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BACKGROUND: Despite efficacy and effectiveness evidence, and recommendations from the National Institute for Health and Care Excellence (NICE), use of CBT self-help materials remains inconsistent in UK mental health services. Since 2006, the Improving Access to Psychological Therapies (IAPT) programme provides standardised training and mandates routine use of CBT self-help materials by their trainee psychological well-being practitioners (PWPs).

AIMS: This study tested whether the main constructs of the theory of planned behaviour (TPB; attitudes, subjective norms, and perceived behavioural control), past use, prior training and demographic characteristics, would predict PWPs’ intention to use self-help materials routinely in their clinical practice.

METHODS: Stage 1 utilised a standardised procedure to create measures for the constructs of the TPB, before the design and testing of a web-based, cross-sectional questionnaire. In Stage 2, the questionnaire was administered to a convenience sample of trainee PWPs (n=94). Data was analysed using multiple linear regression, mediation analyses, and content analysis.

RESULTS: TPB constructs predicted intention to use self-help materials, with only direct attitude contributing significantly to 70% of the variance in intention. Past use of materials predicted intention, via direct and indirect mediation. Qualitative data from 43 trainees highlighted clients’ experience of self-help materials as positive, albeit with some practical constraints.

CONCLUSIONS: The results suggest that the main constructs of the TPB have some utility in predicting trainee PWPs’ intention to use self-help materials routinely. Future prospective, longitudinal research could investigate actual use of self-help materials to elucidate cognitive factors involved in trainees’ clinical decision-making post-qualification.

Key words: CBT, psychological therapies, self-help, statistical mediation
Predictors of IAPT psychological well-being practitioners’ intention to use CBT self-help materials routinely in their practice

Introduction

Self-help is the term used to describe client-administered therapeutic interventions, and which may also be referred to as self-care, self-management or health technology (Richards, Lovell, & McEvoy, 2003). The majority of self-help methods are grounded theoretically in Cognitive Behaviour Therapy (CBT), and hence can also be referred to as CBT-based or CBT self-help. Self-help interventions can be accessed either with little or no contact with a therapist (unsupported/non-guided self-help) or in parallel with individual sessions with a clinician (supported/guided self-help) (Williams, 2001). Self-help formats include written (books or manuals), audio and video materials, computer and internet-based materials, and psycho-educational groups. They can also be offered through a variety of settings - post, telephone, bookshop or library, traditional media, or the internet (Papworth, 2006).

In the United Kingdom, the National Institute for Health and Care Excellence (NICE) advocates accessible, timely, educative and community sustainable mental health interventions. NICE has recommended CBT self-help (individual guided and computerised), as well as structured group physical activity and psycho-educational groups as primary interventions for mild-to-moderate generalised anxiety disorder, depression and obsessive-compulsive disorder (NICE, 2005; 2008; 2009; 2011a; 2011b). A number of reviews, meta-analyses, and studies have provided strong evidence for both the efficacy and effectiveness of CBT self-help materials in the treatment of anxiety, depression and other mental disorders (Bower, Richards & Lovell, 2001; Cuijpers, 1997; Gellatly et al., 2007; Gould & Clum, 1993; Marrs, 1995; Waller & Gilbody, 2008; Whitfield, Williams & Shapiro, 2001). However, in spite of the empirical evidence and guidelines mandated by NICE, it is known that self-help materials are not used routinely in clinical practice (Richards, Lovell & McEvoy, 2003). Two separate studies have
reported that many accredited UK CBT practitioners use self-help materials only as an adjunct to individual therapy, and further, that fewer than 40% of participants have received specific self-help training (Keeley, Williams & Shapiro, 2002; MacLeod, Martinez & Williams, 2009). Whitfield and Williams (2001) and Richards et al. (2003) have also suggested that a lack of appropriate training is a significant barrier to routine use of self-help materials in clinical practice.

The Layard Report (London School of Economics, 2006) has highlighted that timely access to psychotherapy has been impeded by a critical shortage of suitably trained and experienced mental health practitioners, resulting in lengthy treatment waiting lists and times. The UK’s Department of Health commissioned the Improving Access to Psychological Therapies (IAPT) service model that same year. IAPT services are organized on the “stepped-care” principle, in which “the least intensive intervention that is appropriate for a person is typically provided first, and people can step up or down the pathway according to changing needs and in response to treatment” (NICE, 2011b). In practical terms, this means that step 1 is reserved for recognition/assessment/active monitoring in GP services, with “low-intensity” interventions delivered at step 2 to treat mild/moderate disorders, and “high-intensity” input provided at steps 3 and 4 for moderate to severe presentations.

Under the IAPT programme “low intensity” therapists (also known as trainee Psychological Well-being Practitioners - PWPs) have been recruited to full-time, funded training posts in the NHS, to provide standardised step 2 interventions focused on the routine use of CBT self-help materials for the treatment of anxiety and depression. To meet this aim, IAPT’s training curriculum for PWPs provides mandatory training in the use of “CBT-based” self-help materials (Department of Health, 2008a, 2008b). The curriculum is organized across four core modules, with module 2 focused on “evidence-based low-intensity treatment for common mental health disorders”. On completion of module 2, trainees’ core competence in self-help methods is assessed, based on their ability to demonstrate effective knowledge
and application of the interventions in clinical practice. A number of researchers have examined the contribution of psychological frameworks in the evaluation of health professionals’ clinical behaviour (e.g. Eccles et al., 2006; Foy et al., 2007; Godin, Belanger-Gravel, Eccles, & Grimshaw, 2008; Hrisos et al., 2009; Michie et al., 2005; Watson & Myers, 2001). Walker et al. (2003) have suggested the use of “motivational theories”, which are built on the assumption that motivation, oftentimes operationalised as strength of intention to carry out a behaviour, can predict actual behavior. Armitage and Conner (2001) have also provided evidence of a direct link between intention and actual behavior. Social cognition models (SCMs) are one type of motivational theory. SCMs tend to be predicated on combinations of cognitive characteristics such as knowledge, attitudes, the influence of normative opinions, among others, and how these factors are associated with intentions and behaviours. One specific social cognition model, the Theory of Planned Behaviour (TPB; Ajzen, 1985; 1991), has been proposed to offer value in predicting health professionals’ implementation of clinical guidelines.

