An Online Survey to Investigate Clinicians' Use of, Attitudes Towards, and Perceived Competency Around Outcome Monitoring Practices

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1. Abstract

In recent years, there has been an ever increasing emphasis placed on the collection and use of patient reported outcome measures (PROM) in mental health services. This emphasis stems from a culture of evidence based practice, wherein PROM are shown to improve therapeutic outcomes at the clinical level, as well as provide information for the appropriate development of services and commissioning at a national level. This study uses an online survey to explore the use of PROM by mental health staff (n=112) in various Child and Adolescent Mental Health Services across England. Attitudes toward routine outcome monitoring practices and perceived competency around PROM use were also measured. Results found that although significant numbers of staff were using PROM, the amount of data being collected falls short of policy targets. Staff's attitudes towards the practice are shown to be ambivalent, whereas overall perceived levels of competency were reasonably good. The relationships between attitudes, competence and PROM usage are discussed and a prediction model for PROM usage is developed in light of existing psychological theory. Results showed that training played an important role in the uptake of PROM and implications for the dissemination of training programs are emphasised.

2. Introduction

The purpose of this introduction is to introduce the reader to the various concepts and research literature that are relevant to the present study. To begin, various key policy documents that guide the way that mental health services are currently set up will be outlined. While acknowledging the recent shifts in mental health services in general, particular attention is paid to changes in child and adolescent services and the increasing emphasis on using outcome measurement practices in clinical work. Thereafter, a literature review will be carried out in order to evaluate the evidence for the use of outcome measures in mental health. Next, the focus will shift away from organisational guidelines to the clinician's themselves, and the available literature concerning the prevalence of use of such measures will be reviewed to consider the gap between current practice and organisational objectives. This exploration raises some interesting questions about what may or may not be facilitating the integration of these measures into daily clinical practice. This in turn leads to a third review of the literature as to what factors influence the uptake of outcome measures. Thereafter, a model based on contextual feedback intervention theory is introduced in an attempt to understand how feedback works and is perceived as valuable by clinicians. Finally, the aims of the present study are outlined.

2.1 Definition of key terms

The review will use a number of specific terms which are defined as follows:

Patient-reported outcome measures (PROM)

This term refers to questionnaires, rating scales and interview schedules that measure states of health and symptomatology from the patient's point of view. They allow for insight into the way patients view their health and well-being and any improvements as a result of treatment. Examples of such measures include the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) and the Patient Health Questionnaire (PHQ-9; Kroenke K, Spitzer RL, Williams JB, 2001)

Routine outcome monitoring/measurement (ROM)

These terms will be used interchangeably throughout this study to refer to an established system whereby standardised clinical measures are routinely applied at the beginning and end of all treatment cases.

Feedback practices/ provision

These terms refer to any system or strategy in which an update of the client's status is fed back to the clinician through outcome measures, with the intent of providing up to date information of the client's situation or progress.

Session by session outcome measures

This term refers to outcome measures that are intended to be administered in every session, with a view to closely monitoring the therapeutic alliance and/or symptoms of psychological disturbance. An example would be the Generalised Anxiety Disorder Assessment (GAD-7; Spitzer RL, Kroenke K, Williams JB, et al., 2006)

The systems perspective

2.2 Key policy documents, standards of care and economical considerations

Increasing importance has been placed on the routine measurement of outcomes in psychological therapies across a range of NHS policy and guideline documents since the turn of the century and is largely derived from the push towards evidence based practices. This is demonstrated by the development of the National Institute for Clinical Excellence to outline best practice guidelines, as well as the development of national standards in mental health care (Department of Health, 1999). Other drivers to measuring outcomes are said to involve

> *an emphasis on clinical governance and practice guidelines, a political emphasis on quality and on patient experience, the development of high-profile outcome measures for routine clinical use (Health of the Nation Outcome Scales, 1998) and a societal shift towards consumerism, with ever increasing expectations about mental health services.* (Slade, 2002, p.744)

Similar impetuses for monitoring outcomes have been present in the US and Australia, both of whom are more experienced in this regard, although with different starting points. Cost containment was a big driver for outcome measurement in the US following a rapid increase in private healthcare costs pertaining to mental health services at the beginning of the 1980's (Lyons et al., 1997). On the other hand, in Australia routine outcome measurement was gradually implemented from about 2000 onward as part of the national mental health policy and by 2003 had been fully implemented in all public mental health services. At the same time, the Australian Mental Health Outcomes and Classification Network (AMHOCN) was set up to manage and report on outcome data at a national level and was shown to play an integral role in training and service development.

In the UK, a similar process began in 1999 with the Department of Health publishing the 'Mental Health National Service Framework', which outlined seven standards which were meant to 'drive up quality and remove wide and unacceptable variations in provision' (1999, p.5) and recommended the routine use of quality of life measures alongside traditional ones of health and well-being. In the next five years, 'A Good Practice Framework for Improving Access to Psychological Therapies for People with Common Mental Health Problems' (National Institute for Mental Health, 2002) and 'Organising and Delivering Psychological Therapies' (Department of Health, 2004) were published and formalised the requirement to routinely monitor evidence of the effectiveness of services.

The importance of measuring outcomes within Child and Adolescent Mental Health Services (CAMHS) was formalised in England through the government's National Service Framework (Department of Health, 2007) document for children and young people, 'Every Child Matters'. This framework suggested that the effectiveness of interventions employed in CAMHS should be measured from a variety of perspectives, including the mental health professional involved, the parent/carer and the young person themselves. It posited that this information was crucial to informing future clinical interventions and that the necessary resources should be made available to CAMHS to enable them to integrate outcome measures into clinical practice. In response to this need, the CAMHS Outcome Research Consortium (CORC; www.CORC.uk.net) was formed to develop a suite of standardised outcome measures and provide direction and leadership on routine outcome monitoring practices. They were also tasked with offering support with the aggregation and analysis of outcome data in CAMHS. According to the CORC website, over half of all child and adolescent services in England have joined the Consortium, while they also have members in Wales, Scotland, Sweden and Norway (www.CORC.uk.net).

More recently, the Department of Health released their 'Talking therapies: a four year plan of action' (2011) outlining the ongoing aims for the 'Improving Access to Psychological Therapies (IAPT) initiative in the UK, which was initially set up to increase the provision of evidence-based treatments in primary care services. These new IAPT services offer a 'stepped care' approach based on guidelines from the National Institute for Health and Clinical Excellence and is the first project of its kind worldwide, providing a whole new stratum of evidence based psychological services across the UK. Building on its initial success, the Talking Therapies (2011) paper outlined the expansion of the IAPT agenda to not only include working age adults, but also cover older adults; children and young people; those with medically unexplained symptoms; and those with longer term needs. It was posited that in order to deliver improved quality standards, all IAPT services must collect PROM in each therapy session, with a view to informing patients of the progress they've made, informing professionals in their clinical practice and assisting commissioners to monitor and plan services. The significance placed on obtaining this outcome data was reflected in the agreement that services ought to provide both a pre- and post-treatment outcome measure score for at least 90% of clients that are seen more than once in a service. The document also marked a shift in the tide in terms of how these PROM are utilised, stating that:

> *historically, these data have informed national performance indicators. However, from 2011/12, the intention is to transition to a new reporting system that will facilitate: local benchmarking and outcome reporting; improved patient choice and satisfaction outcome monitoring; the development of an outcome tariff to enable the piloting of payment by results (PbR) in IAPT services in 2011/12; and inclusion of non-clinical outcomes, including social and economic participation outcomes. (2011, p.11)*

In 2011, the CAMHS Outcome Research Consortium was again commissioned by the Department of Health to aid in the analysis of outcome measure data collected through the Children and Young People's Improving Access to Psychological Therapies (CYP-IAPT; http://www.cypiapt.org/children-and-young-peoples-project.php). Currently there are 67

CYP-IAPT sites working across 54% of the population aged 0-19 years. The aim of the initiative is to transform psychological interventions in tiers 2 and 3 of Child and Adolescent Mental Health Services as well as increase access in accordance with IAPT quality standards. The CYP-IAPT initiative incorporates other key aspects of the IAPT programme including its emphases on routine outcome monitoring and evidence based practices. As well as the core suite of measures developed by CORC for widespread use, a further, more comprehensive routine outcome measurement framework was developed for CYP –IAPT services to provide standardised assessments of each child's clinical improvement/development and recovery. This expanded framework includes information on 'recovery/improvement; personalisation and choice; social participation, particularly educational and vocational inclusion; as well as service user experience.' (Talking therapies: a four year plan of action, p.18)

2.3 Children and Young Persons Patient Reported Outcome Measures and rationale for their use

In an editorial commentary in 2012, Dr Miranda Wolpert, director of CORC, summarised the three ways that routine outcome measurement is intended to improve care. The *first* is that the measures inform clinical work through their use with patients and their families as well as in supervision. Examples of ways in which PROM can be utilised clinically include the promotion of shared decision making between client and health care professional, which is shown to promote the client's engagement in their recovery plan; another way is through regular feedback about treatment progress which is shown to be therapeutic for clients, functioning as a cognitive-motivational technique which informs and influences the client (Hawkins, 2004). A *second* way in which routine outcome measurement is intended to improve care is when the data can be reviewed nationally in order to develop benchmarks and monitor the quality of care across the UK. The *third* way involves an attempt to develop models of UK therapy intervention norms, whereby data gleaned from outcome measures can be used to develop anticipated recovery trajectories for different diagnoses and severities of psychological disturbance. These can then in turn be used to anticipate rates of treatment progress and detect 'not-on –track' patients or ones at risk of treatment failure. This statistical modelling of predicted patient progress is a relatively new way of using

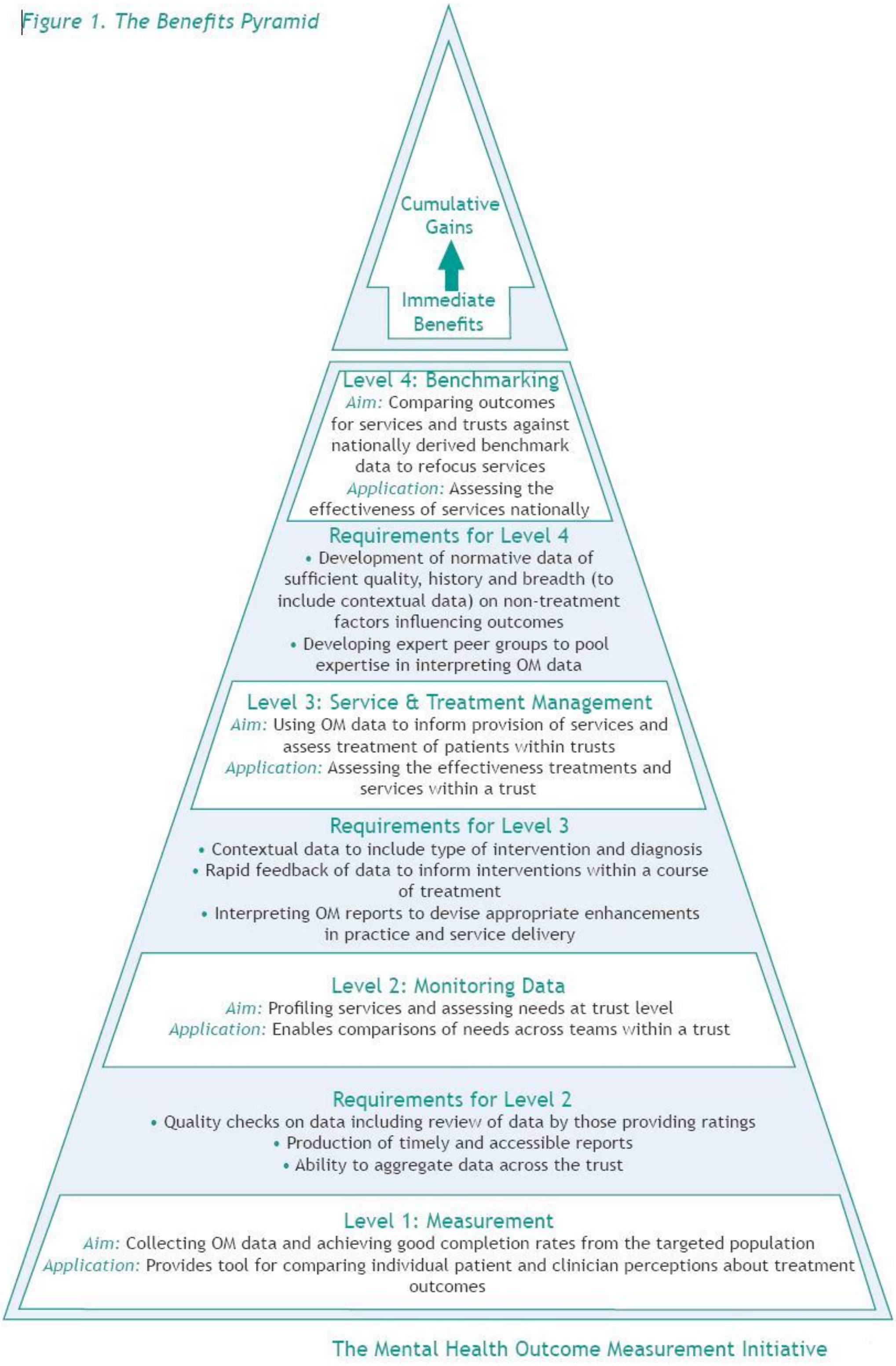
PROM, the rationale being that clinicians can be more responsive to a patient's needs if they are not progressing along expected lines (Wolpert et al., 2012)

As outlined above, CORC have developed a suite of core measures which all services should use at the very least at baseline and follow-up (after 6 months or at discharge). These core measures include two clinician rated outcome measures- the Health of the Nation Outcome Scales for Children and Adolescents (HONOSCA; Gowers et al., 1999) and the Children's Global Assessment Scale (CGAS; Shaffer et al., 1983) which quantitatively provide the clinician's opinion of patient functioning. The former is a 12-item clinician rated instrument developed to measure the health and social functioning of young people along the lines of behaviour, impairment, symptoms and social functioning, while the latter is a numeric scale (1 through 100) used by professionals to rate the general functioning of young people. The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) and the Goals Based Outcome (GBO; Law, 2011) are the two client rated outcome measures developed by CORC. The SDQ is a 25 item measure questionnaire for 3-16 year olds divided into 5 scales: emotional disturbance; conduct issues; hyperactivity/attention; peer relationship difficulties; pro-social behaviour, whereas the GBO was developed to enable the client to monitor the achievement of idiographic or personalised goals following an intervention. Finally, the Experience of Service Questionnaire (CHI-ESQ; Attride-Stirling, 2003) is a client/parent/carer questionnaire used to measure service satisfaction at discharge and completes the CORC suite. These core outcome measures endorsed by CORC have particular advantages as they can be applied across a wide range of clinical conditions encountered in CAMHS and can be employed routinely regardless of the presenting difficulty.

