Can the theory of planned behaviour (TPB) predict trainee clinicians’ use of CBT self-help materials in step 2 mental health services?

Section A: The IAPT programme and adherence to NICE guidelines: A review of the literature on the use of CBT self-help materials in step 2 mental health services

5,490 (plus 1,208) words

Section B: Predictors of IAPT PWP trainees’ intention to routinely use CBT self-help materials in step 2 mental health services

7,985 (plus 118) words

Section C: Critical Appraisal

1,793 (plus 12) words

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Lastly, and by no means least, to the Blessed Trinity be the glory for all that I have been, all that I am, and all that I am becoming.

“Weeping may endure for a night but joy cometh in the morning”. Psalm 30:5
SUMMARY OF THE MRP

Section A reviews and synthesizes the extant literature on adherence to clinical guidelines, with specific reference to the use of CBT self-help interventions as a mainstay within the IAPT programme. The review also evaluates the utility of one psychological framework, namely the theory of planned behaviour, in assessing the cognitive factors that may be most associated with compliance in this context. The review ends by suggesting an avenue for future research.

Section B outlines the results from a cross-sectional web-based questionnaire survey involving 94 IAPT trainee practitioners (PWPs). The main variables of the theory of planned behaviour (TPB), as well as past use, self-help training, and demographic variables were assessed to see if they were associated with PWPs’ intention to use CBT self-help materials. Four hypotheses were tested with correlation, linear and multiple regression, and mediation analyses. Three were fully supported by the results, while one found only partial support. The findings and their implications are discussed, and the methodological limitations of the study are acknowledged, and recommendations made for future research directions.

Section C sets out and answers four specific questions that guide a reflective critical appraisal of the processes involved in the execution of this research project.
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**Question 3**

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SECTION A

LITERATURE REVIEW

The IAPT programme and adherence to NICE guidelines: A review of the literature on the use of CBT self-help materials in step 2 mental health services

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SALOMONS

CANTERBURY CHRIST CHURCH UNIVERSITY
Abstract

This paper reviews and synthesizes the extant literature under an overarching theme of compliance with clinical guidelines, especially those recommended by the National Institute for Health and Clinic (NICE). More specifically, the review provides a brief evaluation of cognitive behaviour therapy (CBT), in light of its pre-eminent position in the guidelines for the treatment of anxiety and depression within stepped care mental health services. An evaluation is also undertaken of the IAPT programme and its stated mandate to use one type of CBT intervention, namely, self-help materials as its mainstay. It also highlights the impact of training in light of the mandate given to IAPT practitioners to routinely use the materials in their clinical practice in step 2 mental health services. It suggests that certain cognitions may be important determinants of healthcare professionals’ adherence to clinical guidelines. Theoretical models that have some utility in tapping individuals factors across a wide range of domains are briefly introduced and evaluated, before one particular framework, the theory of planned behaviour (TPB), is selected for a more comprehensive review. To date, only one study has applied the TPB to the use of self-help materials by mental health professionals in primary care services, and that study’s findings are evaluated, before an avenue for further research is recommended.
Introduction

Clinical guidelines to improve healthcare standards are core outputs of government and health affiliated organizations such as the Department of Health (Treatment choice in psychological therapies and counselling: Evidence-based clinical practice guideline, DOH 2001), and the National Institute for Health and Clinical Excellence (Depression: The treatment and management of depression in adults, NICE 2004b). This focus has been driven by the observation that best research evidence is not routinely translated into clinical practice by healthcare professionals (Grol & Grimshaw, 2003). One consequence of this “research-practice” gap has been poor levels of care, with often deleterious effects on patient outcomes and healthcare costs (Archambault et al., 2010). The past decade has seen the growth of an “implementation research” agenda for healthcare in the United Kingdom. Walker et al. (2003) notes that research in this area aims to identify factors that influence the clinical behaviour of health professionals, with a view to increasing routine adoption of evidence-based interventions in practice settings.

The implementation of clinical recommendations is one means by which the research-practice gap can be bridged. When followed, guidelines are known to augment professionals’ performance, resulting in a higher quality of care for service-users (Grimshaw et al., 1995; Thomas et al., 1998, 1999; as cited in Puffer & Rashidian, 2004). However, where recommendations are not routinely followed, optimal health outcomes can be compromised (Michie et al., 2005). In this regard, the implementation of clinical guidelines for anxiety and depression in primary care mental health services has received some attention. This report reviews the literature relating to a specific NICE clinical
 guideline, namely the use of self-help materials as the first-line treatment for depression and anxiety in primary care services. Additionally, the review was carried out within the context of the mandate given to Improving Access to Psychological Therapies (IAPT) practitioners to use self-help methods for the treatment of depression and anxiety in those services. While quality criteria were not formally applied to the studies included in the review, nonetheless attempts were made to evaluate informally the relevant studies. This was achieved by attending to general evidence of research methodological robustness, such as (but not limited to) evaluation of theoretical framework used (if any), study design, participants, sample sizes, use of effect size as a measure of treatment outcome, and post-intervention follow-up.

**The treatment of depression and anxiety within a stepped care model**

England and Lester (2007) have observed that 40% of primary care consultations have a mental health component. At any given time, one in six individuals of working age will be affected by anxiety and/or depression (DOH, 1999). Data from the last Adult Psychiatric Morbidity Survey indicate that rates of common mental disorders in England have registered year-on-year increases over the past 15 years (NHS Information Centre, 2009). These exert considerable costs on the individual, the health service, and the economy. However, at any given time, only a quarter of individuals affected by anxiety or depression are receiving treatment (London School of Economics [LSE], 2006). Clinical guidelines for treatment recommend medication and/or psychological therapy (DOH, 2001; NICE 2004a; NICE 2004b). However, access to psychotherapy is impeded by a
critical shortage of suitably trained and experienced mental health practitioners. Service users can wait months for an initial assessment, before being transferred to a treatment wait-list for another eighteen months (DOH, 1999).

In order to conserve on limited availability of specialist clinicians, interventions for common mental disorders are restricted in terms of “treatment intensity” provided in a stepped-care model (Bower & Gilbody, 2005). Low-intensity therapy refers to brief interventions for common mental health difficulties, focusing more on self-management. High-intensity describes longer-term treatment for more chronic/severe conditions, requiring direct intervention by specialist clinicians. The rationale behind stepped care is that if problems are identified early, they can be resolved with low-intensity interventions. The corollary is that those clients are then less likely to need high-intensity care, leaving specialist input accessible for those with more severe and enduring psychological difficulties.

**Cognitive Behaviour Therapy: Evidence-based treatment for depression and anxiety**

Cognitive Behaviour Therapy (CBT) is the “gold standard” therapeutic modality recommended by NICE for the treatment of anxiety and panic disorders (NICE, 2007a), depression (NICE, 2007b), and obsessive-compulsive disorders (NICE, 2005). NICE guidelines advocate accessible, timely, instructional, community-based mental health interventions. According to Palmer and Szymanska (2000), CBT offers a highly structured, solution-focused approach, with the therapist and client agreeing to work collaboratively to improve psychological functioning. In UK practice, CBT is usually
executed as a time-specific intervention, which it has been suggested makes it both financially affordable to commission, and a convenient fit for clients’ circumstances (McManus, Grey & Shafran, 2008).

The model efficacy has been proposed across a range of mental health disorders including: depression, anxiety, panic disorders, obsessive-compulsive disorders (OCD), post-traumatic stress disorder (PTSD), bi-polar disorders, and schizophrenia (Chambless & Gillis, 1993; Durham, Chambers, MacDonald, Power, & Major, 2003; Ehlers et al., 2003; Elkin, 1994; Huppert & Franklin, 2005; Scott, Garland & Moorhead, 2001; Tarrier, 2005). It is also effective in routine practice settings (Andrews, 1996; Butler, Chapman, Foreman & Beck, 2006; Foa et al., 2005; Heimberg, 2002; Roth & Fonagy, 1996; Turkington, Kingdon & Turner, 2002).

Butler et al.’s (2006) review has often been cited as providing substantive evidence of CBT’s effectiveness. They synthesised 16 meta-analyses involving nearly 10,000 participants across 332 randomised controlled trials (RCTs). The aim was to evaluate the modality’s effectiveness across a range of disorders, when compared to pharmaco- and behaviour therapy, and whether treatment effects persisted over time. Using effect size to measure treatment outcome, the researchers concluded that CBT was largely effective for unipolar depression, generalized anxiety disorder, panic disorder with or without agoraphobia, social phobia, post-traumatic stress disorder, and childhood depressive and anxiety disorders (mean effect sizes of 0.95 when compared with no-treatment, waiting list or placebo treatment controls). For the treatment of marital difficulties, anger, childhood somatic disorders and chronic pain, moderate effect sizes were reported. CBT
was claimed to be more effective than anti-depressants for the treatment of adult unipolar depression (effect size = 0.38), equally as effective as behaviour therapy for adult depression (0.05) and OCD (0.19). Butler et al. (2006) also reported that effects persisted post-treatment for depression, generalized anxiety, panic, social phobia, OCD, sexual offending, schizophrenia, and childhood internalizing disorders.

The study had several methodological strengths, including its attempt at robust analyses of a large number of RCTs, reporting effects size, and post-treatment follow-up. Additionally, the researchers claimed to have avoided a major pitfall of previous meta-analyses (“aggregating the outcomes for all treatments across disorders into one meta-analysis” – p. 18) by “reviewing meta-analytic evidence of the comparative efficacy of alternative treatments within disorders” (p. 18). However, in spite of strength of the effect sizes reported, some were considerably low (e.g. 0.05, 0.19), while significantly larger others were based on a small number of sub-set studies.

Other researchers have criticised the evidence on which CBT’s proposed superior utility is built, particularly when compared with alternative treatment modalities. Kingdon, Hansen, Finn and Turkington (2007) argue that the evidence is limited, as access to CBT is restricted by a number of exclusion criteria. These include “the use of drugs and alcohol, severity of symptoms, risk issues, lacking ‘psychological mindedness’, inability or unwillingness to engage, limited intelligence or presence of Asperger’s syndrome or organic brain disease” (p. 121). They also note that the “one size fit all” assumption underpinning CBT tends to ignore clients who do not find success with the method, and for whom treatment resistance may be a problem. Lynch, Laws and McKenna’s (2009)
meta-analytic review of published trials compared CBT with control treatments to treat and prevent relapse in clients with diagnoses of schizophrenia, major depression and bipolar disorder. While finding that CBT was efficacious in the treatment of major depression and preventing its relapse, it was less effective in reducing psychotic symptoms or preventing its relapse, or preventing relapse in bipolar disorders. However, the treatment effects for major depression came from only 10 studies (small pooled effect sizes: -0.27 to -0.41). Gaudiano (2008) also opines that CBT targets symptoms rather than the underlying causes of psychological distress, has a high (two out of three) relapse rate, and ignores the influence of life circumstances. In spite of the expressed misgivings, both the DOH (2001) and NICE (NICE 2004a; 2004b; 2005; 2007a; & 2007b) have developed guidelines which recommend CBT as the treatment of choice, on the basis that it has a considerable and reliable evidence base.

The Improving Access to Psychological Therapies (IAPT) programme

Actual provision of CBT interventions in mental health services is known to be impeded by a dearth of qualified therapists, which restricts timely access to treatment. These demand and supply challenges were highlighted in the Layard Report (LSE, 2006). The report focused on the need to reach individuals with cost-effective “high volume” psychological therapies. Against this background, the Improving Access to Psychological Therapies (IAPT) service model was commissioned in 2006.

The IAPT programme’s initial remit was to “support Primary Care Trusts (PCTs) in implementing NICE guidelines for people suffering from depression and anxiety”
In pursuit of that aim, the government committed £173 million to the programme, allocated as follows: 2008/9 (£33 million); 2009/10 (£70 million); and 2010/11 (£70 million). At the programme’s inception, funding was dispersed to PCTs across the UK’s 10 Strategic Health Authorities (SHAs) to train 3,600 new therapists. This injection of clinicians was expected to give nearly a million working-aged adults access to psychological therapies by 2011. Early evaluations at two “demonstration sites” in Doncaster and Newham 2007 claimed that the IAPT initiative would be able to meet its primary aims (Clark et al., 2009; Richards & Suckling, 2009).

Following the last general election in May 2010, the new-elected government agreed to honour the £70 million committed by the previous government for the fiscal year 2010/11. Additionally, the IAPT commissioners have updated guidelines for the continuation of services between 2011 and 2015 (DOH, 2010). During this period, provision will be expanded to include children and young people, and individuals with chronic physical health conditions, medically unexplained symptoms (MUS), and severe mental illnesses.