![Figure 1 Schematic of the theory of planned behaviour (Ajzen, 1991; p. 182)]
Ajzen (1991) postulates that the most proximal determinant of a target behaviour is an individual’s motivation, that is, intention to perform that behavior, and grants that those with the strongest intention are likely to exert the greatest effort in achieving their behavioural goals. Further, intention is itself determined by three “conceptually independent” predictor variables: attitudes, subjective norms (SNs), and perceived behavioural control (PBC). The TPB holds that the more positive the attitude towards a behaviour, the stronger the subjective norm, and the higher the perceived behavioural control, the stronger will be an intention to perform that behaviour (Orbell & Sheeran, 2000). Therefore, when applied to the use of self-help materials, the TPB would hypothesise that practitioners’ use of self-help materials (the behavior) would be dependent on their intention to implement that behavior. Further, intention to use self-help materials can also be predicted by their “beliefs about self-help and its associated consequences (attitudes), beliefs about what important others think of self-help (SNs), and beliefs about how much control they have in their use of self-help materials (PBC)” (Audin, Bekker, Barkham & Foster, 2003; p. 90).

Ajzen (1991) also proposes that while the attitudinal and subjective norms components are assumed to influence intention directly, PBC also functions as an important moderator of the intention-behaviour relationship (see Baron & Kenny, 1986, for a comprehensive explanation of the mediator-moderator effect). This means that when people are accurate in their estimation of control, PBC can have an indirect influence on behaviour through intention, as well as a direct effect on actual behavior (the latter assertion is illustrated by the broken line in Figure 1). Additionally, Ajzen (1991) asserts that intention encapsulates the motivational factors that influence behaviour, while PBC takes into account non-motivational variables such as resources and barriers. Further, Ajzen (1991) also acknowledges that there are instances where the TPB’s predictive ability is enhanced by the inclusion of other factors. Consequently, past behaviour has emerged as a sometimes significant predictor of both intention and
actual behaviour (Conner & Armitage, 1998; Oullette & Wood, 1998; Rhodes & Courneya, 2003; Sutton, 1998). Additionally, other researchers have found demographic variables can also exert some influence on behaviour (Evans & Norman, 1998; Hahm et al., 2008).

The utility of the TPB in predicting both intention and behaviour has been supported by research assessing many health behaviours (Ajzen & Madden, 1986; Armitage & Conner, 2001; Conner & Sparks, 1996; Godin & Kok, 1996). Additionally, some researchers have applied the TPB to health professionals’ behaviours, including following clinical guidelines (Archambault et al., 2010; Audin et al., 2003; Foy et al., 2007; Godin, Belanger-Gravel, Eccles, & Grimshaw, 2008; Puffer & Rashidian, 2004, Watson & Myers, 2001).

Prior to the advent of the IAPT programme, Audin, Bekker, Barkham and Foster (2003) used the TPB to evaluate the use of self-help materials by mental health professionals in UK primary care services. They found that perceived control most strongly predicted intention to use the materials, followed in order by subjective norms and attitudes, accounting for 49% of the variance in intention. Most respondents (85%) reported using self-help materials mainly as an adjunct to individual therapy. Only 14% of the 364 clinicians surveyed had received specific self-help training. The researchers suggested that training would have a positive impact on professionals’ views and actual use of materials. However, Audin et al.’s (2003) study was constrained by the lack of a standardised method in producing the TPB measures.

The aim of the present study was to assess the utility of the three main constructs of the TPB with trainee PWPs on the use of self-help materials. Because other TPB studies have reported that prior behaviour predicts future behaviour, the present study also examined whether the addition of past use of self-help materials and self-help training would enhance the ability of the model to predict trainees’ intention to routinely use the materials. The influence of socio-demographic factors on intention was
also assessed. Finally, as there was a possibility that some important variables might be missed, a further aim was to gather a small amount of qualitative data on trainee PWPs’ experiences of factors affecting their use of self-help materials.

The study aimed to test the following specific hypotheses (depicted schematically in Figure 2):

1. Past use of self-help materials will directly predict attitude, SN and PBC.
2. Past use of self-help materials will directly predict intention to use them;
3. Attitude, subjective norm, and PBC will directly predict intention to use self-help materials;
4. Self-help training will directly predict intention to use self-help materials;
5. Attitude, subjective norm, and PBC will mediate the relationship between past use of self-help materials and intention to use them;
6. Attitude, subjective norm, and PBC will mediate the relationship between self-help training and intention to use self-help materials;
7. The overall and extended TPB model will explain a statistically significant amount of variance in intention to use self-help materials.