For services who have joined the Children and Young Persons IAPT initiative, the choice and requirement of outcome measures is greater than for regular services. At assessment in CYP-IAPT services, young people and their carer's are asked to complete a range of measures to help design the intervention; set treatment goals; and provide contextual information about the family's circumstances. At each subsequent session, it is intended that problem specific checklists are used to measure changes in symptomology, progress towards the agreed treatment aims are reviewed and the client's experience of the session is assessed. Thereafter, at set review periods, the initial set of assessment measures are administered once again, along with a service satisfaction questionnaire. (www.CORC.uk.net; see Appendix A)

2.4 Best practice guidelines for outcome measurement implementation

In the National Institute for Mental Health in England's 'Outcome measures implementation: Best practice guidance' (2005), it is suggested that PROM data alone is of limited value and that only when it is translated into positive practice does the endeavour become worthwhile. The authors place the responsibility of this interpretation of outcomes data on everyone collecting it, from the ground level upwards and not just with the administrative staff who collate it. They also suggest that the effective implementation of such a system must follow a developmental path of sorts, summarised in the pyramid diagram in Figure 1. The pyramid shape demonstrates the fact that actions at the base of the pyramid provide the necessary foundations for higher level benefits, as well as the fact that the amount of effort required is greatest at the grass roots level. The bottom tier of the pyramid involves reliable collection of PROM data by clinicians and interpreting the data as it is relevant for their patient's progress as well as for their own professional development. Without the basic building blocks, services are expected to become lost when attempting to translate the data into meaningful service improvements at local and national levels.



Level 4: Benchmarking
Aim: Comparing outcomes for services and trusts against nationally derived benchmark data to refocus services
Application: Assessing the effectiveness of services nationally

Requirements for Level 4
- Development of normative data of sufficient quality, history and breadth (to include contextual data) on non-treatment factors influencing outcomes
- Developing expert peer groups to pool expertise in interpreting OM data

Level 3: Service & Treatment Management
Aim: Using OM data to inform provision of services and assess treatment of patients within trusts
Application: Assessing the effectiveness treatments and services within a trust

Requirements for Level 3
- Contextual data to include type of intervention and diagnosis
- Rapid feedback of data to inform interventions within a course of treatment
- Interpreting OM reports to devise appropriate enhancements in practice and service delivery

Level 2: Monitoring Data
Aim: Profiling services and assessing needs at trust level
Application: Enables comparisons of needs across teams within a trust

Requirements for Level 2
- Quality checks on data including review of data by those providing ratings
- Production of timely and accessible reports
- Ability to aggregate data across the trust

Level 1: Measurement
Aim: Collecting OM data and achieving good completion rates from the targeted population
Application: Provides tool for comparing individual patient and clinician perceptions about treatment outcomes

Figure 1: The Benefits Pyramid of effective implementation of outcome measurement

(National Institute for Mental Health in England, 2005)

2.5 Evidence for the effectiveness of Routine Outcome Measurement practices

A literature review was carried out to investigate whether in fact feedback practices improve patient mental health and under what circumstances they do. Other factors such as cost effectiveness and patient satisfaction were also considered. Following this, a second smaller literature review was carried out to assess the evidence base for the practice of monitoring outcomes at *every* session. Relevant review papers and meta-analyses were identified by searching PsycINFO, PubMed, Medline, Scopus and Web of Science with the following terms: Progress monitoring; Routine outcome monitoring; Measurement feedback systems; Patient reported outcome measures; Patient focused research; Feedback intervention theory; Session by session outcome monitoring.

2.5.1 Evidence for the effectiveness of feedback practices in general

The aforementioned search strategy brought up a review paper (Carlier et al., 2010) and two meta-analyses (Sapyta, 2004; Knaup, Koesters, Schoefer, Becker, & Puschner, 2009) which will be discussed in turn. In their review of the evidence base, Carlier et al. (2010) reviewed results from 52 randomised controlled trials (RCT) regarding routine outcome monitoring practices with adult and older adult populations. Of these, 7 RCT's concentrated only on the physical health of the patient, whereas the other 45 also included information on their mental health too. They found that the majority of studies (65%) show that the use of outcome monitoring has significant positive results on the mental health of patients. The authors drew the conclusion that feedback seems to be particularly useful and effective with patients who have a more complicated treatment pathway. Another significant finding from their review was that the majority of studies found that clinicians who employed routine outcome measures benefitted significantly from quicker and more complete diagnostic evaluations as well as swifter adjustment to treatment plans in their clients, which is thought to derive from better communication between clinician and client.

In their review, Carlier et al. (2010) also studied the effect of ROM on satisfaction, communication and cost effectiveness. Consistent positive results were found when looking at quality of communication while using ROM, both in the short term and over time. This is a relevant area for study as the quality of doctor-client communication is shown to be a determining factor in better treatment outcomes (Priebe et al., 2007). With regards to improved *satisfaction* of the client with the service they have received and the *cost effectiveness* of feedback interventions (including utilization of care or shorter treatments), results were not univocal however.

In their meta-analysis of 12 RCT's using routine outcome monitoring practices in mental health services, Knaup et al. (2009) found that their impact had a very small but robust effect on improving mental health outcomes (d = 0.10, 95% CI 0.01–0.19), which was shown to be consistent across a variety of outcome measures. Interestingly, they did not find any evidence that the difference between the outcome monitored groups and the control groups remained at longer term follow up though. A clear understanding of this research finding is difficult as the longer term impact of ROM practices have only been studies in five trials (Knaup et al., 2009). The authors felt that more research is required in order to answer the questions of whether this is because the use of routine outcome measurement practices have no lasting impact on mental health, or if it would be worthwhile continuing outcome management strategies after treatment has ended in order to consolidate the improvements made in the short term.

Knaup et al. (2009) also attempted to uncover the active ingredients of ROM practices through the use of moderator analyses and demonstrated that the effect of routine outcome monitoring on a client's short term mental health could be enhanced if: both therapist and patient got feedback (versus only one of them); if feedback was given regularly (versus only once); and feedback included information on the progress that the patient had made (versus only on status). Again, the authors called for caution when interpreting these results due to the small number and substantial heterogeneity of studies for some clusters. In exploring further why provision of feedback to both therapist and client is shown to lead to better outcomes, various authors have suggested that feeding back results from PROM can be a useful way to prompt discussions about treatment progress. Allen et al. (2003) suggest that the provision of PROM feedback leads to better attitudes towards the therapy process, positing that feedback leads to increased engagement in therapy and enhances motivation to change. Furthermore, it is thought that the provision of feedback instils confidence in the treatment process, leading to better therapeutic relationships and greater collaboration in therapy (Allen et al., 2003; Hilsenroth et al., 2004).

Carlier et al. (2010) commented on the lack of theory-driven research when examining the active ingredients of outcome management and both sets of authors called for more consideration of how routine outcome monitoring gives rise to the outcomes that we are seeing, using a theory driven approach which combines knowledge of how and when an intervention works.

Sapyta et al. (2004) carried out a meta-analysis of 30 RCT's evaluating the effectiveness of outcome management practices in community based settings. The studies included varied a great deal as 'feedback' ranged from providing GP's with anxiety and depression screening information on clients who had undiagnosed psychological disturbances, to providing mental health practitioners / GP's with mental health outcome data about clients for each visit. The average effect size of these feedback interventions was .21, representing a small effect. In another aspect of the study, the authors compared the effect of feedback on 'flagged' participants (clients who were not doing well in therapy) against those who were not flagged (clients who were progressing through the therapy as expected), the flagged sample were shown to respond much more positively to the feedback intervention. The feedback intervention had an effect size of .31 for those who were flagged, whereas it only had an effect size of .09 for the sample who were not flagged, which was not significant. And so, the provision of feedback was shown to be most effective for those who were not making progress as they should. This is consistent with behaviour change theories associated with feedback, which suggest that staff alter their behaviour when they are alerted to a discrepancy between some desired standard and the information gathered from feedback (Carver & Scheier, 1981).

2.5.2 Evidence for the effectiveness of session by session measures

Although various practice-based evidence systems have been developed, two in particular have been researched in controlled trials as session by session feedback tools for therapists. These include the 'Outcome Questionnaire' system developed by prominent psychotherapy researcher Michael Lambert and the 'Partners for Change Outcome Management System' (PCOMS; Miller, Duncan, Sorrell & Brown, 2005). Common to both is the use of a symptom focused outcome measure at every session.

Regarding the Outcome Questionnaire system, to date there have been six practice based treatment trials involving over 6000 clients based in adult services. The emphasis in these studies has been on the prevention of treatment failure (i.e. clients whose problems get worse in treatment, which is found to occur in 5-14% of clients treated (Lambert & Shimokawa, 2011). Although the details of the study design and feedback conditions vary between studies, in all of them therapists have practiced in their normal manner (with the exception of the addition of feedback) and therapeutic modality. In most of the studies, clinicians have acted as their own controls, as their own clients are allocated randomly to feedback or no feedback conditions. Summary data from the 6 studies are presented in Table 1, showing the proportion of 'not on track' clients who deteriorated, did not change, or achieved reliable or clinically significant change in 'treatment as usual' compared with different feedback conditions which have been explored in the studies (giving feedback to the therapist and client, giving feedback just to the therapist, and giving feedback to the therapist alongside a Clinical Support Tool). These Clinical Support Tools are problem solving aids for identifying the causes of deterioration in therapy and make suggestions for resolution of identified problems.

Table 1: Percentage of Not-On-Track (NOT) cases meeting criteria for clinically significant change at termination summed across 6 studies

	NOT-Treatment As Usual n (%)	**NOT- Only therapist receives f/b n (%)**	**NOT- therapist received f/b and used CST's n (%)**	**NOT-Therapist & Patient receive f/b n (%)**
Deteriorated (worsened by at least 14 points on the OQ from pre-treatment to post-treatment)	64 (20%)	24 (9%)	12 (6%)	26 (15%)
No change	183 (58%)	140 (53%)	91 (42%)	71 (40%)
Reliable or Clinically Sig Change (improved by at least 14 points on the OQ or improved and passed the cut-off between dysfunctional and Functional populations)	71 (22%)	99 (38%)	114 (53%)	80 (45%)
	100%	100%	100%	100%

(Lambert & Shimokawa, 2011)

Although these studies are scientifically rigorous (as they employed an RCT design) and they were based in real life clinical practice settings, a limitation of the body of research is the fact that all but one of the 6 studies were conducted in the same large university counselling centre, meaning that, for example, the mean age across all studies and all 6151 clients was only 23 years.

To date there have been three methodologically sound studies of the other practiced based evidence system which used session by session measures- the Partners for Change Outcome Management System. In total these studies involved 558 participants, again based in adult services, including a couple therapy setting in Norway (Anker, Duncan and Sparks, 2009), as well as studies based in a university counselling centre, and a study of trainee graduate therapists in a graduate training clinic (Reese, Norsworthy & Rowlands, 2009). In their meta-analysis, Lambert and Shimokawa (2011) calculated that the combined effect size of these three studies comparing the feedback condition with treatment as usual (TAU) was 0.48. Whilst this effect size is smaller than that of the Outcome Questionnaire system, it should be noted that the effect size in the PCOMS studies is reported for *all* clients and not just those at risk of treatment failure.

Similar research in the field of children and adolescents is very scarce, with only Bickman et al. (2011) carrying out a randomized cluster controlled trial with young people to date. This study tested out whether the provision of feedback to professionals on a weekly basis would enhance the effectiveness of home-based mental health interventions in a youth population. The study included the young persons, carers and staff's assessments of the young person's symptoms and level of functioning every second week in 28 different sites. Professionals at half of the sites were provided with results of the assessments every week, whereas the other half only received feedback every 90 days. Analysis of the data found feedback effect sizes of .18, .24 and .27 for the young persons, professionals and carers respectively and that young persons (N = 173) who received their intervention at sites where staff received feedback improved quicker than those who received treatment at non-feedback sites. A dose response analysis demonstrated larger effects when professionals looked at more feedback results with effect sizes increasing by 50% for the young person's to .27, and by 66% for professionals to .4.

Summary of the literature review:

- Overall, findings demonstrate that the use of feedback practices significantly improves patient outcomes across the majority of patient populations and service contexts, although the effect sizes range from very small to very large.
- It is not yet clear whether the benefits of using outcome measures persist over time though.
- Other notable benefits found in some research include improved collaboration between patient and practitioner, shorter treatment pathways and increased satisfaction
- Session by session outcome monitoring is also shown to be effective, particularly for patients who are ‘not on track’
- Some notable gaps in the outcome monitoring literature exist with regards to the research of the effectiveness of outcome monitoring tools research in child and adolescent settings; and in using psychological theory to understand and explain what makes outcome monitoring effective or not.

The clinician's perspective

2.6 Prevalence of the use of Patient Reported Outcome Measures in the UK

In the UK, various research and audits have been published around the collection of PROM data in CAMHS. In 2005, Johnston and Gowers surveyed the lead clinicians from different CAMH services and found that of the 186 responses, 161 (87%) stated that their service collected some form of quantitative clinical measure. Table 2 illustrates the various points in time in which services reported collecting outcome measures, as a frequency/percentage of the entire sample (N = 186) and of those who reported collecting PROM (n = 161)

Table 2: Frequency and percentage of services collecting quantitative clinical measures at 'baseline', 'treatment', 'discharge' and 'follow-up' time-points

Time points	**Currently (% of total sample)**	**Currently (% of those currently collecting)**
Not currently collecting	25 (13.4)	-
Not specified	3 (1.6)	3 (1.9)
Baseline only	9 (4.8)	9 (5.6)
Baseline and treatment	27 (14.5)	27 (16.8)
Baseline, treatment and discharge	121 (65.1)	121 (75.2)
Other	1 (0.5)	1 (0.6)
Total	186 (100)	161 (100)

(Taken from Johnson and Gowers, 2005)

However, when asked if their service had put in place a system of routine outcome monitoring, defined as 'the detailed evaluation of the impact of treatment on areas of a client's functioning that are of clinical relevance' (2005, p.133), only 53 (28.5%) of service leads said that the service had. This suggests that although 161 services were collecting quantitative clinical measures, only a fraction were doing so on a standardised and consistent enough basis (i.e. every client receiving a set of outcome measures at baseline and discharge), to be classified as routinely monitoring outcomes. An important limitation of this research arises from the fact that the participant's who were surveyed were service leads, who might not have provided accurate information because of vested interests. Whether clinician's had been using them or not is a different matter and it is impossible to know the actual frontline uptake of measures in the services surveyed in this study.