Detractors of the IAPT model are critical of its dependence on NICE guidelines, and its over-reliance on CBT interventions (Cohen, 2008). Cohen (2008) asserts that the guidelines are quite uncomprising in their “interpretation of what constitutes ‘evidence’, and that this prejudices some interventions for which there is little or no published evidence (p. 10)”

Thus, it could be argued that the guidelines are based on the assumption that therapies that have not been subject to rigorous empirical scrutiny, must inherently be ineffective. However, evidence exists to refute this assumption. Cuijpers,
van Straten, Smit, Mihalopoulous and Beekman (2008) demonstrated in a meta-analysis of 53 RCTs focusing on the prevention of new cases of depression, that most short-term psychotherapies, including CBT, were equally efficacious. They observed that there were no significant differences between treatment modalities when applied to mild/moderate depression. Further, they assessed previous comparisons of CBT and other short-term psychotherapies and found no difference between methods, after controlling for investigator allegiance. Cohen (2008) also highlighted dissatisfaction with IAPT’s approach to train practitioners solely to provide CBT interventions, to the exclusion of other therapeutic modalities.

IAPT interventions are provided within a stepped-care model. At step 1, mental health professionals usually provide an assessment or watchful waiting approach to presenting difficulties. IAPT low-intensity workers (Psychological Well-being Practitioners (PWPs) are trained and mandated to use CBT self-help materials to treat mild to moderate anxiety and depression at step 2. There is high-intensity input at step 3 for enduring and severe mental disorders.

**Using self-help materials in the treatment of depression and anxiety**

Self-help is the term used to describe client-administered interventions. The majority of self-help methods are grounded theoretically in CBT principles, and hence are referred to as CBT-based or CBT self-help materials. Self-help interventions can be accessed either with little or no contact with a therapist (unsupported/non-guided self-help), or in tandem with individual sessions with a clinician (supported/guided self-help)
Self-help formats include written (books or manuals), audio and videotaped materials, computer and internet-based materials, and treatment groups (Williams, 2001). They can be accessed via post, telephone, bookshop or library, traditional media, or the internet (Papworth, 2006).

Papworth (2006) carried out a comprehensive “second-order” meta-review of the treatment outcomes from self-help studies published between 1978 and 2004. The aim was to evaluate the effectiveness of self-help materials for the treatment of adult mental health problems. The findings from that meta-review are summarized here by way of an evaluation of the materials. Self-help methods are purported to offer a number of advantages over one-to-one therapeutic interactions. They allow prompt access by a greater range/number of clients, particularly those who have felt excluded from mainstream services for “financial, practical or clinical” reasons (Papworth, 2006; p. 388). The privacy and anonymity accorded by the majority of materials is also advantageous to clients. Individuals can be empowered by having control over when, where and at what pace they use the interventions. Papworth (2006) has argued that these and other accessibility issues can be particularly concerning for clients whose access to services has been undermined by discrimination and stigmatization (e.g. older adults and ethnic minorities. Additionally, Papworth (2006) asserts that, unlike more conventional psychotherapy methods, the self-help approach has the potential to prevent the sequelae of common mental disorders, by intervening “prior to, or at the point of a possible triggering crisis” (p. 388). The method is cost-effective to provide and support, when compared with
face-to-face psychotherapy. Additionally, the materials are likely to be standardized, which makes them amenable to scientific research and quality control checks.

The disadvantages attributed to the self-help approach overlap with some of those often ascribed to CBT methods *per se*. Firstly, it has been suggested that the success of the modality hinges on characteristics of the client, specifically that they have the motivation and ability to comply with treatment demands (Papworth, 2006). As can be appreciated, this expectation may conflict with the motivation and concentration deficits that are symptoms of depression and anxiety. Secondly, the majority of self-help formats are reliant on clients being sufficiently literate (educationally and/or technologically), being physically able to use them, and in the case of computerised CBT (cCBT), having access to a computer. Unless addressed directly, some self-help formats may inadvertently exclude particular client groups, for example, children, the learning disabled and cultural minorities (Williams, 2001). Thirdly, self-help approaches are known to suffer higher attrition rates than one-to-one psychotherapy (Bower, Richards & Lovell, 2001; Cuijpers, 1997). The foregoing shortcomings may lead some to conclude that the modality is not universally appropriate or accessible as an intervention for clients with depression and anxiety.

Evidence has been advanced proposing supporting the materials’ efficacy to treat a range of mental health disorders, including anxiety and depression (Bower, Richards & Lovell, 2001; Cuijpers, 1997; Gellatly et al., 2007; Gould & Clum, 1995; Marrs, 1995; van Boeijen et al., 2005; Waller & Gilbody, 2009; White, 1998; Whitfield, Williams & Shapiro, 2001). Cuijpers (1997) reported on a meta-analysis of six experimental studies to
assess the effect of one type of self-help intervention in the treatment of depression, namely, bibliotherapy (treatment in book format). Participants were adult community volunteers. Bibliotherapy treatment effect sizes were compared with those for individual therapy, group therapy, and a wait-list control group. It was reported that bibliotherapy was equally as effective in treating unipolar depression as both individual (mean effect size = 0.10) and group therapies (-0.10), and significantly more efficacious than no treatment (0.82). However, it could be argued that the results were more equivocal than conclusive, given the small number of studies reviewed.

Bower, Richards and Lovell (2001) carried out a systematic review of eight randomized controlled trials (RCTs), in which self-help methods were used to treat anxiety and depression in primary care settings. The aim was to evaluate both the clinical and cost effectiveness of the materials in treating those difficulties. Effect sizes were calculated to indicate treatment outcomes between intervention and control groups. Overall, the reviewers found that use of the materials by clients with anxiety and depression was followed by significant improvements in their symptoms at two, three and six months follow up, when compared with control groups (effects sizes 0.18 to 0.99). However, the limited number of studies restricted to primary care only, and the modest sample sizes reported mean the results cannot be generalized outside of the participants sampled. The authors themselves also acknowledged that the studies in the review were restricted by numerous methodological limitations, including high rates of participant attrition. The utility of self-help interventions has also been confirmed in empirical
investigations (Abramowitz, Moore, Braddock & Harrington, 2009; Ghaderi & Scott, 2003; Whitfield & Williams, 2004).

However, results from other studies have been ambivalent. Anderson et al. (2005) updated Cuijper’s (1997) review by evaluating six RCTs involving UK and overseas based adults. Self-help use was compared with a treatment as usual (TAU) or a wait-list, with standardised mean differences on the Hamilton rating scale reported as treatment outcome. Only two of the papers reviewed attained mean differences indicating a benefit from the materials four weeks post-treatment (i.e. mean differences below zero). Anderson et al. (2005) asserted that the evidence supporting the effectiveness of bibliotherapy for adult depression was still unconvincing eight years on.

In their study, Fletcher, Lovell, Bower, Campbell and Dickens (2005) randomly assigned 30 clients to either a non-guided self-help or a waiting list control group in a primary care service. They found no significant difference in anxiety and depression scores for either group 12 weeks after the start of treatment. Further, other studies have highlighted potential clinical shortcomings with the use of the materials, particularly as, in a few instances, they seem to worsen clients’ symptoms (Halliday, 1991; Mohr et al., 1990; Scogin et al., 1996).

The role of training in the use of self-help materials

In spite of the empirical and review evidence and NICE’s recommendations, it is known that self-help materials are not used routinely or used as interventions in their own right. Keeley, Williams and Shapiro (2002) and MacLeod, Martinez and Williams (2009)
surveyed British Association of Behavioural and Cognitive Psychotherapists (BABCP) accredited CBT practitioners’ use of self-help materials. Only 40.3% and 97.2% respectively of practitioners reported using self-help materials, and then only as an adjunct to individual therapy.

One reasonable inference from IAPT’s promotion of self-help materials as its primary intervention in step 2 services, is the expectation that self-help training will improve adherence to the method. Richards, Lovell and McEvoy (2003) suggest that a barrier to the material’s use is that “training to support patients with self-help is limited and misconceived” (p. 178). They recommend that routine training would facilitate improved uptake by practitioners. Support for the assertion that training plays a considerable role in clinicians’ use of self-help materials goes back more than twenty years in the USA (Marx, Gyorky, Royalty, & Stern, 1992; Quakenbush, 1991; Starker, 1986, 1988; as cited in Keeley, Williams & Shapiro, 2002). These early studies also found that practitioners were limited in their use of the materials (between 60.3% and 88.8%), even when they were viewed them favourably. In those earlier studies, there were differentials in trained therapists’ use of and attitudes towards the interventions, with those with training more likely to use them. However, other investigators have highlighted that even trained clinicians do not routinely use them (Kushner, 1995; Siegel & Schubert, 1996).

It is noteworthy that prior to IAPT’s rollout in 2008, training in self-help methods was not a routine requirement for clinicians working in step 2 mental health services. Where it is not imperative for therapists to be trained “self-help is often presented as a
marginal activity”, and are commonly relegated to “homework” tasks, to supplement individual therapy sessions (Richards, Lovell, & McEvoy, 2003; p. 176).

Investigating lack of adherence to clinical guidelines in healthcare services

Cabana et al. (1999) suggest that identification of factors that hinder or facilitate health professionals’ implementation of clinical guidelines has implications for effective service delivery. Several researchers have investigated factors specifically for injury and infection prevention (Moore et al., 2005; O’Boyle-Williams, Campbell, Henry, & Collier, 1994; Ramsey, McConnell, Palmer, & Glenn, 1996; Watson & Myers, 2001). Moore et al. (2005) reviewed the organizational and individual factors that protected clinicians from infectious illnesses in the workplace. Organisational factors such as education and training, adequate provision of environmental resources, regular evaluation, and management feedback were found to influence workers’ adherence to guidelines (see also, Gershon et al., 1995). Factors such as work environment, characteristics of the individual, job task, and social situation can also affect the execution of recommended precautions in practice settings (Dejoy, Murphy & Gershon, 1995; Kretzer, & Larson, 1998; Moore et al., 2005; Vaughan et al., 2004).

At the individual level, McKinlay, Potter and Feldman (1996) conducted a controlled experiment involving 192 male American physicians’ to test the diagnostic and interventional decisions made in two common clinical presentations (i.e. chest pains and shortness of breath). Decision-making was affected by non-medical patient attributes such as gender, race, age, socio-economic status, and whether patients had health insurance
There was also considerable variability in decision-making based on patients’ age. These were beyond those that may have been predicted if there was adherence to the Bayesian medical decision-making model. Consequently, McKinlay et al. (1996) recommended that the influence of social behaviour should be considered in evaluations of so-called “rational” medical decision-making models.

Davis and Taylor-Vaisey (1997) have opined that the successful implementation of clinical guidelines must incorporate procedures to facilitate their adoption. They observe that “variables that affect the adoption of guidelines include qualities of the guidelines, characteristics of the health care professional, characteristics of the practice setting, incentives, regulation and patient factors (p. 408)”. They suggest, among other things, that there is a need for continuing investigations on the influence of individual cognitions such as motivation, knowledge, skills, attitudes and behaviours, in the adherence to guidelines research domain.

**Assessing non-compliance of clinical guidelines - the role of theoretical approaches**

In the past few years, researchers have increasingly turned their attention to the contribution of psychological models in the evaluation of health professionals’ clinical behaviour (Eccles et al., 2006; Foy et al., 2007; Godin, Belanger-Gravel, Eccles, & Grimshaw, 2008; Hrisos et al., 2009; Michie et al., 2005; Puffer & Rashidian, 2004; Watson & Myers, 2001). As suggested by Davis and Taylor-Vaisey (1997), several have focused on the influence of cognitions on clinicians’ intention to use guidelines. Puffer and Rashidian (2004) suggest that “theoretical approaches may help to improve
understanding of the factors that hinder or facilitate guideline implementation” (p. 501). Eccles et al. (2009) add that the use of theory-based approaches “offers the potential of a generalisable framework within which to consider factors influencing behaviour and the development of interventions to modify them” (p. 25).