Additionally, the study sought to answer the following research question: what, if any, additional factors will participants cite as affecting their use of self-help materials?
Method

Design

With the TPB as a conceptual framework, we conducted a cross-sectional, web-based questionnaire survey. Following the procedures recommended by Ajzen (2002) and operationalized by Francis et al. (2004), we used a two-stage design: (1) we elicited TPB Beliefs to develop pilot-test and retest a questionnaire; and (2) we administered the main questionnaire to trainee PWPs across the country.
Stage 1 – construction and piloting of TPB measures

Participants and measures in stage 1

A convenience sample of trainee PWPs was recruited from an IAPT training institution in Southeast England (N=55), where the lead researcher was studying at the same time. An information pack was emailed to the IAPT lead course administrator, who forwarded this to the cohort. In accordance with Francis et al.’s (2004) recommendations, trainee PWPs were asked to consent to share their salient beliefs about using self-help materials (the elicitation questions were embedded in the email). Seven (13%) trainee PWPs eventually emailed their responses directly to the lead researcher. This sample size for the elicitation stage is comparable with other studies (e.g. Puffer and Rashidian, 2004).

Questionnaire development

The responses elicited were content analyzed and grouped into behavioural, normative and control belief categories. The lead researcher and a volunteer qualified PWP carried out the analysis independently, with high concordance on the categories (Cohen’s kappa = .90). We converted the themes into statements assessing behavioural, normative and control beliefs and their corresponding outcome evaluations, motivation to comply, and control factors, using 7-point Likert-type scales. Francis et al. (2004) refer to the elicitation exercise as producing “indirect” measures. This process resulted in 18 indirect attitudes, 12 indirect subjective norms (SN), and seven indirect perceived behavioural control (PBC) questionnaire items, respectively.

Francis et al. (2004) recommend not only eliciting respondents’ indirect attitude, SN and PBC, but also ascertaining them directly using standard items with the relevant behaviour substituted. The
two should be positively correlated. As recommended by Francis et al. (2004), direct attitude was assessed from four pairs of semantic descriptors (e.g. “harmful/beneficial”) applied to the statement stem “routinely using CBT self-help material with all clients in step 2 services is…” Direct SN was assessed with three items about the views of people deemed significant to trainee PWPs’ clinical practice, for example: “most people who are important to me think that…”. Direct PBC was assessed with four items, for example: “I am confident that I could routinely use CBT self-help materials with all my clients in step 2 services”.

Based on the elicitation stage, four items were included to assess perceived barriers as a predictor of intention: (1) organisational resource issues (administrative support, photocopying, and cost of materials); (2) client-related issues (lack of motivation, literacy, diversity, individual expectations); (3) work environment issues; and (4) personal issues (boredom, hitting a career ceiling, feeling undervalued). These were measured on a 7-point scale from 1=extremely unlikely to 7=extremely likely. Responses on the four items were averaged to obtain a score for perceived barriers.

The mean scores from three items were used to measure trainee PWPs’ generalized intention, and from two items to assess the addition of past behavior. Self-help training was assessed by the single item “have you had your IAPT module 2 training yet?” where “1=yes or 2=no”. Participants reported the types of materials previously used or being used from a list in which they could select any that applied. Five items were included to ascertain demographic characteristics of age, gender, ethnicity, professional background and UK training region.

We emailed the 110-item first draft survey questionnaire to the seven elicitation trainee PWPs, and the second and third authors and volunteer qualified PWPs also reviewed it, in the formats suggested by Archambault et al. (2010) and Francis et al. (2004). We made minor revisions and retained all 110-items.
Piloting

We opened an online account with a web-based survey-hosting company, and uploaded the questionnaire pack. The seven trainee PWPs who participated at the elicitation phase again reviewed the documents online, and amendments were made based on their feedback. To pilot-test the survey online, we sent another email with an embedded weblink to the cohort via their lead course administrator (but excluding the pilot 7). An option was activated within the weblink to track respondents by their IP/email address, to facilitate later anonymous retesting of the questionnaire. Ten trainees eventually returned a completed questionnaire. At that point, all had received their IAPT module 2 training, and reported using mainly written self-help materials.

Only the intention measure achieved an acceptable Cronbach’s alpha score ($\alpha = 0.89$). However, Pallant (2007) suggests that a small number of scale items can result in low Cronbach’s alpha scores that may not reflect the true reliability of the scale. Briggs and Cheek (1986) suggest examining the mean inter-item correlations, and accepting as reliable mean values between 0.2 and 0.4. Consequently, all questionnaire items were retained at this point in the study.

Retesting the questionnaire

The 10 pilot trainee PWPs completed the questionnaire a second time, four weeks after the first. Test-retest analysis yielded: indirect attitude ($r = 0.682$, $p < .05$), indirect SN ($r = 0.858$, $p < .001$), and indirect PBC ($r = 0.503$, n.s.). Again, due to the small sample, the indirect measures were retained and their correlations later reassessed using the final data set.

Stage two

Participants
The research population was PWPs in training (approximate $N = 500^1$) between September 2010 and August 2011. We disseminated a pack (with information, consent, and “thank you” forms) and weblink for the final questionnaire via IAPT regional leads across the UK. Ultimately, 112 trainee PWPs accessed the website, with 94 fully completing a questionnaire and accompanying online consent form, giving a 19% overall response rate.

With 94 participants, at 80% power this sample size was sufficient to detect just above a medium effect ($R^2 = .15$ to .20, explaining 15 to 20% of the variance in intention) if it was present (Cohen, 1988).

Measures and procedure

There were nine predictor variables: indirect attitude, indirect SN, indirect PBC, direct attitude, direct SN, direct PBC, past behaviour, perceived barriers, and training module. The outcome variable was intention to use self-help materials routinely in step 2 services. Demographic factors were trainee PWPs’ age, ethnicity, gender, professional background, IAPT training region, and type of self-help materials used. Data was collected over five months in the 2010/2011 academic year, during which we sent three reminder emails via course administrators. Prior to its execution, the study received ethical approval from the Research Governance Department at the host University.