Whereas the CAMHS Outcomes Research Consortium have not published data regarding the frequency and percentage of outcome measure use for its members to date, Batty et al. (2012) carried out a piece of research across three CAMH services in Nottinghamshire, Derbyshire and Lincolnshire, all of whom were members of CORC at the time the research was carried out. The study used an online survey, stakeholder workshop and case note audit to get an idea of how often outcome measures were being used by clinicians on the front line, as well as their attitudes towards the measures. Of the 127 respondents who did the survey, 93% reported that the use of outcome measures was an 'important' or 'very important' activity. They also regarded certain measures to be valuable, with 53% of respondents suggesting that the Strengths and Difficulties Questionnaire (SDQ) was 'important', and 40% deeming the CHI-ESQ 'important'. Regarding the prevalence of use of specific PROM, 75% of the sample reported having used either the SDQ, C-GAS, HoNOSCA, Common Assessment Framework (CAF) or CHI-ESQ. A 'lack of training and awareness' was listed as the main barrier to PROM use, with 76% of participants reporting that they would like further training in the use of specific measures.

The left column in Table 3 lists the frequency of use of each CORC outcome measure across the three Trusts in the Batty et al. (2012) case notes audit. The audit found that 48% of case-notes were shown to include 1 to 2 different PROM; 36% included 3 to 5 different PROM; while 16% contained no PROM. A year and a half later, Hall et al. (2013) repeated the audit in the same area, to assess for any changes in the uptake of outcome measurement across two of the original sites (Nottinghamshire and Derbyshire). The right column lists the frequency of use of each CORC outcome measure in their audit.

Table 3: Frequency of the single use of assessment and outcome measures across CAMHS in Hall et al. (2013) audit cycle

Name of measure	Original audit (Batty et al., 2012) n=61 (%)	Re-audit (Hall et al., 2013) n=61 (%)
HoNOSCA	42 (69)	56 (93)
SDQ-P	19 (31)	36 (60)
SDQ-T	8 (13)	4 (7)
SDQ-S	14 (23)	38 (63)
C-GAS	25 (41)	45 (75)
GBO	0 (0)	2 (3)
CHI-ESQ	0 (0)	1 (2)
Conners- Teacher	11 (18)	1 (2)
Conners- Parent	11 (18)	2 (3)
RCADS	0 (0)	3 (5)

SDQ Strengths and Difficulties Questionnaire (P = parent, T = teacher, S = self);
RCADS, Revised Child Anxiety and Depression Scale.

(Taken from Hall et al., 2013)

Furthermore, the re-audit by Hall et al. (2013) found that 23% of the audited case notes included 1 to 2 PROM, the majority (72%) included 3 to 5 PROM, while 8% included more than 5 separate PROM. Regarding the absence of any PROM in audited case notes, the figure dropped from 16% in the first audit, to 3% in the re-audit. With regards to the repeated use of the same measure, which is essential for gathering *outcome* data, the first audit found that that only 30% of case-notes included at least one repeated PROM. In the re-audit, 60% of case notes were found to have at least one repeated PROM which had been selected at baseline. Six percent were shown to have repeated all their original measures. These findings demonstrated the increase in PROM uptake that can be made in a short space of time, however, caution should be taken in generalizing the findings to other Trusts.

The findings from the aforementioned three pieces of published research in the field suggest that clinicians have been slow to take up PROM use- from a promising start in 2005 where almost 80% of clinical leads said that their services collected outcome measure at least at baseline and in treatment (Johnston & Gowers, 2005), the case note audits carried out by Batty et al. (2012) and Hall et al. (2013) suggest there are gaps between service policy and clinical practice. It is also useful to bear in mind that the three Trusts in the aforementioned audit were all affiliated with CORC in the beginning (one dropped out by the time the re-audit was carried out), meaning they were likely more cognisant of the use of outcome measures than services who are not.

Regarding the Children and Young Persons IAPT agenda, which requires an even more rigorous approach to routine outcome monitoring practices, CORC[1] have been publishing data since the initiative began. Table 4 reports on the first 21 months of data collection and comes largely from CAMHS clinicians who undertook CYP IAPT training across 18 wave 1 and 25 wave 2 CYP IAPT sites. Wave 1 sites began collecting data in January 2012 and full service roll out for them was in December 2012. Wave 2 sites began to collect data primarily from trainees in January 2013 and full roll out for wave 2 was December 2013. The table outlines closed cases with symptom or general outcome measures from the same perspective (child or parent), for at least two points in time; as well as an EET measure (Education, employment and training) which provides contextual information, from one time point.

Table 4: Amount of outcome information for closed cases ('closed' as indicated by clinician rated variable) in CYP-IAPT services over a 21 month period

Time period	**Number of sites**	**Number of clinicians**	**Frequency**	**Percentage (of all cases seen)**
Annual report 2012	18 (wave 1)	99	44	25.1
April to June 2013	43 (18 wave 1; 25 wave 2)	207	41	40.2
July to Sept 2013	43 (18 wave 1; 25 wave 2)	207	90	27.4

Interestingly, research in the UK and abroad has shown that just because people collect PROM, it does not mean that they put them to use in their own clinical practice. In the US, Garland et al. (2003) explored the views of a random sample of 50 mental health professionals in a children's mental health service and found that even though all respondents had received outcome data for the clients on their caseload, the vast majority (92%) reported not using the information to design their intervention or monitor progress,

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[1] Data available at http://www.corc.uk.net/resources/cyp-iapt-data-bulletins/

as they did not see the outcome measures as having any clinical utility. Similarly, in an unpublished survey commissioned by the Australian government, Pedwell and Slattery (2005) stated that 70% of team leaders in 53 of 60 mental health teams across Melbourne and Victoria reported that data gleaned from outcome measures in their services were not used at all. In a large US survey of clinicians and academics who worked in child and adolescent services, Huffman et al. (2004) found that although respondents perceived outcome measurement practices as important for research, commissioning purposes and program development, they regarded the importance of outcome data for their own clinical practice as ‘little to moderate’. More specifically, they regarded outcome measurement as important in the assessment period, but less important in informing their intervention design, progress or overall practice.

Summary:

- When taking into account the early research on prevalence of outcome measures, it appears that services have been slow to build on the promising start in 2005.
- Some research demonstrates that even when measures are being collected, they’re not being used, thereby raising the question of how clinicians view and value the measures.

2.7 Drivers and barriers to the uptake of Patient Reported Outcome Measures

A literature search was carried out to identify recent studies investigating the relevant factors that contribute to the uptake of PROM. Relevant references were identified by searching PsycINFO, PubMed, Medline, Scopus and Web of Science with the following terms: clinician’s attitudes to ROM; clinician’s perceptions of ROM; barriers to PROM use; drivers to PROM use; progress monitoring; routine outcome monitoring; measurement feedback systems; patient reported outcome measures; patient focused research; feedback intervention theory.

Regarding the influence of *organisational* or *external pressures* on staff, various authors who look at the role of organisational pressure in the dissemination of new ways of working suggest that although organisational pressure is necessary, too much external control is quite likely to raise resistance (Trauer, Callaly & Hermann, 2009; Reimer, Rosof-Williams &

Bickman, 2005). In their recent audit cycle in the UK, Hall et al. (2013) cited important links between national and local service drivers and increased PROM use in their UK audit cycle. They posited that recent government support was instrumental in the uptake, including an increase in administrative resources made available for the collection and analysis of PROM; the incorporation of Commissioning for Quality and Innovation (CQUIN) targets; taking part in early CYP-IAPT trials; the involvement of the Collaborations for Leadership in Applied Health Research and Care - Nottinghamshire, Derbyshire, Lincolnshire (CLAHRC-NDL) who carried out a lot of work to promote the use of PROM across the Midlands region. Their findings suggested that appropriate organisational support and pressure promoted the uptake of PROM.

One of the few researchers to look at the role of individual *therapist variables* in the attendance to, and acceptance of feedback is DeJong. In 2012 she carried out a study which examined whether the effects of feedback were moderated by therapist characteristics. She found that clinicians who had a more open attitude to getting feedback experienced quicker rates of recovery with their patients. Higher self efficacy in the therapist was also shown to have significant effect on the rate of progress that clients made. Her study demonstrated that feedback interventions were not effective in all circumstances and that therapist variables can be important when incorporating feedback into clinical practice.

Another factor which is consistently shown to determine whether clinicians use PROM is *training* in their use. Hatfield and Ogles (2004) surveyed 324 psychologists in the US and found that those participants who used outcome measures had received a substantial amount of training in their use and implementation compared to those who do not use them. Willis, Deane and Coombs (2009) and Trauer et al. (2009) carried out research in adult mental health services in Australia and found that training led to improved attitudes. As mentioned above, Batty et al.'s (2012) survey found that 'lack of training and awareness' was the most commonly cited barrier to the use of PROM, with 76% of respondents feeling that they would like to receive more training in the area. Likewise, Callaly et al. (2006) held focus groups with 83 clinicians in a public mental health service in Australia and found that the most frequent response from mental health staff regarding what would make outcome measurement practices more useful for them, was that more training, particularly refresher training, was required.

The role of *attitudes* of clinical staff towards PROM use has been widely researched in Australia and the US, but not as much in the UK. In a miniature review of the literature, Trauer, Callaly and Hermann (2009) noted that studies have cited a range of feelings, attitudes and sentiments relating to outcome measurement practices, ‘ranging from enthusiasm through ambivalence to scepticism and resistance.’ (p. 288) Poorer accounts of outcome measurement generally come from earlier studies including Walter et al. (Aus; 1998); Stein (UK; 1999); Callaly and Hallebone (Aus; 2001) and Gilbody et al. (UK; 2002), all of which outline numerous barriers to ROM. Generally attitudes to PROM tend to be mixed however (Meehan et al., Aus, 2006; Trauer Callaly & Hermann, Aus, 2009; Garland, Kruse & Aaron, US, 2003) with Trauer et al. (2009) suggesting that one helpful approach to understanding the broad range of attitudes and opinions is to employ the transtheoretical ‘Stages of Change’ model (Prochaska & DiClemente, 1992) which assumes for sequential stages of attitude and behaviour change: precontemplative, contemplative, preparation, action and maintenance.

Studies with predominantly positive attitudes have also been found in research in Australia (Willis, Deane & Coombs 2009), the UK (Batty et al., 2013) as well as the US (Huffman, Martin & Botcheva, 2003) the latter two of which were carried out in child and adolescent services. An attempt was made to identify and list the various barriers suggested by the studies detailed in Table 5, below. Once the relevant papers were gathered using the literature search criteria listed above, papers were grouped together in categories or themes of barriers which have been adapted from Johnston and Gowers (2005) survey, which cites various obstacles to the implementation of a system of routine outcome measurement in the UK.

Table 5: Types of barriers to the usage of outcome measurement based on a literature review

Barrier to use	Reference
***Resource constraints/ feasibility*: This includes practical concerns such as lack of administrative support, time burden, cost of setting up such systems, as well as IT constraints**	Johnston&Gowers, 2005 (UK); Garland et al., 2003 (US); Batty et al., 2012 (UK); Wolpert et al., 2012 (UK); Trauer et al., 2006 (Aus); Norman et al., 2013 (UK); Meehan et al., 2006 (Aus); Gilbody et al., 2002 (UK)
***Scientific merit*: Technical aspects and psychometric properties of outcome measures including the validity, reliability and sensitivity of the available questionnaires.**	Hatfield&Ogles, 2004 (US); Garland et al. 2003 (US); Trauer et al., 2006 (Aus); Norman et al., 2013 (UK); Gilbody et al., 2002 (UK); Johnston&Gowers, 2005 (UK); Lee et al. 2005 (UK); Meehan et al. 2006 (Aus)
***Inappropriate data use*: This refers to broader political and economic motives driving ROM as well as fears around how results are perceived by managers and commissioners.**	Norman et al., 2013 (UK); Trauer et al., 2006 (Aus); Johnston&Gowers, 2005 (UK); Meehan et al., 2006; Moran et al., 2011 (UK)
***Philosophical resistance*: Staff concerns about the reductionist or depersonalizing nature of outcome measures; the reduced emphasis on clinical judgement and expertise; perpetuation of the medical model of patient care; services would lose sight of the patient.**	Norman et al., 2013 (UK); Gilbody et al., 2002 (UK); Johnston&Gowers, 2005 (UK); Batty et al., 2012 (UK); Bickman, 2008 (US) Hatfield&Ogles, 2004 (US); Meehan et al. 2006 (Aus); Gilbody et al., 2002 (UK)
***Interpreting results*: Concerns around not being able to score measures, while others could not understand what the scores meant when they were completed.**	Johnston&Gowers, 2005 (UK); Trauer et al., 2006 (Aus); Norman et al., 2013 (UK); Batty et al., 2012 (UK)
***Utility of measures*: Can outcome data be used efficiently and effectively. Do the scores tell clinicians anything they don't already know?**	Hatfield&Ogles, 2004 (US); Garland et al. 2003 (US); Miller et al., 2003 (US); Gilbody et al., 2002 (UK); Johnston&Gowers, 2005 (UK); Batty et al., 2012 (UK); Meehan et al. 2006
***Patient/Parent issues*: Measures providing an intrusion into clinical work and serving as an obstacle to engagement.**	Batty et al., 2012 (UK); Gilbody et al., 2002 (UK); Johnston&Gowers, 2005 (UK); Norman et al., 2013 (UK)

Perhaps unsurprisingly, research has also shown that just because people think highly of PROM, it does not mean they will collect them. Batty et al.'s (2012) survey contained open questions around clinician's values and perceptions of ROM and demonstrated that 93% of participants saw the use of assessment and outcome measures as ‘important’ or ‘very important’, despite only 30% of case notes audited showing evidence of the collection of same measure at two points in time. Close-Goedjen and Saunders (2002) also found that despite holding positive attitudes towards ROM, unless clinicians received continuous technical support with the instruments, they would not complete them.