A number of frameworks have come from social and health psychology research to explain how cognitions may influence the intention to act and actual behaviour. These are known collectively as social cognition models (SCMs; Conner & Norman, 1995). Walker et al. (2003) note that SCMs are essentially a type of motivational theory, built on the assumption that motivation, oftentimes operationalised as the strength of intention to perform a behaviour, can predict actual or future behaviour. Notable SCMs include, among many others: the health belief model (HBM; Becker 1974), the theory of reasoned action (TRA; Fishbein & Ajzen, 1975), the theory of planned behaviour (TPB; Ajzen, 1991; Ajzen & Madden, 1986), social cognitive theory (SCT; Bandura, 1977), protection motivation theory (PMT; Rogers, 1975); self-regulation theory (SRT; Leventhal, Nerenz & Steele, 1984), health locus of control (HLC; Wallston, Wallston & DeVillis, 1978) and the transtheoretical model of change (TMC; Prochaska & DiClemente, 1984). Several have been widely researched, applied, and their utility established to a disparate range of predominantly health behaviours, such as: smoking cessation (HBM, HLC, TRA/TPB), reducing alcohol use (HLC, PMT, TRA/TPB), breast self-examination (HBM, HLC, TRA/TPB), contraceptive use (HBM), exercise (HLC, TRA/TPB)(Conner & Norman, 1995), and clinical psychologists’ intention to do research (TPB; Eke, Holttum & Hayward, in press).
The present review does not allow for a comprehensive description and evaluation of each of the named models. However, while individual SCMs are fundamentally distinct, as a group they share common assumptions in their formulation of salient constructs relating to behaviour, which will be briefly evaluated here. Specifically, the HBM, TRA and TPB models tend to be predicated on different combinations of cognitive constructs such as, but not limited to: knowledge and attitudes, perceived personal vulnerability, the influence of normative opinions, confidence in one’s competence to undertake health-enhancing behaviours, and the perception of volitional control, and how these factors are associated with intentions and behaviours. The models’ aim is to assess whether behavioural intention and actual behaviour can be predicted from cognitive determinants. Conner and Norman (1995) highlight that SCMs offer advantages for increasing our understanding of health-related and other behaviours as “they provide a clear theoretical background to research, guiding the selection of variables to measure, the procedure for developing reliable and valid measures, and how these variables are combined in order to predict health behaviours and outcomes” (p. 15). Empirical support for theories in predicting behaviour generally comes from their ability to predict intention to act, usually by detailing effect size as a percentage of variance explained between intention and behaviour.

In spite of their widespread application, the frameworks have limitations. Conner and Norman (1995) assert they may inadvertently ignore other intrapsychic and non-cognitive constructs, which may be critical in understanding particular behaviours or outcomes. The authors cite the neglect of the influence of volitional factors on behaviour
change, given that “many individuals who intend to change a health behaviour fail to do so” (p. 16). Sutton (1998) also notes that most of the studies that have found statistical significance using the TRA/TPB, have only been able to explain relatively small amounts (40% to 50%) of the variance in intention and behaviour (19% to 38%). Further, in a conceptual review of the HBM, PMT, TRA/TPB, Ogden (2003) criticises them for being difficult to test, and argues that in fact “they may create and change both cognitions and behaviour rather than describe them” (p. 427).

The contribution of the theory of planned behaviour (TPB)

While researchers have not been deterred by SCMs’ proposed shortcomings, their use in evaluating health professionals’ clinical behaviour has achieved only limited attention in the review and empirical domains. In Perkins et al.’s (2007) review of the use of the TRA and TPB in understanding, predicting, and changing clinicians’ behaviour, they found 20 studies across 19 articles, with only two directly related to mental health professionals. Nonetheless, they recommend the continued development of studies using the TRA and the TPB to predict clinicians’ intention and behaviour, as “they offer a rationale and a direction for future research as well as a theoretical basis for increasing the specificity and efficiency of clinician-targeted interventions” (p. 342). Eccles et al. (2006) reviewed ten studies investigating whether self-reported intentions could predict health professionals’ behaviour when compared with non-clinicians. They concluded that clinicians’ intention was a reliable predictor of their subsequent behaviour. In this regard, the use of the TPB has been proposed to offer substantial predictive value over the use of
the TRA (Puffer & Rashidian, 2004), given that the TPB includes both volitional and external factors in the form of its perceived behavioural control construct (more on this below). As Puffer and Rashidian (2004) have observed, the TPB “is the most appropriate of the two models with which to study the behaviour of health professionals, as their clinical activities may be influenced by a wide variety of external factors” (p. 502). One recent study has successfully applied the TPB to predicting the intention of clinical psychologists to carry out research activity (Eke et al., in press). In that study, intention was distributed bi-modally, and the model accurately classified 78% of cases using the TPB predictors in a logistic regression.

According to the theory of planned behaviour (TPB; Ajzen, 1985; 1991; Ajzen & Madden, 1986), the most important and immediate determinant of a target behaviour is an intention to perform that behaviour. The theory postulates that intention represents an individual’s motivation to act, and holds that those with the strongest intention are likely to exert the greatest effort in achieving their goals. Further, the TPB assumes that intention is itself determined by three “conceptually independent” predictor variables: attitudes, subjective norms, and perceived behavioural control (Figure 1).
The attitude or "salient behavioural belief" component of the TPB is usually underpinned by a belief that a behaviour will produce positive outcomes while avoiding negative ones, and the extent to which these outcomes are valued. Thus, attitude is calculated as a function of an evaluation of the behaviour’s expected outcome weighted by the strength of the belief placed on the behavioural consequence (Ajzen, 1985; 1991).

The subjective norms or "salient normative belief" element of the framework refers to the extent to which one believes important others will approve of the behaviour. Normative beliefs are assumed to have a strength as well as a motivation-to-comply component. Motivation-to-comply is the term used to describe the extent to which the
individual wishes to defer to the expectations of significant others (Conner & Armitage, 1998).

Perceived behavioural control (PBC) refers to the extent to which an individual believes they have control in performing behaviour. PBC is assumed to reflect both external factors (e.g. training, opportunities, resources, obstacles) as well as internal factors such as skills, ability, and information, which may influence behavioural performance (Ajzen, 1991; Godin & Kok, 1996; Puffer & Rashidian, 2004). 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 mediator-moderator effects). Accordingly, when people are correct in their estimation of control, PBC can have an indirect influence on behaviour through intention and a direct effect on actual behaviour (the latter assertion is illustrated by the broken line in Figure 1). As depicted in Figure 1, attitudes and subjective norms exert their influence towards a specific behaviour through their impact upon intentions, while PBC may influence both intention to perform the behaviour and actual behaviour (Ajzen & Madden, 1986).

The TPB’s efficacy has been supported across a range of health behaviours, including: smoking cessation (Norman, Conner & Bell, 1999); exercise (Hausenblas, Carron & Mack, 1997); blood donations (Giles, McClenahan, Cairns & Malett, 2004); condom use (Fisher, Fisher & Rye, 1995); breast cancer screening (Montano & Taplin, 1991). Additionally, the utility of the model in predicting both intention and behaviour has
been confirmed in reviews and meta-analysis (Ajzen & Madden, 1986; Armitage & Conner, 2001; Conner & Sparks, 1996; Godin & Kok, 1996; Hardeman et al., 2002).

The contribution of additional constructs to the predictive ability of the TPB

Despite its extensive application, the TPB has been criticised. Reviews of TPB studies found variations in the correlation between intention and behavior, and that intention only accounts for a modest 20% to 40% of the variance in behaviour (Godin & Kok, 1996). Orbell and Sheeran (1998) noted that weak intention-behaviour relationships indicate individuals having good intentions but failing to act on them. They also argued that the strength of the intention-behaviour relationship depends on the type of behavior performed, with past actions often emerging as a better predictor of behaviour than intentions. This has led some researchers to argue against the “implied sufficiency assumption” of the TPB (Eagly & Chaiken, 1993; Sutton, 1998). Specifically, it has been suggested that the inclusion of other behavior-specific cognitive constructs may better moderate the relationship between intention and behaviour (Conner & Abraham, 2001; Conner & Armitage, 1998; Eagly & Chaiken, 1993; Sutton 1998).

However, Ajzen (1991) acknowledges there are instances when the TPB’s predictive ability can be enhanced by the inclusion of other factors, but only as mediated by the contribution of its main three constructs. In this regard, past behaviour has sometimes emerged as a significant predictor of both intention and actual behaviour (Conner & Armitage, 1998; Oullette & Wood, 1998; Rhodes & Courneya, 2003; Sutton, 1994; 1998). In an investigation of exercise activity, Norman and Smith (1995) found that the addition of past behaviour accounted for a greater percentage of the explained variance
(54%), than when it was omitted (41%). Additionally, Conner and Armitage (1998) and Albarracin and Wyer (2000) found that prior behaviour can significantly affect intention, after controlling for the model’s cognitive variables.

Another construct proposed to extend the predictive utility of the TPB is perceived barriers to the performance of behaviour. Perceived barrier is a core construct in the HBM, in which it is defined as the individual’s perception of the real cost of a behavior (Becker, 1974). Bozionelos and Bennett (1999) advocate that perceived barriers should be included in the TPB, independent of the PBC construct, as both seek to elicit different types of control elements. Both Courneya and McAuley (1995) and Godin, Valois, Jobin and Ross (1991) provided empirical evidence that the addition of perceived barriers accounted for greater variance in exercise intention above that reported by the inclusion of PBC.

Ajzen and Fishbein (2005) also suggest the addition of background factors to the TPB. They recommend the inclusion of demographic variables “if factors of this kind can further our understanding of the behaviour by providing insight into the origins of underlying beliefs” (p. 200). They hypothesize that such factors will exert only indirect effects on intention and behaviour. Both Evans and Norman (1998) and Hahm et al. (2008) produced evidence that the influence of background factors on intention was mediated by the cognitive elements of the TPB.

### Applying the TPB to health professionals’ clinical practice

Many of the studies that have applied the TPB to social and health behaviours have focused on the experiences of the service-users only. Over the last decade, however, the
model has increasingly been used to assess whether healthcare professionals’ practices are concordant with guidelines (Archambault et al., 2010; Audin, Bekker, Barkham, & Foster, 2003; Puffer & Rashidian, 2004, Watson & Myers, 2001). Puffer and Rashidian (2004) found that the TPB explained approximately 40% of the variance in practice nurses’ intention to give smoking cessation advice, in line with the guidelines for coronary heart disease. From that study, attitudes and PBC emerged as the most significant predictors of intention. Additionally, time constraints and inadequate training were identified as significant barriers to nurses’ adherence. Similarly, Watson and Myers (2001) found the TPB was able to predict 45% of the variance in the intention of registered nurses to use gloves to protect against blood borne infections. Again, attitudes and PBC exerted the strongest influence on intention.

**Applying the TPB to the use of self-help materials in step 2 mental health services**

Generally, the TPB would predict the more positive the attitude towards a behaviour, the stronger the subjective norms, and the higher the perceived behavioural control, the stronger will be an intention to perform that behaviour (Orbell & Sheeran, 2000). Therefore, if applied to the use of self-help materials in IAPT services, the TPB would hypothesise that PWPs’ use of self-help (the behavior) will be dependent on their intention to implement that behavior. Further, their intention to use self-help can also be predicted by their “beliefs about self-help and its associated consequences (attitudes), their beliefs about what important others think of self-help (subjective norms), and their beliefs
about how much control they have to offer self-help (perceived control)” (Audin, Bekker, Barkham & Foster, 2003; p. 90).

To date, Audin et al. (2003) are the only investigators who have applied the TPB to evaluate the use of self-help materials by mental health professionals in primary care services. They rationalized that clinicians’ willingness to apply interventions in their clinical practice is determined by factors intrinsic to the individual. They suggest that the TPB is useful to use, because it provides a link between “an individual’s views and their behaviour” (p. 90). They go on to posit that

by using the TPB framework, it is possible to ascertain which practitioner views facilitate, or are barriers to, the use of self-help as a therapeutic alternative and, therefore, what views need to be addressed for aspects of the National Service Framework for Mental Health (NSFMH) to be implemented (p. 90).

Using a cross-sectional, postal questionnaire design, Audin et al. (2003) surveyed therapists registered with the organisation Counsellors and Psychotherapists in Primary Care (CPC). Participants reported use of self-help materials, and their attitudes, subjective norms, perceived control were assessed. Perceived control was found to predict most strongly intention to use the materials, followed in order by subjective norms and attitudes, accounting for 49% of the total variance in intention.

In line with the results from Keeley et al. (2002) and McLeod et al. (2009), Audin et al. (2003) found that 88% of CBT-trained therapists reported consistent use of self-help materials. It was also confirmed that materials were not generally perceived or used as a
stand-alone intervention, but mainly as an adjunct to individual therapy, with 85% reporting “self-help materials are an appropriate resource when used in conjunction with one-to-one counselling sessions” (p. 93). This ran against the recommendations in the National Service Framework for Mental Health (DOH, 1999). Additionally, only 14% of clinicians surveyed (n= 364) had received specific self-help training. The researchers went on to conclude that guidelines promoting the use of self-help methods as mainstream interventions were unlikely to be successfully implemented by the participants surveyed. Given that few counsellors had been trained to use the materials, they also suggested that training would have a positive impact on clinicians’ views and actual use of self-help resources, leading ultimately to more widespread and conventional implementation.

However, Audin et al.’s (2003) study was constrained by the lack of a standardised method in producing TPB measures. Additionally, the amount of variance in intention explained was modest, suggesting that unidentified variable(s) could be accounting for more of the variance than explained by TPB. Adding a qualitative element to their study might have further illuminated factors that contribute to clinicians’ intention to use self-help materials with their clients. Regardless of the methodological shortcomings in this study, it should be commended as a first attempt in the researched area.