Ethical considerations and approval

All participants who accessed the survey online had to read an information document, verify their understanding, and give their consent electronically. Prior to its execution, the study received ethical approval from the Research Governance Department at Canterbury Christ Church University.

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^1 At the time of the initial writing of this report, the IAPT office was in the process of compiling the figure for the total number of PWPs in training in the academic year 2010/2011. However, that figure was not expected to be less than the figure for 2009/2010, which was over 500 trainees (personal communication with the IAPT management team, June 2011).
Data analysis

Internal reliability analyses were repeated for the direct, intention, past behaviour and perceived barriers measures using the full data set (Table 1). All the composite measures were subsequently retained for statistical analyses.

Table 1. Internal consistency reliabilities for the direct Theory of Planned Behaviour measures, intention, past behaviour, and perceived barriers (n = 94)

<table>
<thead>
<tr>
<th>Survey variables</th>
<th>No. of survey items</th>
<th>Cronbach’s alpha&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Mean inter-item correlation&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct attitude</td>
<td>4</td>
<td>0.66</td>
<td>0.33</td>
</tr>
<tr>
<td>Direct subjective norms</td>
<td>3</td>
<td>0.46&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.30</td>
</tr>
<tr>
<td>Direct perceived behavioural control</td>
<td>4</td>
<td>0.43&lt;sup&gt;d&lt;/sup&gt;</td>
<td>0.32</td>
</tr>
<tr>
<td>Intention</td>
<td>3</td>
<td>0.85</td>
<td>n.a.</td>
</tr>
<tr>
<td>Past behaviour</td>
<td>2</td>
<td>0.73</td>
<td>n.a.</td>
</tr>
<tr>
<td>Perceived barriers</td>
<td>4</td>
<td>0.59</td>
<td>0.28</td>
</tr>
</tbody>
</table>

n.a., not applicable.

<sup>a</sup>Francis et al. (2004) recommends 0.6 as an acceptable level for reliability.

<sup>b</sup>Cronbach’s alpha when weakest questionnaire item is deleted.

<sup>d</sup>Cronbach’s alpha when weakest two questionnaire items are deleted.

<sup>c</sup>Means between 0.2 and 0.4 indicate acceptable internal consistency reliabilities based on convention outlined by Briggs & Cheek (1986).

A square transformation of the data normalized the intention distribution. We examined residuals during regression analyses to test whether the statistical assumptions had been met (Tabachnick and Fidell, 2001). Professional background was recoded into the dichotomous variable “psychologist versus other profession”, and ethnicity was recoded into “white/white other versus non-white”. There was no issue with multicollinearity, as none of the correlations between predictor variables exceeded 0.9 (Tabachnick & Fidell, 2001).

We used Baron and Kenny’s (1986) mediation approach to assess the hypothesised relationships among the predictor, mediator, and outcome variables via multiple linear regression with statistical significance set at $p = .05$, one-tailed. This involves looking at four pathways: (i) between the predictor variable and the hypothesised mediator (path a), (ii) between the mediator and the outcome variable...
(path b), (iii) path between the predictor and outcome variables (path c), and (iv) the path between the predictor and the outcome variable when the mediator is controlled (path c'). Mediation is indicated when (a) the predictor accounts for significant variance in the mediator, (b) the predictor accounts for significant variance in the outcome variable, and (c) the predictor accounts for a smaller amount of variance in the outcome variable with the mediator in the equation (Baron and Kenny, 1986).

Qualitative analysis

We performed content analysis on the qualitative responses to the free-response items. The lead researcher and a volunteer assistant psychologist carried out the procedure independently and then resolved disagreements.

Results

Participant characteristics

There were 86 (91.5%) female trainee PWPs and 8 (8.5%) males. The majority of trainee PWPs were aged 20 to 34 [74(78.7%)], and within this, 41 (43.6%) were aged 25 to 29. A further 5 (5%) were aged 35-39, and 15 (16%) were aged 40 to 50 and over. The predominant self-reported ethnic background was White British [65(69%)], followed by Other White [13(13%)]. While 70 (74.5%) trainee PWPs were psychology graduates, 17 (18.1%) were from a range of other careers. Twenty-three (24.5%) were in the Southwest, 21 (22.3%) in the Northwest, 23 (24.5%) in London, and 12 (12.8%) in the West Midlands. No responses were received from the East Midlands, and other regions were represented by less than five participants each. Finally, 80 (85.1%) trainee PWPs had already received
their IAPT training in using self-help materials. Table 2 presents type of materials that trainee PWPs had used in their practice.

**Table 2:** Type of self-help materials used or being used by psychological well-being practitioners (n=94)

<table>
<thead>
<tr>
<th>Materials</th>
<th>Reported frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written materials</td>
<td>94</td>
</tr>
<tr>
<td>Group self-help</td>
<td>64</td>
</tr>
<tr>
<td>Combination of approaches</td>
<td>36</td>
</tr>
<tr>
<td>Audio tapes</td>
<td>26</td>
</tr>
<tr>
<td>DVDs</td>
<td>19</td>
</tr>
<tr>
<td>Internet chat rooms</td>
<td>9</td>
</tr>
<tr>
<td>Other (not specified)</td>
<td>32</td>
</tr>
</tbody>
</table>

Descriptive statistics and correlation analyses

Descriptive statistics are presented in Table 3.