2.8 Ways in which outcome data are used

Another important question in the field of outcome measurement concerns the use of PROM data in day to day clinical practice. Johnston and Gowers (2005) looked at the different ways that the PROM data gathered in UK services was being used and found that the most common use was for clinical management reasons. The service leads surveyed also said that they used the information to ‘Quantify problem type and severity’ (n = 128, 80%), ‘Monitor treatment progress’ (n = 125, 78%), and to ‘Quantify problem complexity’ (n = 95, 59%). They also reported that results from PROM were being fed back to clients (n = 75, 47%), fed back to clinicians (n = 61, 38%), were being used for service evaluation and audit purposes (n = 94, 58%) and research (n = 33, 20%). Only 4% of respondents suggested that they did not use the data from PROM which was collected. Again it should be noted that the data gathered in this study was from lead clinicians reporting on behalf of their service, rather than from evidence gained through case note audits or frontline practitioner reports. There has been no similar research published in the UK which reports on how the data gleaned from outcome measures is used since this one. As mentioned above, Huffman et al.’s (2003) research in the US posited that clinicians saw the impact of outcome data on their daily practice as ‘little to moderate’. When asked specifically at what times they used outcome data, approximately half (53%) stated that they always looked at data from intake reports before seeing a client for the first time, 67% said that they always took it into account in assessment and intervention decisions, whereas only 9% reported considering it at the end of treatment. This would suggest that the measures are not used very much to monitor treatment as it progresses or as a starting point for therapeutic discussions in therapy.

Summary:

- Generally, attitudes to PROM are very varied, but err slightly on the positive side in more recent years.
- Attitudes, perceived competence, as well as other personal and contextual factors play a role in the uptake of PROM. It is apparent that many factors weigh on the processes of decision making and behaviour change, but there has been very little exploration into how these factors affect and interact with one another.
- These studies highlight the different aspects of outcome monitoring including data collection, valuing the results enough to use them, and thereafter deciding which ways to use them. This appears to go back to clinician's perceptions of feasibility, validity, utility and reliability, all of which relate to the construct of attitudes. No research to date has taken such a multifaceted look at attitudes to PROM in the UK and how this might relate to their uptake.
- Another under developed area in the research includes the different personality variables which may contribute to acceptance of PROM use in general and the UK in particular.
- The literature appears quite insular and does not connect with or make use of any psychological theory to understand why clinicians may or may not decide to integrate these measures into their daily clinical practice.

2.9 A model for understanding how feedback is interpreted and made useful by clinicians

Contextual Feedback Intervention Theory (CFIT)

In an attempt to present a theory of the cognitive-affective processes that cause clinicians to change their clinical practice, Riemer, Rosof-Williams and Bickman (2005) developed the 'contextual feedback intervention theory'. The model was initially developed as a guide to understanding why clinicians may or may not assimilate evidence based practices into their clinical practice and posited the use of feedback tools as a crucial aspect of this change process. The application of the CFIT model in the present research is interesting, as it is the use of feedback tools themselves which constitute the evidence based practice which is being disseminated in this instance.

In their model, Riemer, Rosof Williams and Bickman (2005) draw on a range of theoretical constructs including goal commitment theory, feedback theories, cognitive dissonance theory and causal attribution theory to explain processes that lead clinician's to change their clinical behaviour. Based on the synthesis of these theories, in order that a clinician will make a change to their behaviour, they must:

(1) be committed to the target goal (ie. to provide the best possible service to their patients, potentially through the use of an evidence based practice);
(2) recognize when they have not accomplished this goal (through the effective use of feedback tools);
(3) be motivated to move toward the goal (through the discomfort of cognitive dissonance); and
(4) be ready to accept personal responsibility if they are not moving toward the goal (attribute the discrepancy to internal and controllable factors rather than external and uncontrollable ones)

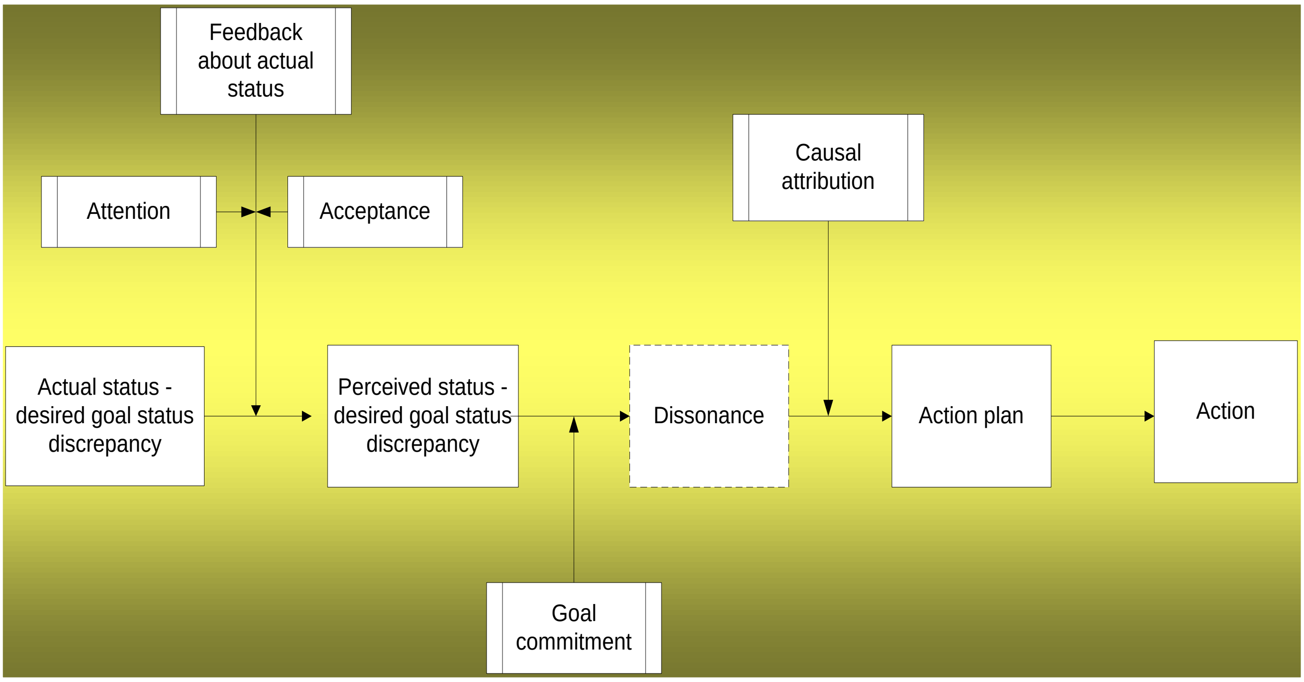

Figure 2: Contextual Feedback Intervention Theory model

Clinicians are thought to change their practice of and beliefs about treatments for several reasons, including professional development or from the repetition associated with a familiar task or skill. Although these are important changes, this model focuses on the type of change that is purposeful and involves thoughtful examination of current clinical practices, professional goals, and an individual's ability to implement new clinical practices involved in using evidence based treatments. Therefore, the authors posit that clinician's *motivation* and *ability* lie at the heart of deliberate change in clinical practice. They describe *motivation* as being intrinsic or extrinsic in nature, with intrinsic motivation coming 'from within the individual and is comprised of urges, wishes, feelings, emotions, desires, and drives' (2005, p. 245) This notion of motivation has clear overlaps with the construct of attitudes and values, such as professional standards, as one must have positive attitudes toward something before being motivated to act on its behalf.

On the other hand, *ability* involves the knowledge, clinical skills, and competencies that clinicians hold or obtain through additional training or learning, and encompasses another set of critical factors.

2.10 Rationale and clinical relevance

Although research has made inroads into examining the different factors that contribute to the uptake of PROM, firm evidence is still scarce. While studies primarily from outside of the UK have begun to explore clinicians' attitudes to routine outcome monitoring, research here has tended to focus on uncovering drivers and barriers to PROM use without gaining a sense of how they are each weighed up in the clinician's mind with respect to hindering or facilitating their commitment to using them. Likewise, there is still little knowledge in the UK as to how competent clinicians feel in administering and interpreting outcome measures, or understanding the ways they utilise the measures, if at all. Furthermore, research is needed to understand how different factors such as attitudes and perceived competency interact with and influence one another as practitioners attempt to integrate these measures into their daily clinical practice. In developing an understanding of these various influences on PROM use, it is hoped that links to be made to existing theoretical knowledge so that the importance of relevant factors influencing the use of PROM can be understood within an overarching framework.

The relevance of this research is clear, as there is not only a clinical governance duty to routinely use outcome measures stemming from recent policy documents and best practice guidelines, but there is also an issue concerning professional ethos as research shows that therapy outcomes improve significantly when they are utilised. In turn, understanding the relationship between attitudes, perceived competency and PROM use has clinical and organisational implications for training purposes as well as the allocation of resources. Finally, by linking behaviour around PROM use to existing theory, the field can draw parallels with and learn from other fields of human behaviour and innovation acceptance.

2.11 Aims and objectives

This study conducted a survey of staff within Child and Adolescent Mental Health Services in collaboration with the CAMHS Outcome Research Consortium. The objective was to explore the following questions:

1. What were clinicians' attitudes to PROM, and to the practice of providing feedback of PROM results to clients?
2. How regularly did clinician's use PROM if they do administer them; and how did they use that data in clinical practice and otherwise?
3. How competent did clinicians feel in administering outcome questionnaires?
4. How strong were the relationships between attitudes, perceived competency and professional practice relating to PROM?
5. What was the significance of various individual, professional and contextual factors in contributing to professionals' attitudes, perceived competency and usage of PROM?
6. Was there any evidence that therapist personality characteristics might contribute to PROM use?
7. A further aim, depending on the emerging results, was to develop a prediction model of the usage of PROM.

This survey is one part of a pilot study in the context of a three year project being carried out by CORC and the Child Policy Research unit, which aims to explore the evidence base for evidence based practice, routine outcome monitoring, and collaborative practice. This larger project involves systematic reviews, analyses of routinely collected datasets, as well as the present survey. And so, as well as assessing attitudes to routine outcome monitoring practices, standardised questionnaires which measure attitudes to Collaborative Practice and Evidence Based Practices were also included in the present survey questionnaire to this end, but are not discussed in this dissertation.

3. Method

3.1 Study design

An online cross sectional web based survey design was used to collect the data. Information was gathered using self-report questionnaires which were disseminated online via email (containing a link to the questionnaire). This method of distribution was considered the most suitable way of collecting data for several reasons including minimal expense, reduced time and good accessibility to the target population, all of whom had readily accessible professional email addresses. Furthermore, the anonymity afforded in the survey and its design increased the likelihood that participants would answer more honestly.

3.2 Target population and recruitment strategy

The target population for the study was clinicians working in Child and Adolescent Mental Health Services all over the UK. These practitioners were recruited primarily through the NHS, although non-NHS organisations were also contacted. Recruitment strategy was carried out as follows:

a) In order to gain access to NHS clinicians, a contact list for all the R and D departments throughout the country was obtained via the NHS Research and Development Forum (http://www.rdforum.nhs.uk/044.asp). All fifty one mental health Trusts and the first 9 Primary Care Trusts (according to alphabet) listed on the aforementioned document were contacted via email with a brief outline of the research and request for information about the Trust requirements for R and D approval.

b) The Young Minds mental health charity for children was contacted in the hope that they might help to distribute the survey to CAMHS, as they had done in the Johnston and Gowers (2005) study.

c) Contact was made with various accrediting bodies to make use of any databases with practitioner contact information.

3.3 Final sample size and response rate

A total of 168 people entered the survey online. However, approximately a third of these (*N* = 56; 34%) did not go on to complete the survey and dropped out at some point before completing it. Twelve of those 56 non-completers did not even give consent to participate after reading the information sheet and a further 3 gave consent but did not answer *any* questions. Participants were not excluded if they had not completed the survey.

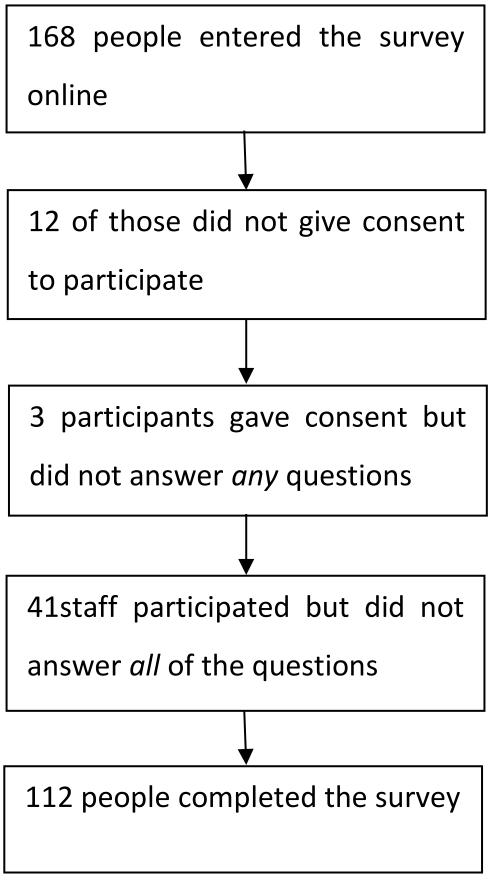

Figure 3: Flow chart showing how the final sample size was determined

Table 6 outlines the response rates for each participating Trust, which were calculated from the number of participants who *completed* the survey questionnaire against the total number of CAMHS clinicians in the Trust. The other Trusts, for whom there were a total of six participants, have been excluded.

Table 6: Response rates for the participating Trusts

Trust	Number of participants	Total number in Trust	Response rate
Trust A*	22	35	63%
Trust B	17	104	16%
Trust C	17	25	68%
Trust D	17	101	17%
Trust E	16	106	15%
Trust F	16	65	25%
Total	106	436	24%

3.3.1 Sample size calculation

An a priori power calculation revealed that a sample size of N = 85 was required to detect a modest Pearson correlation of r = .35 with a power of .85 and an alpha error of 5% (two-tailed). A second power calculation revealed that a sample size of N = 90 was required in order to detect a mean difference between two independent groups corresponding to a medium effect size of d = .60 with a power of .80 and an alpha error of 5% (two-tailed). The intended sample size for the survey was therefore set at a minimum of 100.

3.4 Development of the survey and measures

The survey questionnaire (see Appendix B) was made up of different sections, some of which had been used in previous research studies, whereas others were developed by the researcher for the purposes of the present study. The questionnaire was structured as follows:

I. Professional and service related background
II. Attitudes to PROM
III. Regularity of PROM use and ways that the measures are used
IV. Perceived self competency around PROM use
V. Demographic information
VI. Personality questionnaire

3.4.1 *Professional and service related background*

The first section (Appendix B, Section 1) included a bespoke series of professional and service related background questions which were relevant for Question 5 of the survey (*What is the significance of service context, professional background or therapeutic orientation/preferences in contributing to professional's attitudes, perceived competency and usage of PROM*)

3.4.2 *Outcome Measurement Questionnaire (Willis, Deane & Coombs 2009)*

The Outcome Measurement Questionnaire (Appendix B, Section 3) was used to assess clinician's attitudes to outcome measurement, as outlined by Question 1 of the survey (*What are clinicians' attitudes to PROM, and to the practice of providing feedback of PROM results to clients?).* It is a 23-item measure which was designed to assess clinician's general attitudes to routine outcome measures, as well as attitudes to the practice of providing feedback to clients about their results. The total number of questions were divided up into these two subscales, with 8 items specifically designed to target attitudes to the provision feedback from the outcome measures to the client; with the other 15 questions tapping into general attitudes. The questionnaire was developed by the authors in Australia following a review of relevant literature around Routine Outcome Assessments and in accordance with the different components of a CD-ROM training resource called 'Whose Outcome is it Anyway?' which was used at PROM training workshops around Australia.