Summary of the review

There is a remit for the provision of high-quality healthcare via the adoption of evidence-based interventions, as outlined in clinical guidelines. This is underscored by the assumption that best practice requires both training and adherence to clinical
recommendations. However, it is known that despite widespread dissemination, only a fraction of healthcare professionals regularly follow guidelines. Specifically, research suggests that mental health professionals, who are charged with using CBT self-help methods for the treatment of depression and anxiety, report only partial or sporadic use of the NICE recommended materials.

To date, only Audin, Bekker, Barkham and Foster (2003) has used a theoretical model, namely the theory of planned behaviour (TPB) to evaluate the use of CBT self-help materials by mental health professionals in primary care services.

**Avenue for further research**

This literature review has highlighted gaps in both knowledge and research activity relating to the factors influencing adherence to mental health guidelines in general, and use of CBT self-help materials in particular. The advent of the IAPT programme has added mandatory training in the use of self-help materials as advocated by NICE guidelines. The expectation is that PWPs will routinely use the approaches in step 2 mental health services. To date, there has been no theory-based assessment of PWPs’ intention to adhere to the clinical protocols, to identify factors that might predict their behavioural intention. Only Audin et al. (2003) have assessed the use of self-help materials within primary care mental health services using the TPB as conceptual framework. Therefore, it may be fruitful to apply the TPB to factors that facilitate or hinder PWPs’ intentions to use self-help materials, in line with the NICE guidelines for the treatment of anxiety and depression in step 2 mental health services.
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SECTION B

EMPIRICAL PAPER

Predictors of IAPT PWPs’ intention to routinely use CBT self-help materials in step 2 mental health services

7,985 (plus 118) words

(For submission to Behavioural and Cognitive Psychotherapy journal)

A thesis submitted in partial fulfilment of the requirements of Canterbury Christ Church University for the degree of Doctor of Clinical Psychology

July 2011

SALOMONS

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Abstract

**Background:** In spite of evidence for their efficacy and effectiveness as well as the recommendations of NICE, CBT self-help materials are not used routinely or used as an intervention in their own right in mental health services.

**Aims:** This cross-sectional study set out to assess whether the main constructs of the theory of planned behaviour (TPB), namely, attitudes, subjective norms (SN) and perceived behavioural control (PBC), as well as past use, self-help training and demographic characteristics, could predict IAPT psychological well-being practitioners’ (PWPs) intention to use CBT self-help materials in their clinical practice.

**Method:** A convenience sample of PWPs (n=94) completed a web-based, mixed closed and open-response questionnaire, which was developed from an earlier elicitation study with a sub-sample of their colleagues. The data generated were analyzed by linear, multiple regression, mediation, and qualitative analyses.

**Results:** The TPB’s main constructs predicted PWPs’ intention to use self-help materials in their clinical work, with attitude being most significant. Past use of self-help materials emerged as both a direct predictor of intention, as well as indirectly related to intention, independent of the mediating effects of the main constructs. The overall extended TPB model explained a respectable 70% of the variance in intention. However, neither self-help training nor demographic factors were associated with PWPs’ intention.

**Conclusion:** It is recommended that future research could extend the methodology to prospective, longitudinal investigations of PWPs’ actual use of self-help materials. It is hoped that this would further elucidate the cognitive factors that are involved in PWPs’ decision-making when they are actually using the materials.

*Key words:* IAPT, PWPs, NICE recommendations, theory of planned behaviour, self-help materials, mediation analyses
Introduction

Self-help describes self-administered mental health treatment materials, such as books/manuals, audio/visual recordings, computer/internet resources, and treatment groups (Williams, 2001). Many are underpinned by cognitive behaviour therapy (CBT) principles, and are sometimes referred to as CBT self-help. CBT has been championed as the gold-standard, first-line intervention for mild/moderate anxiety and depression by the National Institute for Health and Clinical Excellence (NICE, 2004a; 2004b; 2005; 2007a; 2007b, 2008). The efficacy of CBT self-help materials has been confirmed in the treatment of a range of mental health disorders, including anxiety and depression (Bower, Richards & Lovell, 2001; Cuijpers, 1997; Gellatly et al., 2007; Gould & Clum, 1993; Marrs, 1995; Waller & Gilbody, 2008; Whitfield, Williams & Shapiro, 2001). The method’s utility has also been confirmed in empirical investigations (Abramowitz, Moore, Braddock & Harrington, 2009; Ghaderi & Scott, 2003; Whitfield & Williams, 2004).

However, in spite of the evidence and NICE’s recommendations, self-help materials are not used routinely or used as a complete intervention (Richards, Lovell & McEvoy, 2003). Keeley, Williams and Shapiro (2002) found that 40.3% of accredited CBT practitioners reported using self-help materials only as an adjunct to individual therapy. Results from MacLeod, Martinez and Williams’ (2009) study also found that 97.2% of clinicians used the materials only to complement individual therapy. Richards et al. (2003) suggest that a barrier to the materials’ use is that “training to support patients with self-help is limited and misconceived” (p. 178). They suggest that routine
training would facilitate improved uptake by practitioners. The impact of a lack of training was also confirmed in the two earlier studies, where only 36.2% and 38.2% respectively of participants had specific self-help training.

The Layard Report (LSE, 2006) highlighted that access to CBT interventions in mental health services is impeded by a paucity of qualified practitioners. It was against this background that the Improving Access to Psychological Therapies (IAPT) service model was commissioned in 2006. IAPT’s remit is to use NICE recommended CBT self-help materials in step 2 mental health services as the main treatment for mild/moderate anxiety and depression. The programme’s aim is underscored by the provision of standardised training in the use of self-help materials for its Low Intensity workers (now known as Psychological Well-Being practitioners - PWPs), who are mandated to use them in their clinical practice. Given the considerable outlay of £173 million since IAPT’s rollout in 2008, it is not unreasonable to ask if the programme is meeting its stated aim for PWPs to routinely use self-help materials. Such a query is given particular impetus by the foregoing findings that qualified CBT practitioners are not consistently trained in or routinely using self-help materials. Consequently, one way to assess whether the IAPT programme is meeting its remit would be to investigate PWPs’ willingness to use the materials, and whether or not that translates to actual use.

Prior to the advent of the IAPT programme, Audin, Bekker, Barkham and Foster (2003) evaluated the use of self-help materials by mental health professionals in primary care services. The researchers posited that clinicians’ willingness to use the materials was
determined by factors intrinsic to the individual, such as their attitudes and intention. In their study, Audin and her colleagues (2003) used the theory of planned behaviour (TPB) as a theoretical framework to examine clinicians’ use of the materials, because it provides a link between “an individual’s views and their behaviour” (p. 90).

*Figure 1.* The theory of planned behaviour (Ajzen, 1991; p. 182)

According to the TPB (Ajzen, 1991), the most direct determinant of behaviour is an intention to perform it, and stronger intentions are more likely to result in behavioural performance. Intention is directly predicted by three constructs, namely attitude, subjective norms (SN), and perceived behavioural control (PBC). Additionally, while the attitude and SN components are assumed to influence intention directly, PBC also
functions as a moderator of the intention-behaviour relationship. Accordingly, when people are correct in their estimation of control, PBC can have an indirect influence on behaviour through intention, and a direct effect on actual behaviour (the latter illustrated by the broken line in Figure 1).

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. Ajzen (1991) suggests that the strength of intention is determined by how positively the behaviour is viewed, how much the individual believes that their normative referents would approve of performance of the behaviour, and how much control the individual believes they have in carrying out the behaviour.

Additionally, Ajzen (1991) acknowledges that there are instances where the TPB’s predictive ability can be enhanced by the inclusion of other factors, but only as mediated by the contribution of attitude, SN and PBC. Past behaviour has subsequently emerged as a sometimes significant predictor of both intention and actual behaviour (Conner & Armitage, 1998; Oullette & Wood, 1998; Rhodes & Courneya, 2003; Sutton, 1998). Further, in some instances, demographic variables have also been found to be significantly associated with behavioural intention (Evans & Norman, 1998; Hahm et al., 2008).

The utility of the TPB in predicting both intention and behaviour has been supported by a significant amount of research assessing a wide range of health behaviours (Ajzen & Madden, 1986; Armitage & Conner, 2001; Conner & Sparks, 1996; Godin & Kok, 1996). Additionally, the TPB has been applied to assess a range of health
professionals’ behaviours, including assessing whether their healthcare practices are concordant with clinical guidelines (Archambault et al., 2010; Audin, Bekker, Barkham, & Foster, 2003; Foy et al., 2007; Godin, Belanger-Gravel, Eccles, & Grimshaw, 2008; Puffer & Rashidian; 2004, Watson & Myers, 2001).

In Audin et al.’s (2003) study, participants reported their use of self-help materials, and their attitudes, subjective norms, perceived control were assessed. Perceived control was found to most strongly predict intention to use the materials, followed in order by subjective norms and attitudes, accounting for 49% of the total variance in intention. Self-help materials were not generally perceived or used as a stand-alone intervention, with 85% of respondents reporting use mainly as an adjunct to individual therapy. Additionally, only 14% of the sample of clinicians surveyed (n= 364) had received specific self-help training. Consequently, the researchers suggested that training would have a positive impact on professionals’ views and actual self-help use, ultimately leading to more widespread and conventional use of the resource.

However, Audin et al.’s (2003) study was constrained by the lack of a standardised method in producing TPB measures. Additionally, the amount of variance in intention explained was modest, suggesting that another unidentified variable could be accounting for more of the variance than explained by TPB. Further, it is possible that adding a qualitative element to this study might uncover additional factors contributing to clinicians’ intention to use self-help materials with their clients.
In summary, the preceding theoretical and empirical discussion has highlighted the continuing need to uncover which psychosocial and other factors might best predict intention to use CBT self-help materials. To date, no study has been undertaken to determine the factors may predict IAPT PWPs’ use of the modality, given their mandatory training, and NICE’s expectations. Consequently, the aim of the present study was to assess the utility of the three main constructs of the TPB, and whether the addition of past use of self-help materials and self-help training would enhance the ability of the model to predict PWPs’ intention to routinely use the materials in their clinical practice.

Additionally, the influence of socio-demographic factors on intention, namely: age, gender, ethnicity, pre-IAPT professional background, and training region, would also be assessed. Finally, as there is a possibility that some important variables might be missed in a purely quantitative survey, a further aim was to gather a small amount of qualitative data on PWPs’ experiences of factors affecting their use of the materials.

The study aimed to test the following specific hypotheses, depicted diagrammatically in Figure 2:

1. Attitude, subjective norm, and PBC will be directly related to intention to use self-help materials;
2. Past use of self-help materials will be directly related to intention to use self-help materials;
3. Self-help training will be directly related to intention to use self-help materials;
4. Attitude, subjective norm, and PBC will mediate the relationship between past use of self-help materials and intention to use self-help materials;
5. Attitude, subjective norm, and PBC will mediate the relationship between self-help training and intention to use self-help materials;

6. 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:

1. What, if any, other factors not taken into account in the quantitative survey will participants cite as affecting their use of self-help materials?

*Figure 2.* Path diagram of the model to be tested
Method

Design

Using the TPB as a conceptual framework, a cross-sectional, web-based questionnaire survey investigated the cognitive factors that might influence PWPs’ use of self-help materials. Following the procedures recommended by Ajzen (2002) and operationalized by Francis et al. (2004), the survey was undertaken in two stages: (1) TPB beliefs elicited, before a questionnaire was developed, pilot-tested and retested; and (2) administration of the main questionnaire to PWPs.

Stage 1 – construction and piloting of TPB measures

Participants in stage 1

A convenience sample of PWPs (n=55) was recruited from an IAPT training institution in Southeast England. Access was facilitated by the lead researcher’s affiliation with that institution.

Measures

Eliciting salient beliefs of the core constructs of the TPB

In accordance with Francis et al.’s (2004) recommendations, PWPs were asked to share their salient beliefs about using self-help materials (see Appendix 1). The questions, accompanied by an introductory statement (see Appendix 2), were sent to the 55 PWPs via their training administrator. Seven (13%) trainees ultimately emailed their responses to the lead researcher. While Godin and Kok (1996) recommend eliciting beliefs from a
sample of 25 participants, Francis et al. (2004) observes that the size of the sample can be amended to reflect study requirements. Accordingly, Puffer and Rashidian (2004) elicited beliefs from only five participants in their study on nurses’ intention to use clinical guidelines for smoking cessation advice.

Questionnaire development

The responses elicited were content analyzed, grouped into behavioural, normative and control belief categories, and ranked from most to least frequently occurring (see Appendix 3). The analysis was carried out independently by the lead researcher and a volunteer qualified PWP, and resulted in reviewer concordance on the categories, ranks and frequencies. Francis et al. (2004) suggests including 75% of elicited belief themes. However, given the small number of elicitation respondents (n=7), all the belief themes were retained, regardless of their frequency. Themes were then converted into a series of statements assessing behavioural, normative and control beliefs and their corresponding outcome evaluations, motivation to comply, and control factors, all on 7-point Likert scales. Francis et al. (2004) refer to this kind of elicitation exercise as producing “indirect” measures. This process resulted in 18 indirect attitude, 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 by asking them directly using a set of standard items with the relevant behaviour substituted. The researchers rationalise that
direct and indirect measurement approaches make different assumptions about the underlying cognitive structures and neither approach is perfect. When different methods are tapping the same construct, scores are expected to be positively correlated, so it is recommended that both be included in TPB questionnaires (p. 9).