**Table 3.** Median, interquartile, and range scores for the direct, indirect, intention, past behaviour, and perceived barriers measures (n = 94)

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Theoretical range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Median</th>
<th>IQR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect attitude</td>
<td>-378 to +378</td>
<td>-134</td>
<td>297</td>
<td>38.5</td>
<td>73.3</td>
</tr>
<tr>
<td>Indirect SN</td>
<td>-252 to +252</td>
<td>-196</td>
<td>216</td>
<td>50.0</td>
<td>84.4</td>
</tr>
<tr>
<td>Indirect PBC</td>
<td>-147 to +147</td>
<td>-147</td>
<td>20</td>
<td>-84.0</td>
<td>-54.3</td>
</tr>
<tr>
<td>Direct attitude</td>
<td>1 to 7</td>
<td>2.75</td>
<td>7.00</td>
<td>5.1</td>
<td>2.5</td>
</tr>
<tr>
<td>Direct SN</td>
<td>1 to 7</td>
<td>1.33</td>
<td>7.00</td>
<td>5.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Direct PBC</td>
<td>1 to 7</td>
<td>2.25</td>
<td>6.00</td>
<td>5.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Intention</td>
<td>1 to 7</td>
<td>1.00</td>
<td>7.00</td>
<td>5.0</td>
<td>2.1</td>
</tr>
<tr>
<td>Past behaviour</td>
<td>1 to 7</td>
<td>1.00</td>
<td>7.00</td>
<td>6.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Perceived barriers</td>
<td>1 to 7</td>
<td>1.50</td>
<td>7.00</td>
<td>5.0</td>
<td>2.4</td>
</tr>
</tbody>
</table>

IQR, Interquartile range; SN, subjective norms; PBC, perceived behavioural control.

On the indirect measures, positive scores indicate favourable attitudes, subjective norms for using self-help materials, and perceived control, while negative scores indicate unfavourable attitudes, norms against using materials, and lack of perceived control.

All other measures range from 1 (against using materials) to 7 (in favour of using materials).

As expected the direct and indirect attitude scores were significantly and positively correlated \( r = .422, p<.01 \), as were the direct and indirect SN scores \( r = .518, p<.01 \). However, the direct and indirect PBC scores were not \( r = -.007 \). Direct attitude was significantly associated with direct SN \( r = .506, p<.01 \), and direct PBC \( r = .638, p<.01 \). Direct SN was significantly correlated with direct PBC.
(r = .422, p<.01). Consequently, we decided to use only direct measures of attitude, SN and PBC to test the study’s hypotheses.

Only 14.1% of trainee PWPs had not received their IAPT self-help training at the point of participating in the survey. Consequently, we removed self-help training from any further analyses, meaning we could not test Hypotheses 4 and 6.

Perceived barriers were significantly correlated with indirect PBC in the expected direction but were not significantly related to any of the other measures, or to the dependent variable. As a result, perceived barriers were also removed from the model testing analyses.

There were no significant correlations between intention and any of the demographic variables. Consequently, we omitted all demographic variables from the main analyses.

Testing the hypotheses

Figure 3 shows the amended model following mediation analyses. The constructs were tested using the recommended three steps (Table 4), and are reported here in a format adapted from the study by Caperchione, Duncan, Mummery, Steele and Schofield (2008).

In step 1, attitude, SN, and PBC were regressed individually on PSHU, which significantly predicted each of the three variables (Table 4). PSHU accounted for 23% of the variance in attitude [F(1, 92) = 29.04, p<.001], 25% in SN [F(1, 92) = 31.20, p<.001], and 31% in PBC [F(1, 92) = 42.24, p<.001]. Hypothesis 1 was therefore upheld.
Table 4: Tests of mediation between attitude, SN, PBC and PSHU on intention to use self-help

<table>
<thead>
<tr>
<th>Step 1</th>
<th>B</th>
<th>S.E.</th>
<th>beta</th>
<th>Adjusted R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude regressed on PSHU</td>
<td>0.47</td>
<td>(0.09)</td>
<td>0.49***</td>
<td>0.232***</td>
</tr>
<tr>
<td>SN regressed on PSHU</td>
<td>0.41</td>
<td>(0.07)</td>
<td>0.50***</td>
<td>0.245***</td>
</tr>
<tr>
<td>PBC regressed on PSHU</td>
<td>0.65</td>
<td>(0.10)</td>
<td>0.56***</td>
<td>0.307***</td>
</tr>
</tbody>
</table>

**Step 2**

| Intention regressed on PSHU | 6.42  | (0.78) | 0.65*** | 0.418*** |

**Step 3**

| Intention regressed on attitude | 7.80  | (0.68) | 0.77*** | 0.582*** |
| Intention regressed on SN | 7.17  | (1.00) | 0.60*** | 0.351*** |
| Intention regressed on PBC | 5.46  | (0.67) | 0.65*** | 0.411*** |
| Intention regressed on attitude and PSHU | 5.99  | (0.66) | 0.59*** | 0.681*** |
| Intention regressed on SN and PSHU | 3.59  | (0.66) | 0.36*** | 0.512*** |
| PBC | 4.33  | (0.83) | 0.47*** | 0.529*** |
| PSHU | 4.63  | (1.01) | 0.36*** | 0.529*** |
| Intention regressed on PBC and PSHU | 3.46  | (0.73) | 0.41*** | 0.529*** |
| PSHU | 4.16  | (0.85) | 0.42*** | 0.529*** |

PSHU, Past self-help use; SN, Subjective norms; PBC, perceived behavioural control; B, unstandardized coefficient; S.E., standard error; beta, standardized beta coefficient. *** p < .001

In step 2, intention was regressed on PSHU, which was a significant predictor of intention to use the materials, accounting for 42% of the relevant variance [F(1, 92) = 67.92, p<.001]. This result upheld Hypothesis 2. In step 3, intention was then regressed individually on attitude, SN and PBC. In line with Hypothesis 3, all three variables were significant predictors of intention to use self-help materials, with attitude accounting for 58% [F(1, 92) = 130.72, p<.001], SN for 35% [F(1, 92) = 51.20, p<.001], and PBC for 41% [F(1, 92) = 65.82, p<.001] of the variance, respectively.