Participants were asked to respond to a series of items on a six point Likert scale with choices ranging from strongly disagree (1), disagree (2), slightly disagree (3), slightly agree (4), agree (5), to strongly agree (6). The higher the score is, the more positive the attitude endorsed. Based on a sample of 96 mental health workers across 8 training sites in Australia, cronbach's alpha for the 8 items related to clinician's attitudes to feedback provision was 0.87, suggesting good internal reliability. Cronbach's alpha for the 15 remaining general attitude items related to outcome measurement was 0.79. The authors of the current study contacted the developers of the Outcome Measurement Questionnaire to find out if it had been used in any other studies to date, to which they replied that it had not, to the best of their knowledge.

3.4.3 *How practitioners used PROM and the information gathered from them in daily practice*

As no existing questionnaire could be found which fulfilled Question 2 (*How regularly do clinicians use PROM if they do administer them; and how do they use that data in clinical practice and otherwise),* a series of questions were developed as well as a bespoke questionnaire for these purposes (Appendix B, Section 4). In doing so, contact was made with a PhD student from Sweden who had developed a questionnaire for a similar research project, which is currently being standardized (Skjulsvik, personal correspondence). The questionnaire contained five items concerning clinician's *clinical* use of outcome measures and five items concerning their *analytic* use. All items used in the present survey were imported from this questionnaire and subsequently reworded or excluded in order to make it more appropriate for a UK population. Following the exclusion of 2 items from the original questionnaire, 8 items were selected for inclusion in the present one.

The original version of the questionnaire had a three point Likert scale with the response options of 'never; occasionally; and regularly', when describing the extent to which a respondent carried out a specific PROM activity. It was deemed suitable to expand this to include a fourth point on the scale as follows: 'never; sometimes; often; always.'

3.4.4 *Perceived self competence*

As no existing questionnaire could be found to meet the needs of Question 3 of the survey (*How competent do clinicians feel in administering outcome questionnaires?),* a bespoke questionnaire was once again developed for this purpose (Appendix B, Section 4, Q. 18). In developing such a measure, which would account for the full range of competencies associated with PROM use, the Outcome Measures Framework section of the CYP-IAPT national curriculum (version 6) (http://www.iapt.nhs.uk/silo/files/cyp-iapt-national-curriculum-v6.pdf; p.13) was consulted. This document outlines the full range of skills necessary for the effective and ethical administration and interpretation of outcome measures in daily clinical practice. Eight questionnaire items were developed for the purposes of this survey, with each one based on a requisite skill for competent use of PROM. The skills listed in the framework are relevant for all PROM use and not just CYP-IAPT measures.

A six point Likert scale was chosen to gauge how well clinicians felt they could perform a specific skill. Response options included 'not at all well; slightly well; fairly well; quite well; very well; extremely well'

3.4.5 *Demographic information*

Basic demographic information (Appendix B, Section 6) including age, gender and caseload were asked as this was also deemed relevant for Question 5 of the survey (*What is the significance of various individual, professional and contextual factors in contributing to professional's attitudes, perceived competency and usage of PROM?)*

3.4.6 *The Big Five Inventory-10 (BFI-10) (Rammstedt & John, 2007)*

To explore Question 6 of the survey (*Is there any evidence that therapist personality characteristics might contribute to PROM use?),* the BFI-10 (Rammstedt & John, 2007) was also included in the survey questionnaire (Appendix B, Section 6, Q. 25). This is an abbreviated version of the original Big Five Inventory questionnaire (John et al., 1991) which measures the big five dimensions of personality. It consists of 10 items measuring 5 trait dimensions of personality- neuroticism, agreeableness, openness to experience, extraversion and conscientiousness, of which there are 2 items for each dimension. The measure uses a 5 point Likert scale from 'strongly disagree' to 'strongly agree', with one coded in the positive and one coded in the negative direction of the scale.

Rammstedt and John (2007) developed the measure using four groups of university students over two countries, namely the United States and Germany, in order to enhance its generalizability and carried out extensive validation studies. Results suggest that the shortened 2-item scale used in this survey can predict almost 70% of the variance of the full scale. Various other psychometric properties of the measure were tested by the authors and were shown to be acceptable over a range of cultures.

3.5 Piloting the survey

Once the survey was considered to be ready, a multi-stage procedure for pretesting as outlined by Dillman (2000) was carried out. The first stage involved a review by esteemed colleagues in the CAMHS Outcome Research Consortium in order to review question relevancy, format, appropriateness, efficiency and completeness. At this stage it was decided that the inclusion of a neutral point in the Outcome Measurement Questionnaire (Willis, Deane & Coombs, 2009) was appropriate, thereby expanding the original six point scale to a seven point Likert scale by including a 'neither agree nor disagree' option. The second stage involved the main researchers completing the survey and 'thinking aloud' while doing so, in order to brain storm ideas and alternative question possibilities. This part of the pretesting sought to evaluate motivational and cognitive aspects of the survey including question understandability, sequencing of questions and sections, word and phrasing consistency and overall impressions from the survey. The third stage involved piloting the questionnaire at a CAMHS Outcome Research Consortium conference in November 2013 in order to pick up on any improvements that could be made. Fifty people took part of a total of 75 attendees and data were analysed to determine any pitfalls in the survey including issues around question scaling, high correlations between certain questions, questions with high non-response rates, attrition rates etc. Some changes that were made in response to analysis and feedback of this data included:

- Modifying the wording of the questionnaire to make it more applicable to voluntary sector organisations and less biased towards NHS respondents
- Adding an additional response option to Q 11 which asks how frequently PROM were used by clinicians.

The final stage involved one last check to catch any typographical or other errors which were included after the amendments from the revision process.

3.6 Procedure

Survey Monkey was selected as the software platform for the survey, which allows researchers to (1) distribute among multiple IT platforms and web browsers (2) prevent multiple submissions (3) offer multiple opportunities to save answers (4) collect coded as well as open-ended responses and (5) provide an immediate "thank-you" response after completing the survey. Furthermore, it limited missing values as respondents were not able to continue without answering all questions.

Once Trust approval to disseminate the survey was acquired, the R and D departments were asked to suggest an appropriate contact in the Trust that would be well placed to disseminate the survey via email. In most cases this involved establishing contact with either a CAMHS lead or operations manager. In Trust E, the most effective way to distribute was deemed to be through the Trust newsletter and the appropriate person was contacted.

So that accurate response rates for each Trust could be obtained, separate survey monkey links were created for each of the participating Trusts. This allowed for accurate completion rates to be calculated for each Trust, as the total number of respondents from each separate survey link were compared to the total number of CAMHS clinicians in that Trust. The figure for the total number of clinicians in each Trust was obtained either through the corresponding R and D department or else through the service lead or manager with whom the authors were in contact. When distributing the survey links, the respective service lead or operational managers were also asked to cc in the authors of the study, so that:

- The researchers would know the date that clinicians in that Trust received the first invitation to participate, thus allowing for appropriate timing for reminders to be sent out.
- The researchers could then autonomously send out reminders for the survey at fortnightly intervals without having to rely on the initial contact person to send them out promptly.

An email invitation (see Appendix C) to participate was then sent out to clinicians, which provided basic information about the researchers; the purpose of the survey; the benefits of taking part for the field of research as well as for policy makers; matters of confidentiality and privacy; and contact details of the researchers. The survey monkey link was embedded into the email via a hyperlink. Once potential participants had accessed the link, the information outlined above was reiterated and included information on options to complete the survey by phone or interview. Thereafter, participants were asked to confirm their informed consent to participate and the questionnaires were then presented in a standard order. Once they had completed the study, participants were thanked and reminded that they could contact the researchers to discuss the survey or develop their responses further.

3.7 Ethical considerations

All participants were presented with the information sheet which outlined important information pertaining to issues of anonymity, storage of data, voluntary participation and informed consent. Specifically, participants were informed that responses were not identifiable to the researchers as they would not be asked for their names or contact details and that all information provided would be treated confidentially and stored securely. The email addresses of the primary researchers were provided in case further clarification was sought regarding any of the information provided.

Informed consent was obtained by asking participants whether they would be willing to take part after reading what taking part would involve, as outlined in the information sheet (Appendix B). If they were happy to participate, they gave consent by clicking YES to the consent question at the bottom of the page, which led them to the beginning of the survey.

As the research was deemed to be benign in nature and as the target population were NHS clinicians, it was not deemed necessary to offer a debrief sheet or follow up support.

Ethical approval was obtained from the School of Psychology Ethics Committee at the University of Hertfordshire. Once ethical approval had been obtained (Appendix D), only then were potential participants asked if they would be willing to take part in the study and questionnaire packs were distributed. Further ethical approval was considered unnecessary as the sample recruited were a non-clinical population.

4. Results

The results of the data analysis will begin with a description of the socio demographic and professional status of the final sample, as well as information about the different service contexts involved. The psychometric properties of the various bespoke questionnaires are then presented, including the Attitudes Index, the PROM Usage Index and the Perceived Competency Index, followed by descriptive statistics for each of the main research questions. Next, the strength of the relationships between the main study variables are explored. Thereafter, group differences are investigated according to individual, professional and contextual variables, to see if they had an impact on the main indices. Finally, the results from two multiple regression analyses are outlined with a view to developing prediction models for the usage of PROM.

4.1 Sample description

4.1.1 Demographic information

As shown in Table 7, the sample included a much larger number of female participants (78%) than male participants (22%). The majority of participants were aged between 35 and 44 years of age (29%) and were quite evenly spread between the six different Trusts that participated.

Table 7 Frequencies and percentages of gender, age and employing Trust of the sample.

Variable	Category	Frequency	Percentage
Gender	Male	24	22%
	Female	85	78%
Age group	18-24	4	4%
	25-34	24	22%
	35-44	32	29%
	45-54	31	28%
	55-64	20	18%
Trust	Trust A	22	20%
	Trust B	17	15%
	Trust C	17	15%
	Trust D	17	15%
	Trust E	16	14%
	Trust F	16	14%
	Other	6	5%
Sample	Total	111	100%

4.1.2 Professional information

4.1.2.1 Profession, length of time in profession and caseload

Data regarding participant's professional status including professional role, length of time in the aforementioned profession and caseload are presented in Table 8.

Table 8: Frequencies and percentages of participant's professional status

Variable	Category	Frequency	Percentage
Primary professional role	Counsellor	13	12%
	Psychotherapist	7	6%
	Social worker	13	12%
	Psychologist	28	26%
	Psychiatrist	12	11%
	Mental Health Practitioner	17	16%
	Mental Health Nurse	13	12%
	Manager	3	3%
	Other	4	4%
	Total	111	100%
Length time working in aforementioned role	In training	3	2%
	Less than one year	16	12%
	1-5 years	33	25%
	6-10 years	29	22%
	11-15 years	21	16%
	16-20 years	11	8%
	21-25 years	8	6%
	26-30 years	11	8%
	31 or more years	2	2%
	Total	111	100%
Caseload	0-9 clients	24	23%
	10-19 clients	18	17%
	20-29 clients	18	17%
	30-39 clients	12	12%
	40-49 clients	7	7%
	50-60 clients	8	8%
	Above 60 clients	7	7%
	Other (non clinical roles)	10	10%
	Total	104	100%

Psychology was the most frequently represented profession in the sample (26%) while all other main professional categories made up between 10 and 15 percent of the sample, except psychotherapists (6.4%). A quarter (25%) of the sample had 1 to 5 years experience and over sixty percent (61%) had less than ten years experience in their primary professional role. Almost a quarter (23%) of participants held 0-9 clients on their current caseload, which refers to the total number of cases open to a clinician, while caseloads of 10-19 and 20-29 each made up 17% of the sample. Seven percent had more than 60 clients and 10% of participants held roles which did not warrant a caseload. No adjustments were made to these figures to account for part time workers.

4.1.2.2 Therapeutic orientation

Data regarding the therapeutic orientations of the participating clinicians was gathered in Q7 of the survey questionnaire (*To what extent do you use the following therapy approaches?*) and outlined in Table 9.

Table 9: Descriptive statistics for preferences of therapeutic approach of participants

Therapeutic model	N	Mean	Median	S D
Systemic	133	3.35	4	1.2
CBT, cog or beh	133	3.11	3	1.1
Humanistic	133	2.66	3	1.3
Psychodynamic	133	2.59	2	1.3

Results demonstrated that systemic models of therapy were employed most regularly, with a mean score of 3.35 which translates into an average position between *sometimes* and *often* on the Likert scale used (never; occasionally; sometimes; often; always). This is closely followed by CBT practices (which also include cognitive and behavioural practices independent of each other) with a mean score of 3.11, then humanistic (2.66) and psychodynamic therapies (2.59).

Appendix E offers further information as to the amount of time each model of therapy is employed by clinicians. The most frequently represented category is in the systemic therapy category, with 45% of clinicians stating that they *often* use this model. Twenty five percent and 22% of participants said that they *never* used humanistic and psychodynamic informed therapies respectively.

4.1.3 Service context

Information regarding the service context of the sample is outlined in Table 10, specifically in relation to the type of service and initiatives that the service is engaged with.

Table 10: Frequencies of participant's service context and initiatives (N=111)

Variable	Category	Frequency
Type of service	Outpatient	49
	Inpatient	9
	Specialist	28
	Voluntary (non-NHS)	22
Service initiatives	Choice and Partnership Approach	51
	CAMHS Outcome Research Consortium	69
	Clinical Outcomes in Routine Evaluation	25
	CYP IAPT Wave 1	31
	CYP IAPT Wave 2	17
	CYP IAPT Wave 3	16
	Payment by Results (pilot sites)	30
	Quality Network for Community CAMHS	10
	Quality Network for Inpatient CAMHS	11
	No team involvement	5

As shown in the table, the majority of participants worked in outpatient settings (n=49). Twenty two participants worked in the voluntary sector, all of whom belonged to the Young Persons Advisory Service (Trust A). Nearly every participant's service was involved in one or more initiatives, with the CAMHS Outcome Research Consortium (of which 69 participant's services were members) and CYP IAPT (of which 64 participant's services were members) constituting the main ones.

