.29	1.45	1.01

[1]N = 168

Table 2

Pattern Matrix and Communalities of the Promax Rotated 16-item TAP

Original Item Number from TAP21	TAP16 Item	F1*	F2	F3	F4	Communalities
1	1. I find psychotherapy to be negative/ positive			.97		.81
8	7. I find attending psychotherapy to be bad/ good			.92		.92
9	8. I find attending psychotherapy to be unpleasant/ pleasant			.73		.48
16	13. I find attending psychotherapy to be harmful/ beneficial			.77		.82
7	6. Those people who are important to me would want me to attend psychotherapy	.92				.81
10	9. Most people who are important to me would approve of my attending psychotherapy	.96				.88
20	15. Those people who are important to me would approve of me attending psychotherapy	.86				.85
2	2. Those people who are important to me would support me attending psychotherapy	.84				.72
5	4. I intend to attend my next psychotherapy session		1.02			.81
13	11. I will attend my next psychotherapy session		.83			.83
19	14. It is likely that I will attend my next psychotherapy session		.79			.60
4	3. I intend to continue my psychotherapy programme		.79			.60
14	12. It is mostly up to me whether I attend my next psychotherapy session				.96	.73
6	5. I have complete control over whether I attend psychotherapy sessions				.74	.54
11	10. I am confident that I can attend my psychotherapy sessions				.57	.76
21	16. I think I can attend my psychotherapy sessions		.44		.49	.85

Note. Item loadings below .30 are suppressed.

Table 3

Test-Retest and Internal Reliability Coefficients for the 16-item TAP

Scale	Number of items	Test-Retest	95% CI	Internal Consistency
Total Scale	16	.75	[.59, .85]	.94
Subjective Norm	4	.72	[.56, .83]	.94
Intention	4	.72	[.55, .83]	.92
Attitude	4	.80	[.67, .88]	.91
Perceived Behavioural Control	4	.65	[.46, .78]	.88

Note. Internal consistency was measured using Cronbach's alpha (N = 168). Test-retest reliability was measured using Intraclass Correlation Coefficients (N = 51).

Table 4

External Validity Pearson Correlations of the TAP Subscales with Related Clinical Measures

	TAP Total	Subjective Norm	Attitude	Perceived Behavioural Control
K-10	-.57*	-.43**	-.59**	-.52**
MPEQ	-	.49**	.69**	.60**
MSPSS	-	.51**	.48**	.45**
PDDS	-	-.18	-.34**	-.26*
Rotter's LOC	-	-.11	-.28*	-.31**

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