When intention was regressed on attitude and PSHU, the latter two variables were both significant predictors of intention, accounting for 68% of the total variance [F(2, 91) = 100.09, p<.001]. Attitude was the most significant predictor of intention (β = .59, p<.001), while PSHU was also a significant predictor of intention (β = .36, p<.001). Given that PSHU’s β in step 3 was less than its value in step 2 (β = .65, p<.001), but was still a significant independent predictor of intention, this indicated that attitude was a partial mediator of the relationship between intention and PSHU.
When intention was regressed on SN and PSHU, both were significant predictors of intention with $\beta$ weights of .47 and .36 respectively, explaining 51% of the total variance in the model $[F(2, 91) = 49.75, p<.001]$. Because PSHU was less in step 3 ($\beta = .36, p<.001$) than in step 2 ($\beta = .65, p<.001$), SN was only a partial mediator of the relationship between PSHU and intention.

When intention was regressed on PBC and PSHU, both significantly predicted intention, explaining 53% of the variance in the model $[F(2, 91) = 53.27, p<.001]$. However, PSHU was marginally a more significant predictor of intention than PBC ($\beta$ weights of .41 and .42 respectively). Because PSHU was less in step 3 ($\beta = .42, p<.001$) than in step 2 ($\beta = .65, p<.001$), this suggests that PBC was a partial mediator of the relationship between PSHU and intention. The foregoing three significant indirect partial mediation effects partly supported the prediction made in Hypothesis 5.

We also carried out a regression analysis to assess the overall model, and specifically the amount of variance in intention to use self-help materials. The full model explained 70% of the variance in intention (adjusted $R^2 = .704$)$[F(4, 89) = 56.22, p<.001]$. Attitude ($\beta = .468, p<.001$) emerged as the most significant predictor, followed in descending order by PSHU ($\beta = .264, p<.01$) and SN ($\beta = .176, p<.05$). However, PBC was not a significant predictor of intention ($\beta = .125, p = .117$). Consequently, Hypothesis 7 was only partially supported.

During the mediation analyses, diagnostics were reassessed to check whether the statistical assumptions that underlie regression analyses were met. The results indicated appropriate distributions of data for all variables in the final model, and that the assumptions for normality and multicollinearity had been achieved.
Qualitative analysis

The most frequently identified organisational constraints were difficulties in reproducing materials and accessing online resources. Trainee PWPs also reported a lack of translated materials, lack of physical resources, inadequate supervision, and the referral of clients not appropriate for step 2 services.

![Diagram](image)

Figure 3. Mediation pathways from the survey results. ***p<.001, $\beta =$ standardised beta coefficients; SN, subjective norms, PBC, perceived behavioural control.

In relation to clients, trainee PWPs cited lack of understanding of services or their role, clients’ lack of motivation to use the materials, and difficulties for those with physical or intellectual difficulties or a language barrier. Difficulties in the work environment included chain of command constraints like poor communication between workers at different levels, and the size of trainee PWPs’ caseloads. Personal issues included feeling devalued, lack of opportunities for personal development, problems with the amount of supervision, and a lack of variety of materials available.
With regard to the open-ended question assessing self-help training prior to joining the IAPT programme (n = 18), 7 (39%) had “studied some of it at university”, 7 (39%) knew about the method from in-service training, while 4 (22%) reported learning from other sources (e.g. whilst running a group).

With the invitation to comment on CBT self-help materials within the IAPT model, 43 PWPs provided feedback. Their evaluations were grouped into strengths, opportunities for improvements, and general observations. Trainee PWPs felt that clients generally found self-help useful, and that the materials complemented other interventions. However, they were concerned that the materials could be simplistic, which some clients might perceive as patronising, that materials were not suitable for all clients (“one size does not fit all”), and that they were not standardised. Additionally, trainee PWPs reiterated their earlier observation about the lack of provision for a diverse population of clients.

Discussion

As hypothesized, the TPB’s main constructs significantly predicted trainee PWPs’ intention to use self-help materials routinely. More favourable attitudes towards self-help materials, valuing the opinions of referent others, and feeling in control over using the materials predicted intention to use them. Attitude most strongly predicted intention, followed in order by PBC and SN, results slightly different from the findings of Audin et al. (2003). This suggested that trainee PWPs might hold greater “instrumental” beliefs that use of the materials mainly leads to positive outcomes, as well as reporting more positive “experiential” beliefs about how they feel about using the materials (Francis et al., 2004; p. 13). Additionally, the finding that SN was the least significant of the three main predictors of intention was consistent with results from studies on other types of behaviour (Godin & Kok, 1996). Attitudes,
SN and PBC were found to mediate the relationship between past behaviour and intention when tested on their own.

As hypothesized, past use emerged as both a direct and indirect predictor of intention. In the overall test of the model, past use was the second most significant predictor of intention after attitude, suggesting that trainee PWPs with past self-help experience had greater intention to continue using them. However, the strength of association between past use and intention supported the criticism that the main constructs of TPB may not be sufficient to predict intention (Conner, 1993; Eagly & Chaiken, 1993; Rhodes & Courneya, 2003; Sutton, 1994; 1998).

Because almost all participants had already had mandatory training in self-help materials, it was not possible to examine whether such training versus its absence predicted intention. Additionally, none of the socio-demographic factors were associated with intention. However, it was possible that these findings were influenced by participant homogeneity in terms of age, gender, ethnicity, and professional background, reducing statistical power to detect effects related to these variables if present.