4.2 Development of indices

4.2.1 Development of the Attitudes Index

Following further inspection of the original Outcome Measurement Questionnaire (Willis, Deane & Coombs, 2009), it was felt that some of the 15 general attitudes items were not related to an *attitudes* construct per se, but were more aligned to constructs of *intentionality* and *self efficacy* than attitudes (e.g. I am confident integrating outcome measures into my work; I intend to routinely offer the service user self assessment measures to service users). It was thought that the questionnaire would be more aptly described as an overall *orientation to PROM* rather than a pure *attitudes* one and that the construct validity of the 15 general attitudes items were not suitable for the purposes of this research.

Thereafter, only questions from the original questionnaire which were thought to capture the construct of attitude alone were selected for the new Attitudes Index. Items were selected on the basis of criteria by which the usefulness of outcomes measures is assessed, as outlined by Long and Dixon (1996). These criteria include the constructs of validity, reliability, feasibility of use, responsiveness to change, clinical utility and patient-centeredness. Based on those criteria, the following 6 questions from the Outcome Measurement Questionnaire (Willis, Deane & Coombs, 2009) were used in analysis:

1. Outcome measures do not capture what is happening for my patients
2. Outcome measures take the human aspect out of my work
3. I find outcome measures very useful for working with patients
4. Using outcome measures will help me make better treatment decisions with patients
5. Outcome measures take too long
6. I see the value in changing my clinical practice to support the use of the service user self-assessment measures

A principal component analysis was then carried out on these six items after assessing for the suitability of data for factor analysis. Inspection of the correlation matrix revealed the majority of coefficients were 0.4 and above. The Keiser-Meyer-Olkin value was .83, exceeding the recommended value, supporting the factorability of the correlation matrix. The principal component analysis revealed the presence of one component with an eigenvalue exceeding 1 (eigenvalue= 3.5), explaining 59% of the variance. Inspection of the scree plot (see Figure 4) revealed a clear break after the first component. All items loaded strongly on this one component, as presented in Table 11.

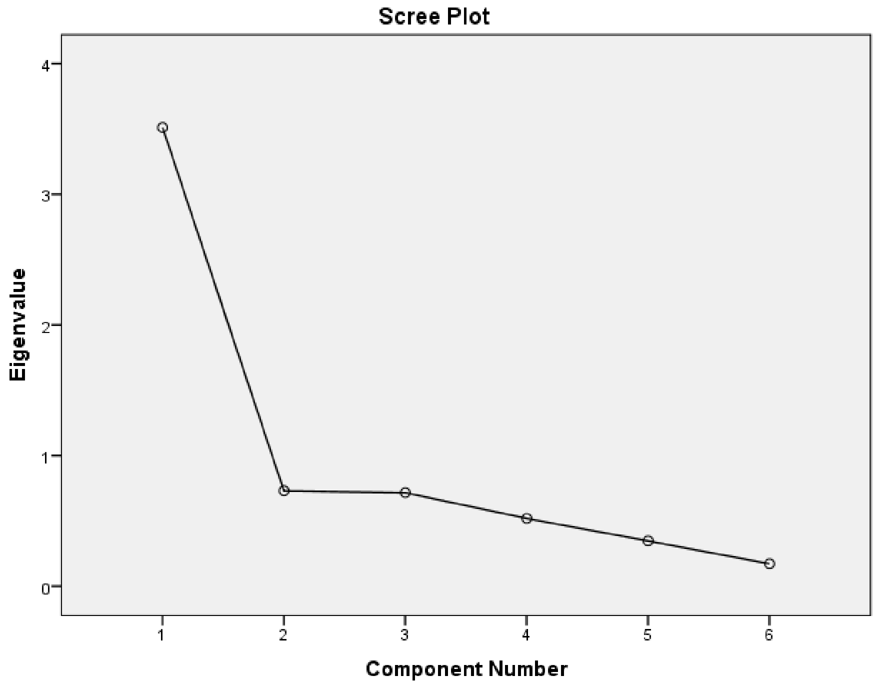

Figure 4: Scree plot for the eigenvalues in the PCA for the Attitudes Index.

Table 11: Component loadings for the Attitudes Index (N=114)

Item	Component loadings
I find outcome measures very useful for working with patients.	.89
Using outcome measures will help me make better treatment decisions with patients.	.86
I see the value in changing my clinical practice to support the use of the service user self-assessment measures.	.81
Outcome measures do not capture what is happening for my patients.	-.78
Outcome measures take the human aspect out of my work.	-.62
Outcome measures take too long.	-.60

The Cronbach's alpha coefficient was found to be .85, which demonstrates very good reliability and was higher than the Cronbach alpha coefficient for the original 15 general attitudes items.

4.2.2 Development of the PROM Usage Index

The 8 items of the PROM Usage Index were subjected to principal components analysis. Prior to performing the PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed multiple coefficients of 0.4 and above. The Keiser-Meyer-Olkin value was .79, exceeding the recommended value, supporting the factorability of the correlation matrix. The PCA revealed the presence of two components with an eigenvalue exceeding 1, explaining 49% and 16% of the variance respectively. An inspection of the screeplot (Figure 5) reveals a small break after the second component and so it was decided to retain two components for further investigation.

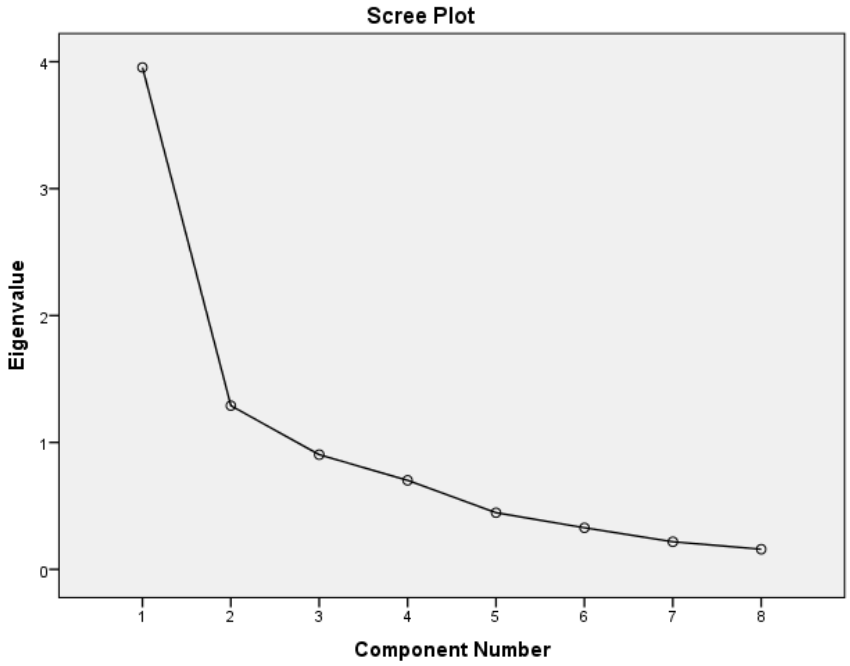

Figure 5: Scree plot for the eigenvalues for the PCA on the PROM Usage Index

Table 12: Component (Structure matrix) loadings for the PROM Usage Index (N=114)

Item	Component 1	Component 2
(i) Reflecting on a patients problem or score	.87	.35
(ii) Discussing a patients scores with them	.92	.25
(iii) Using a patients scores to inform treatment	.85	.31
(iv) Comparing change in an individual patients score	.90	.40
(v) Comparing change in a group of patient's scores	.27	.72
(vi) Discussing scores in supervision	.63	.49
(vii) Summarising scores for discussions, meetings or reports	.30	.83
(viii) My team uses outcomes data for evaluation	.27	.64

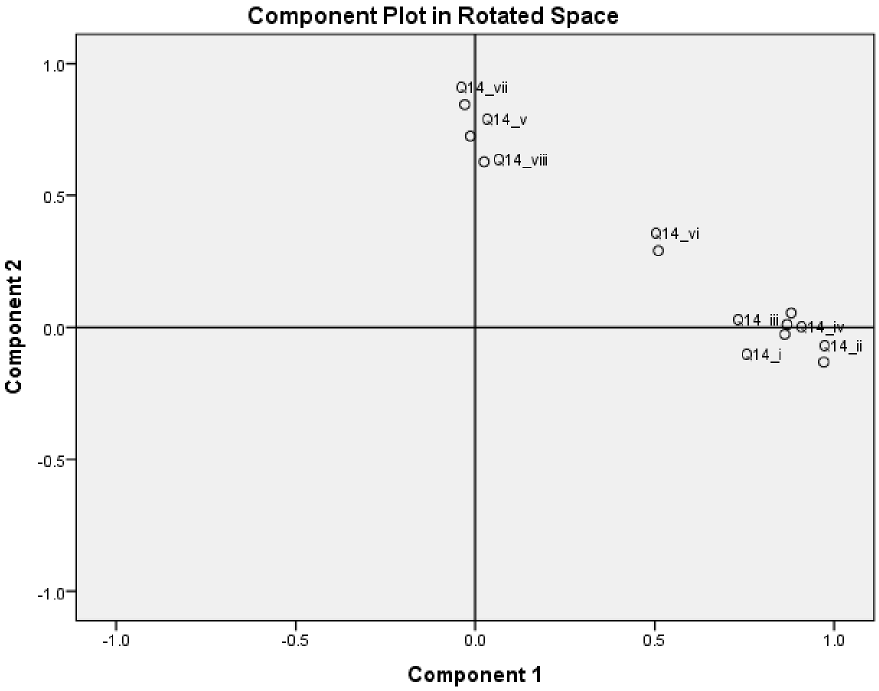

Figure 6: Component plot for the PCA on the PROM Usage Index

The results of the PCA therefore indicated the presence of two underlying variables, which could be best summarised as follows:

Clinical use of PROM: Items grouped into this category (i, ii, iii, iv, vi) share the fact that they all pertain to clinical or client centred purposes. The results from the measures are used to further thinking on the therapy or individual case in this instance.

Evaluative use of PROM: Items grouped into this category (v, vii, viii) share an evaluative or analytic function, pertaining more to groups of clients or perhaps models of therapy. The results from the measures are used to further thinking at a group or service level in this instance and represent the kind of reflection that is needed to progress up to the higher stages of the 'Benefits Pyramid' outlined in Figure 1.

Both of these variables, which represent different aspects of PROM usage, were used in the main analysis and individual *clinical* and *evaluative* use index scores were computed for each participant. The clinical usage index was shown to have excellent internal consistency with a Cronbach's alpha coefficient of .9, whereas the three items used in the evaluative practice scale only demonstrated a Cronbach's alpha coefficient of .6. When all eight items from the usage scale were examined for internal consistency however, the overall Cronbach's alpha coefficient was .84

4.2.3 Creating a Perceived Competency Index

The 8 items of the Index of Perceived Competency scale were once again subjected to a principal components analysis. Prior to performing the PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed multiple coefficients of 0.5 and above. The Keiser-Meyer-Olkin value was .91, exceeding the recommended value, supporting the factorability of the correlation matrix. The principal component analysis revealed the presence of one component with an eigenvalue exceeding 1 (eigenvalue= 4.9), which explained 61.4% of the variance. Inspection of the scree plot (Figure 7) revealed a clear break after the first component. All items loaded strongly on this one component, as presented in Table 13.

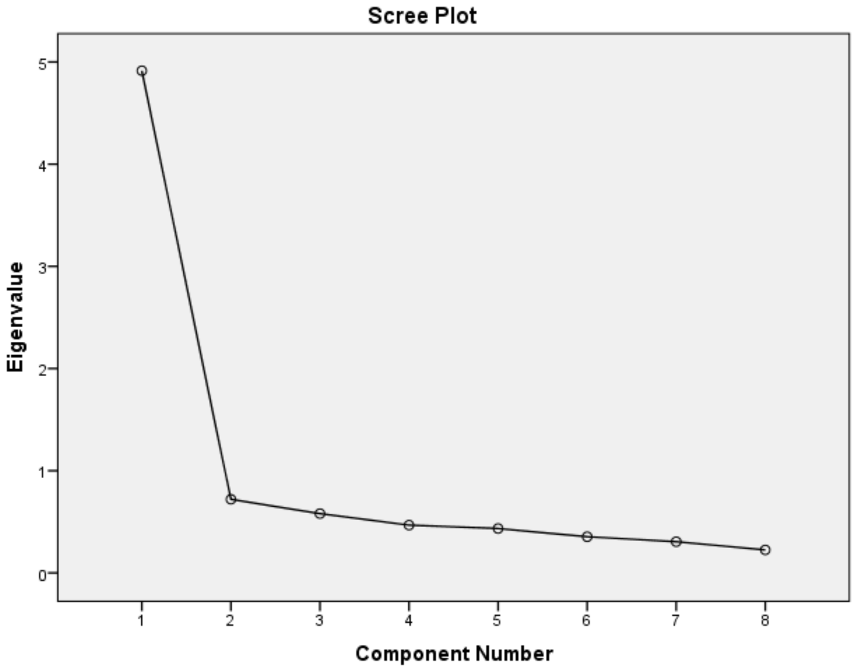

Figure 7: Scree plot for the eigenvalues for the PCA on the Perceived Competency Index data.

Table 13: Component loadings for the Perceived Competency Index (N=114)

Item	Component loadings
Introduce outcomes	.83
Work collaboratively to choose appropriate measures	.71
Administer PROM at correct times	.73
Judge when to use, and not to use, measures	.78
Score and interpret results	.74
Integrate results into sessions	.84
Use results to identify need to change approach	.85
Present results in supervision	.80

The results of the PCA therefore indicated that the items developed for the Perceived Competency Index could be summarised by one underlying *competency* variable, which was computed for each participant. The scale was shown to have excellent internal consistency with a Cronbach's alpha coefficient of .91

4.3 Descriptive analyses

4.3.1 Attitudes to outcome measurement practices

4.3.1.1 Attitudes Index

To develop an individual participant's *attitude* index, their total score was divided by the six selected items in the questionnaire after accounting for reversed scorings. This allowed for a mean score on the Attitudes Index which corresponded with the questionnaires seven point Likert scale, ranging from strong negative attitudes to strong positive attitudes to Patient Reported Outcome Measures. Descriptive statistics for participant's responses to the Attitudes Index are presented in Table 14 and a box plot for the scale can be found in figure 8.