Consequently, measures were also formulated to assess PWPs’ direct attitude, normative and control beliefs, all on 7-point scales, with mean composite scores after correcting reverse-scored items. 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 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 specific factors suggested by PWPs during the elicitation stage, four items were also included to assess perceived barriers as a predictor of intention: (1) organisational resource issues (admin support, photocopying, cost of materials); (2) client-related issues (lack of motivation, literacy, diversity, individual expectations); (3) work environment issues; and personal issues (boredom, hitting a career ceiling, feeling undervalued). These were all 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 PWPs’ generalized intention, from two items to assess the addition of past behaviour, and from four items to assess perceived barriers. Self-help training was assessed by the single item “have you had your IAPT module 2 training yet?” on “1=yes or 2=no”. Participants were also asked to report the types of materials previously used or being used. Five items were also included to monitor demographic characteristics of age, gender, ethnicity, professional background and UK training region.

All the measures generated made a 110-item first draft of the survey questionnaire. Additionally, information, consent, and “thank you” forms were prepared to complete the study pack. These were emailed to the seven elicitation PWPs for their evaluation. They were also reviewed by the project’s lead and second supervisors and the volunteer qualified PWP, in the formats suggested by Archambault et al. (2010) and Francis et al. (2004) (see Appendix 4). The minor revisions suggested were incorporated for second drafts of the study pack.

Pilot testing the questionnaire

Next, an online account was opened with SurveyMonkey (see Appendix 5), and the study pack was uploaded to their website. Elicitation PWPs were asked to review the documents online, which were subsequently amended with their feedback (see Appendix 6 for final copies).

To pilot-test the survey online, an email with an embedded weblink was sent to the 55 trainees (excluding the pilot 7) via their training administrator (see Appendix 7). An
option was activated on SurveyMonkey to track respondents by their IP/email address, to facilitate later retest of the questionnaire. Ten PWP s ultimately returned a completed questionnaire. Nine were female, five were psychology graduates (four other professionals, one counsellor), six were White British (four Other White), four were aged 25 to 29, three were aged 30 to 34, two were 40 to 44, one was 45 to 49, and one was 50 or over. All had received their IAPT module 2 training at that point, and all reported using mainly written self-help materials.

The pilot data were transferred to the Statistical Package for Social Scientists (SPSS) version 17. Participants’ indirect measure responses were recoded using a scoring key compiled for the study (see Appendix 8), before the relevant composite scores were computed. Direct measures questionnaire items 78, 79, 81, and 85 were also reverse scored, before their internal reliabilities were calculated. 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 less than modest Cronbach’s alpha scores, which may not reflect the true reliability of the scale. Briggs and Cheek (1986) suggest examining the mean inter-item correlation values instead, and accepting as reliable, mean values between 0.2 and 0.4. Consequently, all questionnaire items were retained at this point in the study, and their reliabilities were recalculated later using the final data set.

Additionally, a bivariate analysis yielded a mix of positive and negative, significant and not significant correlations (see Appendix 9). Due to the small sample, correlations were later re-assessed using the final data set.
Retesting the questionnaire

The questionnaire was re-sent four weeks later to the pilot 10 participants, who all completed and returned a second questionnaire. A test-retest analysis on the indirect measures yielded a mixed picture: indirect attitude ($r = 0.682, p < .05$), indirect SN ($r = 0.858, p < .001$), and indirect PBC ($r = 0.503, \text{n.s.}$). 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 (see Appendix 10). The weblink for the final questionnaire was disseminated via IAPT regional leads (see Appendix 11). Ultimately, 112 PWPs accessed the website, with 94 completing a questionnaire and consent form, for a 19% overall response rate. Data from 18 respondents who started but did not complete a questionnaire were discarded from the subsequent analyses.

At the planning stage, it was anticipated that mediation relationships between the constructs would be assessed with regression analyses. Cohen (1988) suggests the following effect sizes for adequately powered regression analyses: (1) small, $R^2 = 0.02$; (2)

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1^ At the time of the 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).
medium, $R^2 = 0.13$; and (3) large, $R^2 = 0.26$. Cohen (1988) also recommends that analyses should aim to detect at least a medium effect size, with statistical power of 0.80 ($\alpha = 0.05$). Following those conventions, the study needed a minimum sample of 120 participants. Consequently, with a conservative trainee population of 500, a sample of 200 trainees assuming a 40% response rate was deemed achievable. Although only 94 PWPs participated, at 80% power this was sufficient to detect just above a medium effect ($R^2 = .15$ to $.20$ for explaining 15 to 20% of the variance in intention) if it was present.

**Measures**

The measures were those elicited and finalised in stage 1. 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 routinely use self-help materials in step 2 services. Demographic factors were PWPs’ age, ethnicity, gender, professional background, IAPT training region, and type of self-materials used or being used.

**Procedures**

To ensure anonymity, the retest feature was de-activated on SurveyMonkey before the final study pack was dispatched. However, participants were invited on page 2 of the questionnaire to give an email address if they wished to receive summary feedback at the end of the study. A volunteer assistant psychologist was recruited to retrieve and save all participants’ email addresses, leaving the lead researcher blind to those details until the end of the study. Data were collected over five months in the 2010/2011 academic year, during which PWPs were sent three reminder emails via their course administrator.
Ethical considerations and approval

All participants who accessed the survey online had to read an information document and verify their consent electronically (see Appendix 6). Prior to its execution, the study received ethical approval from the Research Governance Department at Canterbury Christ Church University (see Appendix 12).

Data screening before analyses

The final data set was transferred to SPSS version 17, screened for missing data (there were none) and corrected for entry errors. An examination of the data from the 18 respondents who did not complete a questionnaire revealed no significant difference with completers.

Analyses

Scale reliability analyses

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 TPB measures, intention, past behaviour, and perceived barriers (n = 94)*

<table>
<thead>
<tr>
<th>Survey variables</th>
<th>Number of survey items</th>
<th>Cronbach’s alpha*</th>
<th>Mean inter-item correlation****</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct attitude</td>
<td>4</td>
<td>0.66</td>
<td>0.33</td>
</tr>
<tr>
<td>Direct SN</td>
<td>3</td>
<td>0.46 **</td>
<td>0.30</td>
</tr>
<tr>
<td>Direct PBC</td>
<td>4</td>
<td>0.43 ***</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>

Note.

* Francis et al. (2004) recommends 0.6 as an acceptable level for reliability
** Cronbach’s alpha when questionnaire item 83 is deleted (see questionnaire in Appendix 6)
*** Cronbach’s alpha when questionnaire items 86 and 87 deleted (see questionnaire in Appendix 6)
**** Means between 0.2 and 0.4 indicate acceptable internal consistency reliabilities based on convention outlined by Briggs and Cheek (1986)

Analyses of statistical assumptions

The main data set was screened for the statistical assumptions necessary for regression analyses. The assumptions were tested with a combination of visual inspection of histograms, stem-and-leaf plots, normal and detrended normal Q-Q plots, Kolmogorov-Smirnov (K-S) statistic, and an examination of skewness/standard error of skewness scores. While the normality assumptions were reasonably met for the three indirect measures (see Appendix 13), they were not for the direct, intention, past behaviour and perceived barriers measures. A square transformation of the data normalized only the intention distribution. However, it was decided to proceed with the regression analyses, using the transformed intention measure as the outcome variable. Tabachnick and Fidell (2001) suggest an examination of residuals during regression analyses to test whether the
statistical assumptions have been met, as an alternative to “preanalysis screening” (p. 119). Additionally, Field (2009) suggests that in instances when the outcome variable is normally distributed but some of the predictors are not, it is still appropriate to execute regression analyses because residual distributions are more important than the distribution of the overall data.

Correlation analyses

Using the transformed intention measure, correlation analyses were carried out on the predictor, outcome and demographic variables (see Appendix 14). The reported correlations reflect the following changes: professional background was recoded into the dichotomous variables “psychologist versus other profession”, and ethnicity was recoded into the dichotomous variables “white/white other versus non-white”. There was no issue with multicollinearity in the data, as none of the correlations between predictor variables exceeded 0.9 (Tabachnick & Fidell, 2001).

Testing the hypotheses

Baron and Kenny’s (1986) mediation approach was used to assess the hypothesised relationships among the predictor, mediator, and outcome variables. Baron and Kenny (1986) propose looking at effects along four pathways: (i) between a predictor variable and the mediator (path a, direct effect), (ii) between the mediator and an outcome variable (path b, direct effect), (iii) direct path between the predictor and outcome variables (path c, direct effect), and (iv) the path in which the predictor affects the
outcome variable when the mediator is controlled (path c', indirect effect). To test for mediation, they recommend three regression equations: (1) regressing the mediator on the predictor, (2) regressing the outcome variable on the predictor, and (3) regressing the outcome measure on both the predictor and the mediator. Mediation is reached when (a) the predictor affects the mediator in equation 1, (b) the predictor affects the outcome variable in equation 2, and (c) the mediator affects the outcome variable in equation 3.

Further, Baron and Kenny (1986) observed that

if these conditions all hold in the predicted direction, then the effect of the independent [predictor] variable on the dependent [outcome] variable must be less in the third equation than in the second. Perfect medication holds if the independent variable has no effect when the mediator is controlled (p. 1177).

The mediation pathways and overall test of the model were assessed in the present study with linear and multiple regressions, with statistical significance set at one-tailed.

Qualitative analysis

Qualitative responses to the questionnaire items 94, 96, 98, 100, 101, 104, and 105 were content analyzed. Participants’ responses were grouped into categories and subcategories, and their frequency noted. The lead researcher and the volunteer assistant psychologist carried out the procedure independently, until concordance was achieved.

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2 “Affects” is used here as a statistical term and is not meant to imply a causal relationship.
Results

Participant characteristics

There were 86 (91.5%) female PWPs to 8 (8.5%) males. The majority of PWPs were aged 20 to 34 [74(78.7%)], with 41 (43.6%) aged 25 to 29, while 15 (16%) of those who completed a questionnaire were aged 40 to 50 and over. The predominant self-reported ethnic background was White British [65(69%)], followed by Other White [13(13%)], whilst 17% of trainees came from non-white backgrounds. In terms of professional background, 70 (74.5%) PWPs were psychology graduates, while 17 (18.1%) were from a range of other careers. Twenty-three (24.5%) PWPs 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 PWPs in the East Midlands. All the other regions were represented by between one and four participants each. Further, 80 (85.1%) PWPs had already received their IAPT training in using self-help materials, while 14 (14.9%) had not. Table 2 presents type of materials that PWPs previously used or were using in their current practice.

Table 2

<table>
<thead>
<tr>
<th>Type of self-help materials used or being used by PWPs (n = 94)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Materials</strong></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Written materials</td>
</tr>
<tr>
<td>Audio tapes</td>
</tr>
<tr>
<td>DVDs</td>
</tr>
<tr>
<td>Group self-help</td>
</tr>
<tr>
<td>Combined</td>
</tr>
<tr>
<td>Internet chatrooms</td>
</tr>
<tr>
<td>Other (not specified)</td>
</tr>
</tbody>
</table>
Descriptive statistics

Descriptive statistics were calculated for the main theoretical and additional variables of the model, as presented in Table 3.

Table 3

*Median, inter-quartile, 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>Inter-quartile range</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>84.8</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>

Correlation analyses

Francis et al. (2004) suggest that where both direct and indirect measures are used to arrive at the main constructs of the TPB, scores on those measures should correlate positively. Cohen (1988) has suggested the following effect sizes for interpreting correlation scores between 0 and 1: \( r = .10 \) to \( .29 \) (small), \( r = .30 \) to \( .49 \) (medium), and \( r = .50 \) to 1.0 (large), and recommends that analyses should aim to detect a medium effect size. Of the main TPB constructs, 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 \( (r = -.007) \) (see Appendix 14 for the correlation matrix).
An examination of correlations among the direct measures indicated that 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 ($r = .422, p < .01$).

With regard to the associations between intention and the direct measures, intention was significantly correlated with direct attitude ($r = .766, p < .01$), direct SN ($r = .598, p < .01$) and direct PBC ($r = .646, p < .01$). This suggests that PWPs were reporting their intention to use self-help materials, that their use was viewed favourable by their normative referents, and that trainees believed they have control over using the methods.