The full model explained 70% of the variance in intention, clearly supporting the utility of the TPB in predicting trainee PWPs’ intention to use self-help materials routinely. This figure is considerably higher than in previous TPB studies (Foy et al., 2007; Godin & Kok, 1996). The findings suggest the importance of positive beliefs about the materials, experience of past use, and the influence of normative referents such as clients, accrediting organisations, managers, and local commissioners.

Contrary to theoretical prediction and previous investigations (e.g. Godin & Kok, 1996; Puffer & Rashidian, 2004; Watson & Myers, 2001), PBC did not predict trainee PWPs’ intention to use the materials when the full model was tested. This suggested that while PBC may be relevant, it might be less important than attitude or SN. However, it is possible that this result was due to shared variance
when all the TPB variables were in the regression, reducing the likelihood that each variable would appear as a significant predictor.

Watson and Myers (2001) observed that when the PBC measure was operationalised with a small number of items (two in the present study), this limited the predictive power of the variable in regression analyses. However, an alternative explanation may be offered. Francis et al. (2004) recommend operationalizing the direct PBC measure such that the composite measure comprises both a self-efficacy and a controllability component. However, the controllability component was assessed by items we deleted to improve the internal reliability of the scale. Thus, PBC was assessed only by its self-efficacy component, and consequently, the direct measure of PBC did not capture directly the influence of external control factors.

Self-efficacy is a key construct from Bandura’s (1977) social learning theory, defined as individuals’ belief that they are capable of performing a behaviour. Ajzen (1988; 1991) acknowledged the overlap between self-efficacy and PBC, supported by the inclusion of a self-efficacy rather than a PBC measure in a study by De Vries, Dijkstra and Kuhlman (1988). However, Manstead and van Eekelen (1995) and Terry and Leary (1995) have provided evidence in support of theoretical separation of the two constructs. To add to the uncertainty, Sparks, Guthrie and Shepherd (1997) argued that a distinction between the two was not necessary because the recommended measure generally assessed parts of both constructs. Nonetheless, the studies by Manstead and van Eekelen (1995) and Terry and Leary (1995) demonstrated a strong, independent relationship between self-efficacy and intention after controlling for the effects of PBC. While the present study did not undertake a direct analysis between self-efficacy and intention controlling for PBC, it is worthy of note that our PBC measure, assessed only by self-efficacy, was significantly and positively correlated with intention ($r = .646, p<.01$). However,
PBC was also strongly correlated with past behaviour, meaning that shared variance made it a weaker predictor alongside other predictors.

Interestingly, trainee PWPs’ qualitative reports did not reflect positive self-efficacy. This may reflect their status as students on a course, where their performance was constantly assessed. Additionally, those who supplied qualitative data were a sub-sample, and may have felt the need to give socially desirable responses rather than mention personal lack of confidence. Finally, it may be that because using the materials is such an integral part of the trainee PWP’s role, it would not occur to them that they have much control. This may then affect their stated future intention rather more than if they were post-qualification and working in a context where they felt more capable and had greater flexibility.

The study had several methodological limitations. Firstly, although the analyses were sufficiently powered with 94 participants for the final four predictors, the response rate of 19% meant that the results may not represent the views of the majority of PWPs in training. The sample of participants was also relatively demographically homogeneous, which may not be representative of the population of trainee PWPs. Secondly, the cross-sectional survey design precludes any conclusions about causality. Thirdly, there were aforementioned issues relating to the validity and reliability of the scales developed in the study, for example, the impact of small numbers of items in some subscales. Fourthly, we could not eliminate the influence of social desirability effects from the survey, and it was possible that trainee PWPs responded particularly favourably about their attitudes, normative referents and intention. Those effects might also be stronger for PWPs because they are in training, where they are being judged on their performance, even though the survey was anonymous and unconnected with IAPT commissioners or courses. However, this was the first attempt to study this phenomenon using a standardised method of devising scales to assess TPB constructs, and future studies should address these issues where possible.
The findings supported the utility of the TPB’s three main constructs in predicting trainee PWPs’ intention to use self-help materials, thus adding to the body of research on the model. However, the median score for intention of 5.0 suggests that there may be room for selecting trainee PWPs’ beliefs for intervention, possibly focussing on their attitude, as this was the most significant predictor. This may be especially pertinent as the barriers identified by trainee PWPs may be less amenable to change.

The study extends the protocol outlined by Ajzen (2002) and Francis et al. (2004) by replicating the methodology as a web-based questionnaire survey. There is also a case for examining the prevalence of practical constraints highlighted by trainee PWPs, such as high caseloads, inadequate supervision, and materials not matching clients’ needs. Although these problems may be limited to those who responded, if they reflect the wider population of trainee PWPs they risk seriously undermining IAPT goals for the routine use of self-help materials in step 2 services.

While the present study set out to assess intention to use self-help materials, the TPB goes beyond intention to actual behaviour. Consequently, additional research could extend the methodology to prospective, longitudinal investigations of trainee PWPs’ actual use of self-help materials, with a view to elucidating the cognitive factors involved in their decision-making and actions. The inclusion of behaviour is particularly cogent given that a major assumption underlying the TPB is that intention is the most proximal determinant of behaviour. However, detractors of the model have observed that it depends heavily on the use of correlational data, less on assessing causal relationships between intention and behaviour, and that generally intention only accounts for a modest 20% to 40% of the variance in behaviour (Armitage & Conner, 2001; Godin & Kok, 1996; Randall & Woolf, 1994). Orbell and Sheeran (1998) have argued that the weak intention-behaviour relationship may be due largely to individuals having good intentions but failing to act on them. More recently, Webb and Sheeran (2006), in a meta-analysis which assessed both intentional and behavioural changes, have reported that “a
medium-to-large sized change in intention engenders only a small-to-medium change in behaviour” (p. 262). They conclude the influence of intention on behaviour is quite limited, and recommend that future behavioural change interventions focus not only on improving intention but also on “promoting intention stability and implementation intention formation” (p. 293).