Table 14: Descriptive statistics for the Attitudes Index

N	Min	Max	Mean	S D	Median	Skewness	Kurtosis
119	1.0	6.33	4.17	1.16	4.17	-0.35	-.51

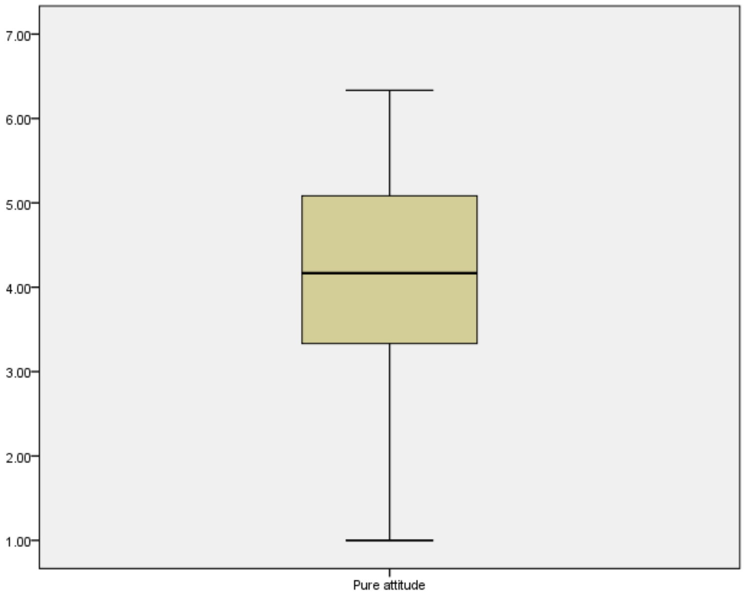

Figure 8: Box plot for the Attitudes Index

The samples mean attitude to outcome measures is 4.17 which corresponds to an average position between 'neither agree nor disagree' and 'slightly agree' position on the Likert scale, although closer to the former. This suggests a very small endorsement for PROM overall. The distribution of scores on the scale is reasonably even as shown in figure 9. Mean scores and standard deviations of individual items on the Attitudes Index are presented in Table 15.

Table 15: Mean and SD scores for individual items on the Attitudes Index (N= 119)

Item	Mean	SD
Outcome measures do not capture what is happening for my patients.	4.3	1.6
Outcome measures take the human aspect out of my work.	3.9	1.6
I find outcome measures very useful for working with patients.	4.5	1.6
Using outcome measures will help me make better treatment decisions with patients.	4.5	1.6
Outcome measures take too long.	4.5	1.4
I see the value in changing my clinical practice to support the use of the service user self-assessment measures.	4.8	1.3

The percentage frequencies of responses for individual items on Attitudes Index are presented in Appendix E

4.3.1.2 Attitudes to the provision of PROM feedback to clients

Even though the 15 item general attitudes scale on the original Outcome Measurement Questionnaire (Willis, Deane Coombs, 2009) was replaced with the 6 item Attitudes Index for the present study, the 8 item Attitudes to Feedback subscale was kept in order to gauge participant's attitudes to feeding PROM results back to clients. In doing so, the participant's total score for the subscale was divided by 8 to get a mean Attitudes to Feedback score which corresponded with the questionnaires seven point Likert scale, ranging from 'strongly disagree' through to 'strongly agree'. Descriptive statistics for participant's responses to the Attitudes to Feedback subscale are presented in Table 16. The mean score is 4.9

corresponds to an overall position of ‘slightly agreeing’ that providing feedback to clients on their outcome measure scores is a useful clinical practice.

Table 16: Descriptive statistics for the Attitudes to Feedback subscale

N	Min	Max	Mean	S D	Skewness	Kurtosis
119	2	7	4.9	1.1	-0.82	0.24

4.3.2 Professional use of outcome measures

4.3.2.1 PROM Usage Index

In order to develop indices for participant’s clinical and evaluative use of PROM, mean scores were once again calculated by dividing the total scores of each subscale by the number of items pertaining to each. This allowed for usage scores which corresponded with the questionnaires four point Likert scale, ‘never; sometimes; often; always’ regarding the regularity of use of different PROM activities. Descriptive statistics for the overall sample’s responses to the PROM Usage Index are presented in Table 17 and a box plot for the scale can be found in Figure 9.

Table 17: Descriptive statistics for the PROM Usage Index

	N	Min	Max	Mean	S D	Skewness
Clinical use	114	1	3.8	2.2	.75	.02
Evaluative use	114	1	4	1.9	.63	.5

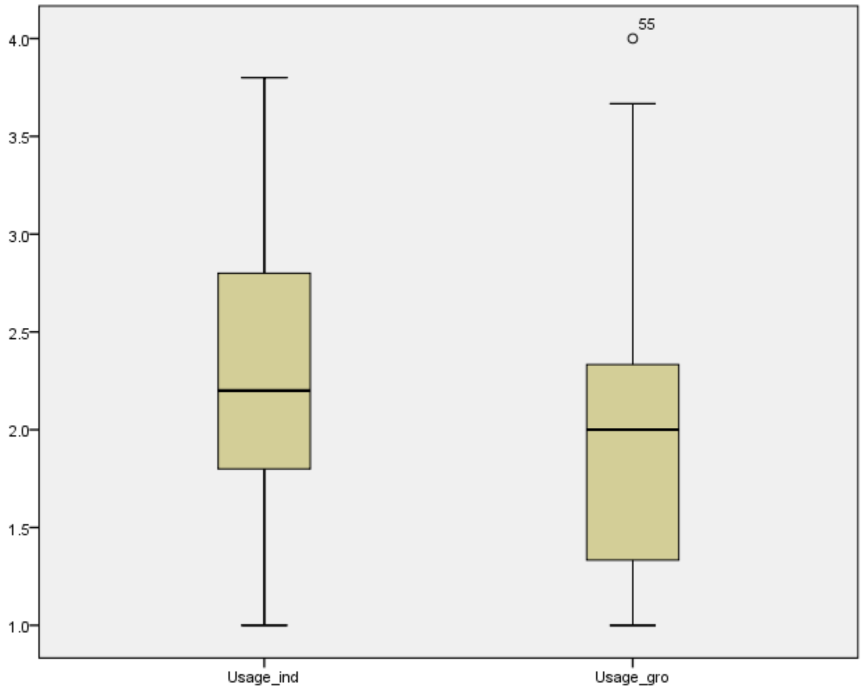

Figure 9: Boxplots for the PROM Usage Index including clinical use (left; Usage_ind) and evaluative use (right; Usage_gro)

The mean *clinical* use index was 2.2 which corresponded to an overall position between 'sometimes' and 'often'; while the mean *evaluative* use index was 1.9 which corresponds to a general position just below 'sometimes'. The distribution of scores on the scales are reasonably even as seen in the boxplots above. Mean scores and standard deviations of individual items on the two indices are presented in Table 18.

Table 18: Mean and SD scores for individual items on the PROM Usage Index (N= 114)

Item	Mean	S D
Reflecting on a patients problem or progress	2.46	.95
Discussing a patients scores with them	2.39	.96
Using a patients scores to inform treatment	2.3	.89
Comparing change in an individual patients score	2.42	.93
Comparing change in a group of patient's scores	1.5	.73
Discussing scores in supervision	1.66	.67
Summarising scores for discussions, meetings or reports	1.74	.78
My team uses outcomes data for evaluation	2.45	1.1

The percentage frequencies of responses for individual items on PROM Usage Index are presented in Appendix E

4.3.2.2 Quantity of clients for whom outcome monitoring data is collected

In order that outcome monitoring practices can yield data on therapy outcomes, data is required from at least two points in time, ideally at baseline and discharge. Table 19 outlines the regularity with which participants reported collecting data at assessment and follow up (6 months later or discharge), as well as on a session by session basis. These results correspond with Q11 of the survey questionnaire (*With how many of your patients do you use the following measures?*).

Table 19: Percentages of clinicians who collect outcome data on at least two occasions with the following number of client's (N=114)

Number of clients	Assessment and follow up	Session by session measures
None	15%	46%
A few	18%	25%
Most	32%	19%
All	35%	10%

As demonstrated, 35% of clinicians are collecting outcome data at assessment and follow up for *all* the patients they see; while 15% do not collect this information for anyone. Regarding outcome measures which are to be administered in every session, almost half (46%) of clinicians say that they do not use these measures at all; whereas a quarter of the sample reported using them with a few of their patients.

4.3.2.3 Frequency of session by session outcome measure use

Whereas session by session measures are intended to be used in every meeting, some practitioners may find this impractical and unnecessary. Table 20 outlines the regularity with which clinicians collect these measures with their clients, corresponding with Q12 of the survey questionnaire (*Of those with whom you use session by session measure, how often do you use them?*).

Table 20: Percentages of clinicians who employ session by session measures at the following intervals (n=74)

Number of sessions	Percentage
In a few sessions	35
In some sessions	20
In most sessions	34
In all sessions	11

As shown, over a third (35%) of the sample reported collecting session by session measures in just a few sessions, whereas a similar number of clinicians (34%) collect them in most sessions.

4.3.2.4 Relationship between regularity of PROM administration and clinical and evaluative use of the data

In order to explore whether staff viewed PROM administration as a tick box exercise or not, a Spearman's correlation was run to explore the relationship between PROM administration and PROM use, in the clinical and evaluative senses. Table 21 outlines the findings

Table 21: Correlations between regularity of PROM administration to clients and use of the data for clinical and evaluative purposes

	Clinical use	Evaluative use
Regularity of PROM administration at assessment and follow up	.25**	.28**
Frequency of session by session measure use	.39**	.08

** correlation is significant at the .01 level

These findings suggest that the more regularly measures are given out to clients, the more the data is used by the staff administering them, (except in the case of evaluative practice by those who administer session by session measures regularly) thereby suggesting that PROM use is not treated like a tick box exercise among those who use them.

4.3.2.5 Use of CORC outcome measures

Question 13 of the survey questionnaire (*Below is a list of some outcome measures. Please tell us which of these you have used or currently use in your practice with patients*) offers a list of CORC and CYP-IAPT approved measures from which clinicians select, as well as an open ended response option for any other measures which they use or have used. Table 22 outlines results from the various CORC and CYP-IAPT listed outcome measures used by clinicians.

Table 22: Percentage of clinicians who use or have used the following outcome measures (N= 114)

Measure	Percent
SDQ (Strength and Difficulties Questionnaire)	51
HoNOSCA (Health of the Nation Outcome Scales)	23
CGAS (Children's Global Assessment Scale)	33
GBO (Goal Based Outcome)	30
CSRS (Child Session Rating Scale)	10
RCADS (Childrens Anxiety and Depression Scale)	35
MAMS (Behavioural Difficulties)	1
EDE-Q (Eating Disorder Examination)	6
IES (Impact Event Scale)	8
CRS-R (Conners Rating Scale Revised)	26

Results show that the SDQ is the measure which has been most frequently used with 51% of clinicians saying they have used it or currently use it; 35% say they have used the RCADS and 33% say they have used the CGAS. The least used measures are the MAMS (1%), the EDE-Q (6%) and the IES (8%).

A further 17 separate measures are listed by 25 respondents in the section where participants are asked to specify which outcome measures they use which are not listed in the survey questionnaire. These outcome measures are listed in Appendix F. It is not known whether respondents used the measures listed in place of CORC measures or alongside of them.

4.3.3 Perceived competencies around PROM use

4.3.3.1 Perceived Competency Index

In order to develop an overall *competency* index, the participant's total score for the Perceived Competency Index was once again divided by the number of items in the questionnaire. This allowed for a mean competency score which corresponded with the questionnaires six point Likert scale, ranging from 'not at all well' to 'extremely well'. Descriptive statistics for the overall sample's response to the Competency questionnaire are presented in Table 23 and a box plot for the scale can be found in Figure 10.

Table 23: Descriptive statistics for the Index for Perceived Competency Index

N	Min	Max	Mean	S D	Skewness	Kurtosis
114	1	6	3.43	1.14	-0.62	-0.418

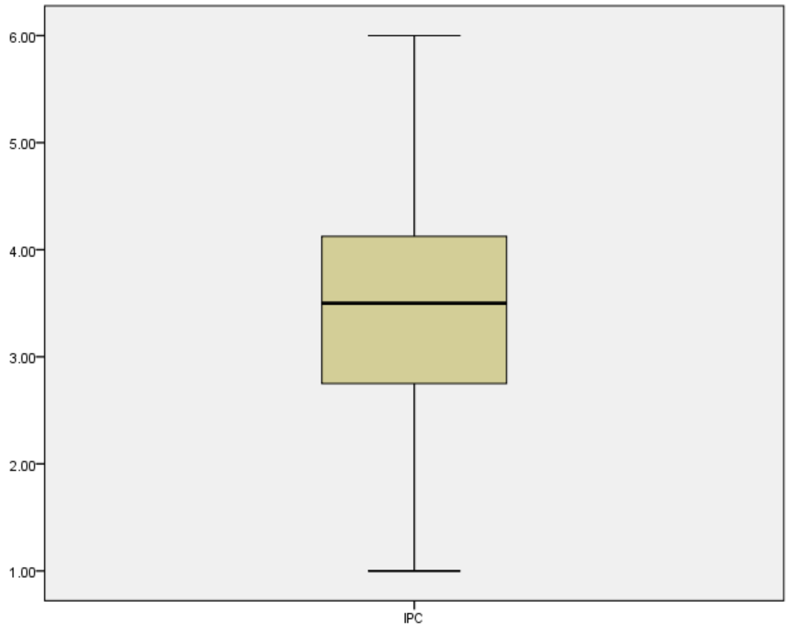

Figure 10: Box plot for the Perceived Competency Index

The mean competency index is 3.4 which corresponds to an overall position between 'fairly well' and 'quite well' regarding competencies required to administer PROM effectively. The distribution of scores on the scale is quite even as seen in the boxplot. Mean scores and standard deviations of individual items on the Index are presented in Table 24.

Table 24: Mean and SD scores for individual items on the Perceived Competency Index (N= 114)

Item	Mean	S D
Introduce outcomes	3.7	1.46
Work collaboratively to choose appropriate measures	3.8	1.38
Administer PROM at correct times	3.1	1.58
Judge when to use, and not to use, measures	4.0	1.24
Score and interpret results	3.6	1.49
Integrate results into sessions	3.4	1.46
Use results to identify need to change approach	3.2	1.49
Present results in supervision	2.8	1.54

The percentage frequencies of responses for individual items on Perceived Competency Index are presented in Appendix E

4.3.4 Personality variables

To calculate the five personality subscales as found in Big Five Inventory-10 (BFI-10) (Rammstedt & John, 2007), participants' total score for each subscale was divided by two, as two questionnaire items were related to each personality trait. This allowed for a personality trait score which corresponded with the questionnaires Likert scale, ranging seven points from 'strongly disagree' to 'strongly agree'. Descriptive statistics for the BFI-10 are presented in Table 25 and the distribution for each item can be seen in the boxplots in Figure 11.