Consequently, it was decided to use only direct measures of attitude, SN and PBC to test the study’s hypotheses. This decision was also strengthened by the lack of correlation between direct and indirect PBC, suggesting that the indirect measure of PBC might be problematic in the reported sample of PWPs.

In terms of the additional variables adding to the predictive utility of the model, past behaviour displayed significant association with indirect attitude ($r = .227, p < .01$), indirect SN ($r = .433, p < .01$), direct attitude ($r = .490, p < .01$), direct SN ($r = .503, p < .01$), direct PBC ($r = .561, p < .01$), and intention ($r = .652, p < .01$), but was not correlated with indirect PBC ($r = -.052$). There were no significant correlations between self-help training (reported as training module in the correlation matrix) and any of the other variables in the study. It is possible that this was a reflection of the fact that only 14.1% of trainees had not received their IAPT self-help training at the point of participating in the survey, and that there was not enough people without training for this variable to be tested. Consequently, it was decided to remove self-help training from any further analyses.
Perceived barriers were significantly (but negatively) correlated with indirect PBC. This suggests that the more barriers PWPs perceived existed, the less control they felt they had to use the materials. Otherwise, perceived barriers were not significantly related to any of the other measures, and were not related 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. The only significant associations between background variables and main predictors were between age and indirect SN \( (r = -0.247, p<.05) \), age and direct SN \( (r = -0.271, p<.01) \), and age and past behaviour \( (r = -0.342, p<.01) \). Other significant correlations were obtained between gender and indirect SN \( (r = 0.323, p<.01) \), gender and age \( (r = -0.298, p<.01) \), profession and past behaviour \( (r = 0.206, p<.05) \), and profession and age \( (r = 0.470, p<.01) \). Otherwise, the remaining demographic variables generated effects less than .01. Consequently, it was decided to omit all demographic variables from the main analyses.

*Testing the hypotheses*

The amended model, tested in line with Baron and Kenny’s (1986) mediation analyses, is presented diagrammatically in Figure 3. Past self-help use (PSHU) was the predictor variable, intention to use self-help materials was the outcome variable, and direct attitude, direct SN, and direct PBC were the mediators. The constructs were tested in linear regressions in the recommended three steps, and are reported here in a format
adapted from the study by Caperchione, Duncan, Mummery, Steele and Schofield (2008) (see Table 4 for results from the three steps).

**Step 1**

In step 1, attitude, SN, and PBC were regressed individually on PSHU, which significantly predicted each of the three variables (standardised $\beta$ weights .49, .50, and .56 respectively; all $p<.001$). Specifically, 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 [$F(1, 92) = 42.24, p<.001$].

**Table 4**

Tests of mediation between attitude, SN, PBC and PSHU on intention to use self-help materials ($n=94$)

<table>
<thead>
<tr>
<th></th>
<th>$B$</th>
<th>SE</th>
<th>$\beta$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude regressed on PSHU</td>
<td>.47</td>
<td>.09</td>
<td>.49***</td>
<td>.232***</td>
</tr>
<tr>
<td>SN regressed on PSHU</td>
<td>.41</td>
<td>.07</td>
<td>.50***</td>
<td>.245***</td>
</tr>
<tr>
<td>PBC regressed on PSHU</td>
<td>.65</td>
<td>.10</td>
<td>.56***</td>
<td>.307***</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention regressed on PSHU</td>
<td>6.42</td>
<td>.78</td>
<td>.65***</td>
<td>.418***</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention regressed on attitude</td>
<td>7.80</td>
<td>.68</td>
<td>.77***</td>
<td>.582***</td>
</tr>
<tr>
<td>Intention regressed on SN</td>
<td>7.17</td>
<td>1.00</td>
<td>.60***</td>
<td>.351***</td>
</tr>
<tr>
<td>Intention regressed on PBC</td>
<td>5.46</td>
<td>.67</td>
<td>.65***</td>
<td>.411***</td>
</tr>
<tr>
<td>Intention regressed on attitude and PSHU</td>
<td>5.99</td>
<td>.66</td>
<td>.59***</td>
<td></td>
</tr>
<tr>
<td>\hspace{1cm} • attitude</td>
<td>3.59</td>
<td>.66</td>
<td>.36***</td>
<td></td>
</tr>
<tr>
<td>Intention regressed on SN and PSHU</td>
<td>4.33</td>
<td>.83</td>
<td>.47***</td>
<td></td>
</tr>
</tbody>
</table>
Step 2

In step 2, intention was regressed on PSHU, which was a significant predictor of intention to use the materials ($\beta = .65$, $p<.001$), accounting for 42% of the relevant variance [$F(1, 92) = 67.92$, $p<.001$]. This result fully demonstrated the prediction made in hypothesis 2.

Step 3

Given that Baron and Kenny’s (1986) conditions were achieved in steps 1 and 2, in step 3, intention was then regressed individually on attitude, SN and PBC. In line with hypothesis 1, 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 ($\beta = .59$, $p<.001$), while PSHU was also a significant predictor of intention ($\beta = .36$, $p<.001$). Given that PSHU’s $\beta$ in step 3 was less than its value in step 2 ($\beta = .65$, $p<.001$), 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 ($\beta = .65, p<.001$), the third condition of Baron and Kenny’s (1986) rule of thumb was met. However, SN was only a partial mediator of the relationship between PSHU and intention because it was still also an independent predictor of intention.

When intention was regressed on PBC and PSHU, both significantly predicted intention, explaining 53% of the total 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. Consequently, the foregoing three significant indirect partial mediation effects partly supported the prediction made in hypothesis 4.

A regression analysis was also carried out 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 ($\beta = .468, p<.001$) emerging 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 to use the materials ($\beta = .125$, $p = .117$).

Consequently, hypothesis 6 was only partially supported by the survey results.

During the mediation analyses, diagnostics were reassessed to check whether the statistical assumptions which underlie regression analyses were met. The results indicated that the distribution of the data was appropriate for all the variables in the final model, and that the assumptions for normality and multicollinearity had been achieved.
Figure 3. Mediation pathways from the survey results

Note. ***p<.001, $\beta$ = standardised beta coefficients
Qualitative analysis

PWPs identified a number of organisational, client-related, personal, and work environment factors that would hinder their ability to routinely use self-help materials in their role (see Appendix 15). The most frequently identified organisational constraints were difficulties in reproducing materials, and accessing online resources. PWPs also believed that they were encumbered by a lack of translated materials, lack of physical resources, inadequate supervision, and the referral of clients not appropriate for step 2 services.

In terms of client related issues, trainees cited lack of understanding of services or their role, clients’ lack of motivation to use the materials, and the difficulties encountered by those with physical or intellectual difficulties or a language barrier. Specific difficulties in the work environment included chain of command constraints like poor communication between High and Low Intensity workers, and the size of PWPs’ caseloads. On a personal level, some reported feeling devalued, lamented what they perceived as a lack of opportunities for personal development, highlighted problems with the amount of supervision they could access, and a lack of variety in the kinds of materials available.

The most widely reported type of materials previously used or currently being used by trainees (n = 29) was computerised CBT (cCBT), which was utilised by 18 (62%) respondents. This was followed by online resources, used by 7 (24%) and CDs used by 3
(10%) of respondents. One trainee reported using self-designed materials in their clinical practice.

With regard to the open-ended question assessing self-help training prior to joining the IAPT programme (n = 18), 7 (39%) reported “studied some of it at university”, 7 (39%) knew about the method from in-service training/CPB events, while four trainees (22%) reported learning from other sources (e.g. whilst running a group).

With the opportunity to share freely their thoughts on any aspect of the use CBT self-help materials within the IAPT model, 43 PWPs provided feedback. Their evaluations were grouped into strengths, opportunities for improvements, and general observations (see Appendix 15 for reported categories, sub-categories and example verbatim responses). PWPs felt that clients generally found self-help useful, and that the materials were a key complement to other therapeutic interventions. However, they were concerned that the materials can be simplistic, which some clients, particularly the well-educated, might perceive as patronising, that materials are not suitable for all clients (“one size does not fit all”), and that they are not standardised. Additionally, PWPs reiterated their earlier observation about the lack of materials to adequately meet the needs of a diverse population of clients.

Discussion

As hypothesized, the TPB’s main constructs significantly predicted PWPs’ intention to routinely use self-help materials in their clinical practice. Trainees with more
favourable attitudes towards self-help materials, who valued the opinions of referent others, and who felt they had some control in using the materials, were most likely to intend to use the materials. Attitude most strongly predicted intention, followed in order by PBC and SN, results that contradicted the findings from Audin et al.’s (2003) study. This suggested that PWPs might be holding 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 previous studies on other types of behaviour (Godin & Kok, 1996). Further, in terms of the hypothesised mediation relationships, attitude, 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 predictor of intention, as well as indirectly related to intention, independent of the mediating effects of the TPB’s main constructs. Additionally, in the overall test of the model, past use was the second most significant predictor of intention after attitude, being more influential than either SN or PBC. This finding suggested that PWPs with past self-help experience had greater intention to continue using them. The strength of association between past use and intention in this study supported the criticism that the TPB may not be sufficient in predicting intention (Conner, 1993; Eagly & Chaiken, 1993; Rhodes & Courneya, 2003; Sutton, 1994; 1998).
Exposure to mandatory training in the use of self-help materials, although a mainstay of the IAPT programme, did not emerge as having any association with PWPs’ intention. Additionally, none of the proposed socio-demographic factors were associated with PWPs’ intention. However, it was possible that these findings were influenced by participant homogeneity on age, gender, ethnicity, and professional background. Consequently, predictive effects from these variables might have been undetectable in the analyses.

The full model explained a respectable 70% of the total variance in intention, clearly supporting the utility of the TPB in predicting PWPs’ intention to routinely use self-help materials. This figure was considerably higher than the average variance of 41% reported by Godin and Kok (1996), and the range of 28.6% to 53.3% reported by Foy et al. (2007). The attitudinal component emerged as the most significant predictor, followed by past use and SN. This suggested that trainees intended to use the materials because they had positive beliefs about them, had used them previously, and because they were influenced by the views of normative referents such as clients, accrediting organisations, their managers, and local commissioners.

However, contrary to theoretical prediction, this study’s expectation, and results from previous investigations (e.g. Godin & Kok, 1996; Puffer & Rashidian, 2004; Watson & Myers, 2001), PBC did not predict trainees’ intention to use the materials. This suggested that while PBC may be relevant, it may be less important than attitude or SN. It was also possible that the absence of a strong association when all the TPB variables were in the regression was a statistical effect, due to the shared variance between all three
constructs. This would mean that each variable was less likely to appear as a significant predictor due to lower statistical power when more predictors were included in the equation. Additionally, and more importantly perhaps given the aims of the IAPT programme, in reality PWPs have little control over whether or not to use self-help materials, as they are mandated to follow the NICE guidelines in their clinical practice.

Watson and Myers (2001) observed that when the PBC measure was operationalized 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 from a closer examination of the items retained in the direct PBC measure. 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 86 and 87, which were deleted to improve the internal reliability of the scale. Thus, PBC was assessed only by its self-efficacy component in items 84 and 85, and consequently, the direct measure of PBC did not capture the influence of any external control factors.

Self-efficacy is a key construct from Bandura’s (1977) social learning theory. Bandura (1977) defined self-efficacy as the individual’s belief that they are capable of performing a specific task or behaviour. Ajzen (1988; 1991) acknowledged that there is some overlap between self-efficacy and PBC, as both are concerned with control. This assertion was confirmed by the inclusion of a self-efficacy rather than a PBC measure in

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3 item 84: “I am confident that I could routinely use CBT self-help materials with all my clients in step 2 services – 1=strongly disagree to 7=strongly agree”; and item 85: “for me to routinely use CBT self-help materials with all my clients in step 2 services is – 1=easy to 7=difficult”
the TPB in the study by de Vries, Dijkstra and Kuhlman (1988). However, Manstead and van Eekelen (1995) and Terry and Leary (1995) have counter-argued and provided evidence in support of a theoretical separation of the two constructs. To add to the uncertainty around the two measures, 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 was worthy of note that the PBC measure, assessed only by its self-efficacy component, was significantly and positively correlated with intention ($r = .646, p<.01$). However, PBC assessed by self-efficacy was also strongly correlated with past behaviour, and this could mean that shared variance made it a weaker predictor in the equation with other predictors.

Interestingly, trainees’ positive sense of self-efficacy was not reflected in their qualitative reports. This may be due in part to the context in which PWPs were operating at the time of the survey, namely as students on a course, where their performance was being constantly assessed. Additionally, those who supplied qualitative data were a sub-sample of the total, and may have felt the need to give socially desirable responses, not mentioning any lack of confidence in using the materials. Only one trainee hinted at this possibility by reporting that using self-help materials was a “fairly new concept and way of working to me so my confidence is not as high as I would like it to be”. Additionally, it
may be that because using the materials is such an integral part of the PWP’s role, it would not occur to them that they have or are able to employ alternative methods in the training setting. This may then affect their stated future intention rather more than if they were a year or two post-qualification, and working in a context where they felt more capable, and had greater choice in using materials.