It would be interesting to assess whether the addition of Gollwitzer’s implementation intentions (1993; 1997; 1999) would maximise trainee PWPs’ actual use of self-help materials. Implementation intentions are proposed to be simultaneously motivationally-driven and goal-directed, and involve a goal cost-benefit analysis which results in the formation of a goal intention to perform a behaviour (or not). Oettingen, Honig and Gollwitzer (2000) have proposed that implementation intentions are powerful self-regulatory tools which can overcome barriers to initiating action, such as when individuals are tired, engrossed in some other activity, lost in thought, etc., thus missing opportunities to act. The addition of implementation intentions may have practical implications for routine use of self-help materials standardised across all IAPT services, given that trainee PWPs identified a lack of standardisation as a barrier to their use. By way of an example, both trainee and post-qualified PWPs could be randomly assigned to groups with and without implementation intentions, before analysing their use of standardised self-help materials in line with NICE guidelines.

Additionally, Clark (2011) has reviewed outcomes from the initial implementation stage of the IAPT programme, concluding that it has surpassed expectations (see also: Glover, Webb & Evison, 2010; Gyani, Shafran, Layard & Clark, 2011). Since then, the UK government has extended the IAPT programme to 2015, with the injection of a further £400 million of funding, which will include the recruitment and training of another 2,400 high-intensity and low-intensity PWPs. Consequently, there will be continued impetus for the programme’s outcomes to be assessed and its progress validated. Further, it is likely that ongoing opportunities for trainees to use CBT self-help materials with clients
will continue to enhance their attitudes towards doing so, foster their sense of it being an accepted practice, and enhance perceived control of using the materials.

Finally, greater heterogeneity in sampling in future studies might also improve generalisability of the findings. It would also be interesting to disentangle the relative contribution of both PBC and self-efficacy in applying TPB to the use of self-help materials, and whether a better operationalised PBC construct might indicate a direct influence on actual use without the mediating influence of intention. The contribution of the indirect measures of the framework’s variables could also be re-examined after improvements in their construction and psychometric properties, perhaps with a larger and more diverse elicitation sample, and using face-to-face elicitation.

Conclusion

There is yet only a small body of research evaluating mental health professionals’ use of NICE recommended clinical interventions, and still fewer studies which underpin investigations with a theoretical framework. Consequently, this theoretically driven study is novel in examining the psychosocial predictors that may influence the intention of one specific group, i.e. IAPT trainee PWPs, to use CBT self-help materials in step 2 mental health services. The results suggest that the main constructs of the TPB had utility in predicting trainees PWPs’ intention to routinely use the materials, although the measure of PBC seemed less useful in this sample, possibly due to sharing variance with other variables. The study also supports the addition of past behaviour in extending the predictive applicability of the TPB, over and above the mediating influence of attitude, SN, and PBC. Future research could extend the methodology beyond a cross-sectional design to assess the impact of the variables investigated on actual self-help use by trainee PWPs.
Learning Objectives

- Whether and to what extent trainee PWPs’ intention to use routinely CBT self-help materials in their clinical practice will be determined by their attitude, how the use of materials are assessed by others, and how much control practitioners feel they have to use the materials.

- Whether training in the use of self-help materials relates directly to trainee PWPs’ intention to use them.

- In line with previous studies, will prior experience of using self-help materials exert significant influence on trainee PWPs’ intention to use materials as a routine part of their clinical practice?

- Can a social cognitive model, such as the theory of planned behaviour, predict trainee PWPs’ intention to use CBT self-help materials as a core component of their clinical practice?

Summary of main points of the study

- Study confirmed that three main constructs of theory of planned behaviour (TPB), that is more favourable attitudes towards materials, valuing the opinions of referent others, and feeling in control over using the materials, predicted IAPT trainee PWPs’ intention to use self-help materials in their clinical practice.

- Attitude most strongly predicted intention to use self-help materials, followed in order by perceived behavioural control and subjective norms (the opinions of referent others).
As hypothesised, past use of self-help materials emerged as both a direct and indirect predictor of intention to use, behind attitude as the second most significant predictor. This suggested that PWPs with past self-help experience has greater intention to continue using them.

The study’s meditational model explained 70% of the variance in intention, which supports the utility of the TPB in predicting trainee PWPs’ intention to use self-help materials routinely in their clinical practice.

Currently there is a small body of research evaluating mental health practitioners’ use of NICE recommended clinical interventions, and still fewer studies which underpin investigations with a theoretical framework. Consequently, this theoretically driven study is novel in examining the psycho-social predictors that may influence the intention of one specific group, i.e. IAPT trainee PWPs, to use CBT-based self-help materials in step 2 mental health services in the UK.

Suggestions for follow-up reading

- The role of IAPT training on the actual use of CBT self-help materials in clinical practice.


• Is the IAPT model accessible for clients with physical or intellectual difficulties or non-native English speakers? See: Dodd, K., Joyce, T., Nixon, J., Jennison, J., & Heneage, C. (2011) Improving access to psychological therapies (IAPT): Are they applicable to people with intellectual disabilities?, Advances in Mental Health and Intellectual Disabilities, 5(2), 29-34.


• The feasibility of other theoretical frameworks, social cognition and otherwise, for assessing mental health practitioners’ ability to apply clinical guidelines routinely in their practice.
References


National Institute for Health and Care Excellence (NICE, 2011a). Generalised anxiety disorder and panic disorder (with or without agoraphobia) in adults: Management in primary, secondary and