Several methodological limitations were inherent in the study. Firstly, although the analyses were sufficiently powered with 94 participants for the final four predictors, the response rate of 19% was modest, and meant that the results were possibly affected by a response bias, as the views of the majority of PWPs in training had not been assessed. Further, the sample of PWPs who participated in the survey was demographically homogeneous, and their responses would not be representative of the population of PWPs. Consequently, caution should be exercised in generalising the findings from the present study to the population of 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 number of items in some of the subscales. Fourthly, the influence of social desirability effects was not eliminated from the survey, and it was possible that PWPs responded more 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 in no way connected to IAPT commissioners or training 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.

A few theoretical and practical implications arose from the study. In the main, the findings supported the utility of the TPB’s three main constructs in predicting 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 suggest that there may be room for selecting PWPs’ beliefs for intervention, possibly focussing on their attitude, as this was the most significant predictor of their intention. This may be especially pertinent as the barriers identified by PWPs may be less amenable to change or removal. Additionally, the study extends the protocol outlined by Ajzen (2002) and Francis et al. (2004) by replicating the methodology to a web-based questionnaire survey. There is also a case for examining the prevalence of some of the practical constraints highlighted by PWPs, such as very high caseloads, inadequate levels of supervision, and materials not being amenable to clients’ needs. It is possible that the problems identified may be limited to those who responded to the survey. However, if these concerns are reflected in the wider population of PWPs, they risk seriously undermining IAPT goals for the routine use self-help materials in step 2 services.

It is recommended that future research could extend the methodology to prospective, longitudinal investigations of actual use of self-help materials. It is hoped that this would further elucidate the cognitive factors which are involved in PWPs’ decision-making when they are actually using the materials. Greater heterogeneity in sampling might also improve generalisability of the findings. It would also be interesting
to disentangle the relative contribution of both PBC and self-efficacy to the TPB in the use of self-help materials, and whether a better operationalized PBC construct might have 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, again 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 their investigations with a theoretical framework. Consequently, this exploratory and 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 guideline 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’ intention to routinely using the named 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 PWPs.
References


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SECTION C

CRITICAL APPRAISAL

1,793 (plus 12) words

A thesis submitted in partial fulfilment of the requirements of
Canterbury Christ Church University for the degree of
Doctor of Clinical Psychology

July 2011

SALOMONS

CANTERBURY CHRIST CHURCH UNIVERSITY
Question 1

What research skills have you learned and what research abilities have you developed from undertaking this project, and what do you think you need to learn further?

The execution of this project demanded re-acquaintance with research skills and abilities I had previously learned but not used in over a decade, as well as the acquisition of new ones. There were challenges and opportunities inherent in both sets of processes. Firstly, the project required the development and implementation of a comprehensive literature review strategy that culminated in an extensive search and evaluation of the relevant literature. However, I was relatively confident in my ability to evaluate and synthesise the available literature, due in no small part to experience I gained from writing three critical reviews over the course of the clinical psychology training programme. In the main, I enjoyed the chance this process provided to think independently and to evaluate critically the theoretical and empirical contributions of other researchers in the field.

I also had to become re-acquainted with research methodology specifics, such as the mechanics of using the latest version of SPSS (v.17), developing research hypotheses, calculating and interpreting bivariate statistics, using parametric statistics and testing the statistical assumptions that underpin them, and carrying out linear and multiple regression analyses. I admit to having prior knowledge and a theoretical affinity for the theory of planned behaviour, having used it for my master’s degree research in health psychology.
However, applying the model in an exploration of healthcare professionals’ intention was a novel experience for me. Simultaneously, I learnt to develop and test a substantive questionnaire and measurement scales, and apply Baron and Kenny’s (1986) mediation analyses and interpret its results.

In the course of carrying out the project, I came to realise that research abilities also encompass personal characteristics such as patience, curiosity, adaptability, and the ability to tolerate a great deal of uncertainty, disappointment, and unplanned events. In my case, I had to cope with an extended period of personal illness, and having to change lead and second supervisors halfway through the project, due to a staff member leaving the programme. Looking back, I can see that another critical research skill was a realistic assessment of the time that the different processes would require, how painstakingly slow these could be, and how easy it was to underestimate the amount of time needed to complete the composite tasks involved in the project. Nonetheless, I was often struck and, dare I say, surprised that I actually enjoyed parts of the process, particularly those involving confirmation of the study’s predictions (e.g., that past behaviour was a significant predictor of future intention). Even where parts of the findings were not consistent with the stated hypotheses or theoretical predictions, for example, that the perceived behavioural control construct was less strongly related to intention than the subjective norm element, it was illuminating to examine and suggest alternative explanations for this and other unexpected outcomes.
Given the opportunity to undertake a similar study in the future, I would be interested in learning and applying other statistical techniques for investigating the relationship among variables, such as other types of regression analyses (e.g. hierarchical and logistic regressions) and factor analysis, and apply them to a longitudinal prospective study. I would also like to improve my knowledge of transforming non-normally distributed data. While I was able to carry out a successful transformation in the current study, this was an entirely new experience for me, and I am still somewhat tentative in my understanding of the available transformation methods (562 words).

**Question 2**

*If you were able to do this project again, what would you do differently and why?*

With the benefit of hindsight, there were a number of methodological changes I would make to the project. The idea for this study came from an initial approach to the project’s second supervisor, who was involved in a clinical capacity with the IAPT programme at the time. Early in our discussions, the papers by Audin, Bekker, Barkham and Foster (2003), Francis et al. (2004) and MacLeod, Martinez and Williams (2009) were identified as source papers, and led directly to a proposal being developed to explore IAPT trainees’ use of self-help materials, using the theory of planned behaviour as a theoretical framework for this assessment. I subsequently tried to follow Francis et al.’s (2004) protocol as closely as possible. However, I have since come to realise my attempt to elicit
PWPs’ beliefs solely from a questionnaire was not the most efficient way of gathering the information required to develop the main study questionnaire. It was likely that if I had simultaneously convened a couple of focus groups, I would have accessed a larger sample of elicitation participants than the seven ultimately achieved. Using focus groups would also have helped with generating and clarifying the study’s hypotheses (Powell & Single, 1996), while allowing me to explore face-to-face the meaning behind PWPs’ responses. It was also likely that the information garnered during focus groups would have greatly improved the validity and reliability of the subsequent questionnaire and scales (Powell, Single & Lloyd, 1996).

I think I greatly underestimated the time it would take to carry out the data analyses and interpret the results. Consequently, if I had to do this or a similar project again, I would prepare and record detailed analyses and interpretation strategies quite early in the study, ensure that I understand these in their entirety, and if not, clarify points of misunderstanding. Additionally, I would give the analyses strategy a test run, possibly with a dummy dataset (these are available on the internet), before applying it to the final data set.

Lastly, on a somewhat more practical note, I would also have budgeted to upgrade from SurveyMonkey’s select plan used in the study to its gold plan. The gold plan provided several critically useful features, such as question randomisation, analysis of text responses, and direct integration with SPSS. For a novice SPSS user and technophobe like me, these additional features would have made the data screening and analyses phases much less time-consuming (402 words).
Question 3

Clinically, as a consequence of doing this study, would you do anything differently and why?

As I write this critical appraisal, the IAPT commissioners have recently published updated guidelines for the continuation of services between 2011 and 2015 (DOH, 2010). At the same time, however, as I look to start my career in a few months time, there seems to be a contraction in clinical posts for newly qualified psychologists. Increasingly, clinical psychologists are working in IAPT services, as High Intensity practitioners. Part of their responsibility in those roles is the supervision of PWPs in their use of self-help materials in step 2 services.

I have used self-help materials with clients in my clinical placements over the course of training to become a clinical psychologist, and anticipate that I will continue to do so in my career. The information uncovered in this study has added to my knowledge of the materials, particularly their strengths and shortcomings. More pertinently however, it has opened my eyes to the challenges faced by PWPs using self-help materials in step 2 mental health services. I can only speculate at present whether I will be working in IAPT services in the near future. However, should an opportunity arise for me to use as well as supervise PWPs’ use of self-help materials in that context, I would be mindful of the barriers and constraints to using the materials that were uncovered in the present study (223 words).
**Question 4**

If you were to undertake further research in this area what would that research project seek to answer and how would you go about doing it?

Having explored the predictors of trainee PWPs’ intention to use to self-help materials in the present study, I believe the next and most logical step would be to extend the research to assessing actual use of the method by both qualified and trainee PWPs. A follow-on study could aim to establish the extent to which intention leads to self-help materials actually being used. The impact of past behaviour on subsequent behaviour could also be investigated, given the strength of the relationship between past behaviour and intention uncovered in the present study. Once again, the theory of planned behaviour (TPB) could be applied as a theoretical framework, due to its considerable proven utility in extending investigations beyond intention to actual behaviour. Using the TPB would also facilitate an analysis of the potentially moderating role of PBC on the relationship between intention and actual behaviour.

Any future investigation using the TPB should also aim to improve the way the PBC is operationalised by identifying and possibly separating its component parts. In this way, for example, PBC could be assessed as a separate measure from self-efficacy (Giles, McClenahan, Cairns & Mallet, 2004), and perceived barriers (Bozionelos & Bennett, 1999). This would be prudent, particularly as the role and effect of these two latter variables were not fully uncovered in the present study.
While a cross-sectional design was employed in the initial study, the results were constrained by a lack of generalisability. To overcome this limitation, and allow for possible causal relationships to be identified, I would recommend the use of a prospective, longitudinal design in assessing actual use of self-help materials by PWPs. Any follow-on study could still use a web-based design, possibly with PWPs being asked to enter use of self-help materials data directly onto a SurveyMonkey password protected and encrypted weblink, after all client identifying details have been anonymised.

Another possibility for extending the utility of the TPB for PWPs’ actual use of self-help materials would be to add an interventional element to the intention-behaviour relationship, possibly by using an implementation intention. Implementation intention is a theoretical approach that has been shown to increase understanding of the processes that may be involved in mediating the relationship between intention and actual behaviour (Gollwitzer, 1999; Gollwitzer & Brandstatter, 1997). Procedurally, this could involve asking a randomly allocated sample of PWPs to set a goal intention (for example, “I intend to routinely use self-help materials with my clients this week”), while another group of randomly allocated PWPs would not be asked to propose an implementation intention. Behavioural outcomes for both groups would then be compared to establish which actually attained their behaviour goal. In practical terms, the current methodology could be repeated, with the addition of an implementation intention statement, with PWPs being asked to record and report (possibly at weekly intervals) their actual use of self-help materials.
I would anticipate that any future study that set out to assess PWPs’ actual behaviour would require access to information directly related to clients. Clearly, such a situation would raise additional ethical concerns about confidentiality and anonymity of client data. Consequently, I anticipate that such a project would have to go through the NHS ethics procedures, which were avoided in the current study, but which would extend the methodology even further in another study. Finally, this type of extended study would provide an opportunity to carry out an in-depth investigation of the need for the development of more culturally and demographically tailored self-help materials. Such an analysis would clearly resonate with PWPs’ assessment in the current study, that a lack of suitably diverse materials was a primary barrier and source of frustration in their attempts to routinely use self-help materials in their clinical practice (618 words).
References


MICHELLE A LEVY BBA Hons, MBA, PGDip Psych, MSc Hons

SECTION D

APPENDICES OF SUPPORTING MATERIAL

A thesis submitted in partial fulfilment of the requirements of
Canterbury Christ Church University for the degree of
Doctor of Clinical Psychology

July 2011

SALOMONS
CANTERBURY CHRIST CHURCH UNIVERSITY
SECTION A
Appendix: Literature review search strategy

Literature review search strategy

For the purposes of this review, a comprehensive search of both electronic and printed sources was completed iteratively in several stages. Prior to the start of writing, three papers were identified as primary sources from the initial discussions about the overarching research topic (“the use of NICE recommended CBT self-help materials by IAPT trainees to treat depression and anxiety in primary care services”) between the lead researcher and the second lead research supervisor (MO). These were papers published by Audin, Bekker, Barkham and Foster (2003), MacLeod, Martinez and Williams (2009), and Francis et al. (2004).

From an initial review Audin et al. (2003) and MacLeod et al. (2009) and their reference lists, a list of alternative terms and/or acronyms was compiled, which were synonymous with key terms such as “CBT self-help materials”, “adherence to NICE guidelines”, “Improving Access to Psychological Therapies/IAPT”. Using the list of keywords, electronic searches were undertaken across a range of core allied health and social science databases, as outlined in Table 1 below. Searches were also undertaken of the key terms combined with the Boolean operators “and/or” (e.g. “self-help materials” and “anxiety/depression/mood disorders”). In order to cover the extant literature as completely as possible, other than the upper cut-off date limit of December 2010, no lower date limit was imposed during the database searches. Consequently, some searches dated
to 1845, which was the earliest available date for general articles from the core psychology database, PsychINFO. To streamline the literature searches further, abstracts of the initially shortlisted papers or studies were examined and either included or eliminated for the subsequent review against the following criteria:

- Papers were excluded if they were not published or available in the English Language, as the reviewer did not have access to translation facilities;
- Both primary and secondary source documents could be included;
- Studies were eliminated that related to children/adolescents and older people;
- Unpublished studies including dissertations were excluded; however, relevant studies submitted and/or accepted for publication (i.e. in press) could be included;
- Participants could be volunteers, service users or practising clinicians (not limited by discipline), as long as the investigations were directly related to a clinical context;
- Studies could be included whether they had employed a conceptual framework or not;
- Studies were not restricted by design or methodology;
- Meta-analytic and systematic reviews could be included;
- Studies could be included that reported previously unpublished aspects of already existing data;
- Studies from outside the UK could be included.

Additionally, a fair number of papers were identified and included from backward searches of the reference lists from primary sources. Further, forward reference searches
were undertaken on Google Scholar (restricted to subjects in the Social Sciences, Arts and Humanities only), which identified other key authors in the relevant domains. The searches on Google Scholar also facilitated the review of additional citations linked to other publications. The strategy was also repeated to find documents related to the search terms “theoretical framework”, “social cognition models”, “theory of planned behaviour (TPB)”. Hard or electronic copies were subsequently obtained of the 115 papers or studies that met the inclusion criteria, and which were subsequently included in the final literature review.

A search of the literature was deemed suitably exhausted at the end of January 2011, when either no new studies were found, or backward reference checks of any newly published studies only yielded papers already identified and included in the review.
### Table 1  Databases searched

<table>
<thead>
<tr>
<th>Online databases searched</th>
<th>Key search terms</th>
<th>Publication dates</th>
<th>Combined initial search results</th>
<th>Number of abstracts against which the inclusion criteria was applied</th>
<th>Number of papers which met the inclusion criteria</th>
</tr>
</thead>
</table>
| **Health and Social Care (5 resources):**  
- British Nursing Index  
- CCCU library catalogue  
- Cochrane Library  
- Directory of Open Access Journals  
- Social Policy and Practice  
- Wiley Library | Cognitive behaviour therapy, CBT, CBT self-help materials  
Self-help, self-help materials, approaches, interventions, treatment, resources  
Do-it-yourself therapy, treatment, intervention  
Self-administered treatment  
Minimal-contact therapies  
Adherence to, compliance with, implementation of NICE guidelines, clinical guidelines, recommendations  
Improving access to psychological therapies, IAPT, IAPT trainees, IAPT low intensity trainees, IAPT psychological well-being practitioners, PWPs | 1993 to 2010  
1957 to 2010  
1971 to 2010  
1983 to 2010  
1989 to 2010  
1990 to 2010  
2004 to 2010 | 137  
360  
86  
162  
62  
190  
104 | 42  
58  
12  
5  
3  
37  
6 | 1  
4  
1  
0  
0  
2  
2 |
| **Social and Applied Sciences (21 resources):**  
- ASSIA  
- BioMed Central  
- British Humanities Index  
- British Periodicals Index  
- CINAHL  
- EBM Reviews  
- EBSCOhost  
- IBSS  
- IngentaConnect  
- Intute  
- Journal Citation Reports  
- JSTOR  
- Medline  
- Oxford Journals  
- PsycARTICLES  
- PsycINFO  
- PubMed Central  
- SAGE Journals  
- ScienceDirect  
- Taylor & Francis  
- Web of Knowledge | Cognitive behaviour therapy, CBT, CBT self-help materials  
Self-help materials, approaches, interventions, treatment, resources  
Do-it-yourself therapy, treatment, intervention  
Self-administered treatment  
Minimal-contact therapies  
Adherence to, compliance with, implementation of NICE guidelines, clinical guidelines, recommendations  
Improving access to psychological therapies, IAPT, IAPT trainees, IAPT low intensity trainees, IAPT psychological well-being practitioners, PWPs | 1845 to 2010  
1887 to 2010  
1971 to 2010  
1983 to 2010  
1989 to 2010  
1990 to 2010  
2004 to 2010 | 346  
1097  
95  
21  
25  
1060  
426 | 104  
160  
15  
11  
17  
256  
109 | 15  
12  
0  
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0  
13  
10 |
Appendix 1: Elicitation schedule

Research project on what helps or hinders your use of CBT self-help materials with your clients

Hello, my name is Michelle Levy and I am a 3rd year trainee clinical psychologist based at Salomons, Canterbury Christ Church University in Kent.

I am conducting research involving IAPT Psychological Well-being Practitioners (PWPs). I am interested in what makes it easier or more difficult for PWPs to use CBT self-help materials as part of their clinical practice in step 2 services. **Please spare a few minutes to list your responses to the questions below. I would really appreciate hearing your opinions. Consequently, I would be very grateful if you could restrict your responses to your personal beliefs, and not how clients may believe self-help materials help them.**

There are no right or wrong answers to the questions, and I would only ask that you make responses as thorough as possible. Your answers will help me construct a study questionnaire which will be sent to a sample of PWPs across the country.

Once you have answered the questions, you can email your responses to me at mal16@canterbury.ac.uk.

Thanks very much for your time and contribution. If you would like to see the findings of the study, please email me after July 2011 at mal16@canterbury.ac.uk.

________________________________________________________________________

**What do you believe are the advantages of routinely using CBT self-help materials within step 2 mental health services?**

________________________________________________________________________

**What do you believe are the disadvantages of routinely using CBT self-help materials within step 2 mental health services?**
Apart from clients themselves, which other individuals or groups would approve of you routinely using CBT self-help materials within step 2 mental health services?

Apart from clients themselves, which other individuals or groups would disapprove of you routinely using CBT self-help materials within step 2 mental health services?

What factors or circumstances either do or would enable you to routinely use CBT self-help materials within step 2 mental health services?

What factors or circumstances either do or would make it difficult for you to routinely use CBT self-help materials within step 2 mental health services?

Are there any other issues that come to mind when you think about routinely using CBT self-help materials within step 2 mental health services?

Thank you very much for your participation. Please return your responses to me at mal16@canterbury.ac.uk
Appendix 2: Introductory statement for the elicitation schedule

Introductory statement for the elicitation schedule

I am writing to ask you to share some of your experiences as an IAPT Psychological Well-being Practitioner (PWP). The information you give will be used to design a questionnaire for my Independent Research Project, as part of my training as a clinical psychologist at Salomons, Canterbury Christ Church University. As far as I am aware, this research is one of first to evaluate the experiences of PWPs working in step 2 mental health services, since the inception of the IAPT programme.

If you are able to help, please see the document attached with seven questions for you to answer. Once you have completed the questions, I would be grateful if you could return your responses to me, Michelle A Levy, at mal16@canterbury.ac.uk or in an envelope in the internal post at Salomons. Please do not return your response to ……………, who is only forwarding this email to all PWPs on my behalf.

If you need any further information, please do not hesitate to contact me on mal16@canterbury.ac.uk.

Thank you very much if you are able to spare time from your busy schedule to answer the seven questions. Your participation is greatly appreciated.

Kind regards and many thanks,

Michelle A Levy
Appendix 3: Coding of elicitation responses

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Appendix 4: Protocol for evaluating draft study pack

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Appendix 5: Description and features offered by SurveyMonkey

Description and features offered by SurveyMonkey (www.surveymonkey.com)

SurveyMonkey is one of the most well-known commercial online research tools that facilitate researchers to create and distribute web-based questionnaire surveys, and to collect and analyse results from data, in return for a monthly or annual subscription fee.

SurveyMonkey provide a plethora of features to facilitate the successful administration of web-based research. The following benefits were most pertinent to the present study:

- Greater reach to potential respondents in our technological information age;
- Simple to use, as it easy to create and manage online and real-time surveys with minimum IT skills;
- Guarantees anonymity, confidentiality, and data security (e.g. encrypted weblink, password and encrypted access only)
- Saves time with data collection, as responses can be collected and viewed in real-time;
- Facilitates en-block transfer of data to compatible programmes such as SPSS and Microsoft Excel for subsequent statistical analyses;
- Allows tracking of survey’s progress online in real-time, and facilitates the sending of reminder communication to respondents;
- Cost effective – by way of an illustration of the cost differential, for the current study the costs was £23.99 per month for the five months the survey was online, versus the £800 it would have cost to send 200 survey pack by post, including a self-addressed and stamped envelope for the return of questionnaires;
- Projected response rate between 20% and 40%;
- Provides a wide range of survey templates and questionnaire formats;
- Provides a filter facility for analysing and exporting data;
Appendix 6: Web-based study pack

This has been removed from the electronic copy
Appendix 7: Introductory email for the pilot of the study pack

Introductory email for the pilot of the study pack

Dear Psychological Well-being Practitioners:

You may recall that I sent several emails in the latter half of last year about some research I am doing looking at your experiences of using CBT self-help materials with your clients in step 2 services. The final study questionnaires are now complete, and I would really be grateful for your participation and responses. The first questionnaire is now logged on the SurveyMonkey research website. Please click into the link below which will take you directly to the questionnaire and then follow the instructions accordingly. It should take about 20 minutes to complete the questionnaire, considerably less than the time required to complete this year’s census document.

Weblink to the questionnaire on SurveyMonkey:

https://www.surveymonkey.com/s/JWZZ7CH

I remain very grateful for all your help with this study, which is one of the first to examine PWPs’ working practice under the IAPT programme. Consequently, you have a great opportunity to share your experiences and have your views heard with regards to the work you do in step 2 services.

If you have any individual queries, please feel free to email me at any time at: mal16@canterbury.ac.uk.

Kind regards and many thanks,

Michelle

Michelle A Levy
3rd year Trainee Clinical Psychologist
Salomons Campus
Appendix 8: Questionnaire scoring key

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Appendix 9: Pearson product moment correlations for the pilot measures

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Appendix 10: IAPT training providers by SHA regions (2010 to 2011)

### IAPT training providers by SHA regions (2010 to 2011)

<table>
<thead>
<tr>
<th>SHA Regions</th>
<th>Number of IAPT Training Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>East of England</td>
<td>3</td>
</tr>
<tr>
<td>East Midlands</td>
<td>1</td>
</tr>
<tr>
<td>London</td>
<td>6</td>
</tr>
<tr>
<td>North West</td>
<td>7</td>
</tr>
<tr>
<td>North East</td>
<td>2</td>
</tr>
<tr>
<td>South East Coast</td>
<td>3</td>
</tr>
<tr>
<td>South Central</td>
<td>2</td>
</tr>
<tr>
<td>South West</td>
<td>3</td>
</tr>
<tr>
<td>West Midlands</td>
<td>4</td>
</tr>
<tr>
<td>Yorkshire and Humber</td>
<td>4</td>
</tr>
</tbody>
</table>
Appendix 11: Introductory email for the main survey

Introductory email for the main survey

Dear Psychological Well-being Practitioners

My name is Michelle A Levy, and I am a Trainee Clinical Psychologist at Salomons (Canterbury Christ Church University). To meet the requirements of my training programme, I am required to plan and execute an independent piece of research. I have decided to investigate the experiences of IAPT PWPs in their use of CBT self-help materials with clients in Step 2 Services. The research involves asking trainees in the 2010 to 2011 academic year to complete and submit an online questionnaire.

The final study questionnaire is now ready, and I would really be grateful for your participation and responses. The questionnaire is logged on the SurveyMonkey research website. Please click into the link below which will take you directly to the questionnaire and then follow the instructions. It should take about 20 minutes to read the enclosed study information document, consent form, and then to complete the questionnaire.

Weblink to the questionnaire on SurveyMonkey:

https://www.surveymonkey.com/s/3CVG6XK

I am very grateful for your participation in this study, which is one of the first to examine your working practices under the IAPT programme. Consequently, you have a great opportunity to share your experiences and have your views heard with regards to the work you do in step 2 services. Please be assured that your responses will remain confidential and anonymous, so feel free to be as frank as possible with your answers.

If you have any individual queries, please feel free to email me at mal16@canterbury.ac.uk at any time.

Thank you very much for reading this email, and for your help with the above request.

Kindest regards,
Appendix 12: Ethics approval letter

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Appendix 13: Histograms for normalised indirect measures

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Appendix 14: Correlation matrix for the main study

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Appendix 15: Perceived barriers identified qualitatively by PWP

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Appendix 16: Categories, sub-categories and example verbatim responses from qualitative responses

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Appendix 17: Journal requirements for Behavioural and Cognitive Psychotherapy

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Appendix 18: Letter and summary report to the Research Governance Department at Canterbury Christ Church University

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Appendix 19: Summary report to PWP

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