Table 25: Descriptive statistics for responses to the Big Five personality questionnaire (N = 111)

Personality trait	Min	Max	Mean	S D
Openness	2.5	7	4.8	1.1
Extraversion	2	7	4.9	1.2
Agreeableness	2	7	5.2	1.1
Conscientiousness	3	7	5.8	.9
Neuroticism	1	6.5	3.3	1.2

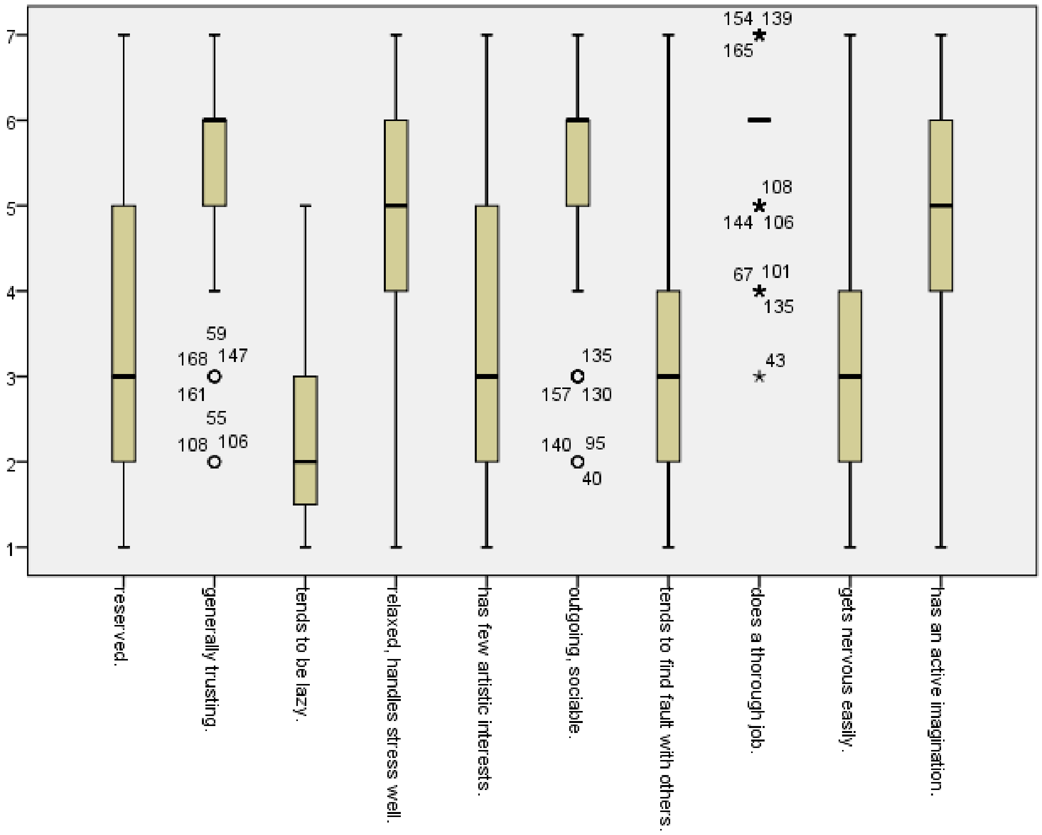

Figure 11: Boxplots for the Big Five Personality subscales

Results showed that *conscientiousness* and *agreeableness,* with means of 5.8 and 5.2 respectively, are the strongest personality traits prevalent in this sample and equate to positions between ‘slightly agree’ and ‘agree’ on the Likert scale.

4.4 Exploration of relationships between the main indices

4.4.1 Exploring the relationships between attitudes, perceived competency and PROM usage

In order to explore the relationships between the Attitude Index, Perceived Competency Index and PROM Usage Indices (both clinical and evaluative), a series of Pearson product-moment correlations were carried out. Preliminary analyses were performed to ensure no violation of the assumptions of normality and linearity. Table 26 outlines the results of these analyses.

Table 26: Correlations between attitudes, competency and usage of PROM (N = 114)

	Attitude to PROM	Competency	Clinical use	Evaluative use
Attitude to PROM	1			
Competency	.27**	1		
Clinical use	.48**	.46**	1	
Evaluative use	.35**	.42**	.40**	1

** Correlation is significant at the 0.01 level (2-tailed)

Results showed that positive relationships exist between Attitudes and PROM Usage, both at clinical and evaluative levels; r= .48, p < .01 and r= .35, p < .01 respectively, representing a strong relationship between attitudes and clinical use; and a moderate strength relationship between attitudes and evaluative use, in accordance with Cohen's guidelines (1988). Likewise, a moderate positive relationship was found between attitudes and perceived competence, r= .27, p < .01. Moderate positive relationships were also present between competency and use of PROM, both at a clinical and evaluative level (r= .46, p< .01 and r=.42, p < .01 respectively).

4.4.2 Exploring relationships between attitudes, perceived competency, usage and personality

In order to explore the impact that personality variables have on the main study indices, another series of Pearson product-moment correlations were carried out. Preliminary analyses were performed to ensure no violation of the assumptions of normality and linearity. Table 27 below outlines the strength of the relationships across each variable.

Table 27: Correlations between attitudes, competency, PROM usage and personality variables

	Attitudes	Competence	Clinical Usage	Evaluative Usage
Openness	.11	.11	.21*	.19*
Conscientiousness	.01	.22*	-.04	-.05
Extraversion	.18	.11	-.01	.16
Agreeableness	-.03	.02	.03	-.04
Neuroticism	.09	-.15	.09	.13

*Correlation is significant at the 0.05 level

Results demonstrated small positive relationships between openness and PROM usage, both at clinical and evaluative levels; r= .21, n = 111, p < .05 and r= .19, n = 111, p < .05 respectively. Likewise, a small positive relationship was found between conscientiousness and perceived competence, r= .22, n = 111, p < .05.

4.4.3 Exploring relationships between general attitudes, attitudes to feedback, perceived competency and PROM usage

In order to investigate whether the attitudes to feedback subscale demonstrated weaker or stronger relationships to the main study indices than the main attitudes scale, a final series of Pearson product-moment correlations were carried out. Table 28 outlines the results of these analyses.

Table 28: Correlations between attitudes, attitude to feedback, competency and PROM usage (N = 119)

	Attitudes	Competence	Clinical Usage	Evaluative Usage
Attitude to Feedback	.84*	.29*	.53*	.34*
Attitude		.27*	.48*	.35*

* Correlation is significant at the 0.01 level

Interestingly, results demonstrated that the Attitudes to Feedback subscale had a slightly stronger positive relationships to clinical use of PROM, r = .53, p < .01 than the main Attitudes Index, r = .48, p < .01. The strength of relationships between the other indices are virtually the same for both general attitudes and attitudes to feedback.

4.5 Group differences on the main indices used in the analysis

As the sample were from a diverse range of services and Trusts, it was deemed appropriate to compare groups of participants across a number of variables. The purpose of this section of the analysis was to explore any individual, professional or contextual variables that might have had an impact on the main indices of the research.

4.5.1 Individual differences among participants

As well as the personality factors outlined above, other variables which could be categorized as individual differences included the participant's age and the length of time that they had been using PROM.

4.5.1.1 Exploring the impact of participant's age on the main indices

To investigate the impact that a participant's age had on the main indices, age groups were formed in an effort to make the variable easier to analyse, thereby making them into an ordinal variable. Participants were allocated into groups with a range of ten years and a spearman rho correlation was used to compare the groups. Table 29 demonstrates the relationships across all the relevant variables, of which no significant ones exist.

Table 29: Relationship between participant's age and main study indices

	Attitude	Competency	Clinical use	Evaluative use
Participant's age	.02	-.07	-.03	-.2

4.5.1.2 Exploring the relationship between the length of time of PROM use and attitudes, competency and usage

To explore the impact that time had on the main study variables (*Q 16- How long have you been using Patient Reported Outcome Measures?*), another series of correlations were carried out. Again, length of time was grouped into periods such as 6-12 months, 1-2 years etc, resulting in an ordinal variable. Spearman rho correlations were used to uncover any existing relationships. Table 30 demonstrates the results of the analyses

Table 30: Correlations between attitudes, competency, usage and length of time PROM had been used

	Attitudes	Competence	Clinical Usage	Evaluative Usage
Length of time individual using PROM	.02	.23*	.16	.21*

*Correlation is significant at the 0.05 level

Perhaps unsurprisingly, results demonstrated a significant positive relationship between perceived competency and the length of time the individual has used PROM, r = .23, n = 97, p < .05. Likewise, a small positive relationship was shown to exist between evaluative usage of PROM and the length of time the individual is using them, r = .21, n = 97, p < .05.

4.5.2 Professional differences

Regarding one's professional background, differences between professions, the length of time in a professional role, caseload size, therapeutic orientation and whether they had received PROM related training were explored across the main study indices

4.5.2.1 Comparing different professions according to attitudes, competency and usage of PROM

To investigate whether a participant's profession had a bearing on any of the study's main indices, a series of one way between groups analysis of variance tests were carried out. Table 31 outlines the group means according to main indices.

Table 31: Group means for attitudes, competency and usage according to profession (N=114)

Profession	Attitudes	Competency	Clinical use	Evaluative use
Counsellor	4.8	3.9	2.7*	2.0
Psychotherapist	3.9	3.3	1.9	1.8
Social worker	4.1	3.3	2.2	1.7
Psychologist	4.1	3.8	2.3	1.9
Psychiatrist	4.3	3.1	1.8*	1.7
Mental health nurse	3.6	2.8	2.1	1.7
Mental health practitioner	4.3	3.4	2.4	2.1

* The mean difference is significant at the 0.05 level

Results showed that the only variable in which there was a significant difference at the $p < 0.5$ level according to profession was that of clinical use of PROM. Post hoc comparisons on this variable indicated that the mean score for counselors (M = 2.7, SD = .66) was significantly different from that of psychiatrists (M = 1.8, SD = .79). The effect size, calculated using eta squared, was 0.13 which represented a large effect according to Cohen (1988). No other significant differences were observed between professions across any of the variables in question.

4.5.2.2 Exploring relationships between length of time in professional role and participant's caseload in relation to main study indices

Two further questions were explored using non-parametric correlations, to ascertain their impact on attitudes, competency and use of PROM. These included participant's caseloads (Q23; *What is your current caseload?),* and length of time in profession (Q6; *How long have you been working in the primary professional role indicated above?).* Both continuous variables were collapsed into groups, with caseloads divided up into groups of 10 clients and length of time in professional role divided into groups of five years. Spearman rho correlations were used to search for any significant relationships, outlined in Table 32.

Table 32: Relationships between participant's caseload, age and length of time in professional role, with main study variables

	Attitude	Competency	Clinical use	Evaluative use
Caseload	-.2*	-.1	-0.1	-.1
Length of time in professional role	-.04	.1	0.01	-.18

* Correlation is significant at the .05 level (2-tailed)

Results showed that a small but significant negative relationship existed between attitude to PROM and client caseload.

4.5.2.3 Exploring relationships between therapeutic preferences and the main study indices

To investigate for the presence of any relationships between therapeutic preferences and main indices, another series of correlations were carried out. In Q7 (*To what extent do you use the following therapy approaches?*), therapeutic practices were classified into never, occasionally, sometimes, often and always. Spearman rho correlations were once again utilised for this set of group comparisons. Table 33 outlines the strength of relationships across all the relevant variables.

Table 33: Relationships between therapeutic orientation and main indices

Therapeutic model	Attitude	Competency	Clinical use	Evaluative use
CBT	.07	.1	.21*	.14
Humanistic	.21*	.22*	.25**	.25**
Systemic	-.1	.1	-.05	-.03
Psychodynamic	-.3*	-.07	-.19*	-.02

* Correlation is significant at the .05 level (2-tailed)

** Correlation is significant at the .01 level (2-tailed)

Results showed that a small but significant positive relationship existed between CBT practices and clinical use of PROM, r = .21, n = 119, p < .05. A humanistic therapeutic approach was positively associated with all of the main indices including attitudes, r = .21, n = 114, p < .05; competency, r = .22, n = 114, p < .05; clinical use, r = .25, n = 114, p < .01 and evaluative use, r = .25, n = 114, p < .01 all of which represent quite small relationships. On the other hand, psychodynamic therapies were negatively associated with both attitudes, r = -.3, n = 114, p < .05 and clinical use, r = -.19, n = 114, p < .05, both of which represent small effect sizes.

4.5.2.4 Investigating differences based on whether participants have received PROM training or not

To investigate whether training on PROM had an impact on the main indices (Q15 *Have you received any training in how to use Patient Reported Outcome Measures?),* a series of independent samples t-tests were carried out with training as the independent variable and attitudes, competency and usage as the dependent variables. Group means and standard deviations can be found in Table 34.

Table 34: Group means and standard deviations for attitudes, competency and PROM usage according to whether PROM training had been received

		Attitudes	Competency	Clinical use	Evaluative use
Training	N	61	61	61	61
	Mean	4.27	3.66	2.44	1.97
	S D	1.21	1.1	.75	.65
No Training	N	53	53	53	53
	Mean	4.16	3.16	2.02	1.81
	S D	1.03	1.12	.68	.61
Effect size		.1	.45*	.61*	.27

* p < .05

The results showed that there were no significant differences in attitudes between those who had received training for PROM and those who had not (t (112) = 0.55, p = .59, d = .1). Moderate differences were observed between the two groups on perceived competency (t (114) = 2.41, p < .05, d = .45) as one would expect, and also for clinical usage of the measures (t (114) = 3.16, p < .05, d = .61), but not for evaluative usage of the measures (t (114) = 1.3, p = .19, d = .27).

4.5.2.5 Group differences based on whether CYP-IAPT training had been completed

To investigate whether the completion of CYP-IAPT training had an impact on the main indices, a series of independent samples t-tests were carried out. The ‘training not completed’ group include those who are currently in CYP-IAPT training but not yet finished, as well as those who have not received this training. Group means and standard deviations can be found in Table 35.

Table 35: Group means and standard deviations for attitudes, competency and usage according to whether CYP-IAPT training had been completed

		Attitudes	Competency	Clinical use	Evaluative use
CYP-IAPT	N	18	18	18	18
training	Mean	4.58	3.89	2.6	2.1
completed	S D	1.14	1.18	.67	.6
Training	N	96	92	92	92
not	Mean	4.13	3.34	2.16	1.86
completed	S D	1.13	1.13	.75	.64
Effect size		.40	.48	.62*	.39

* p < .05

The results showed that there was no significant difference in attitudes between those who had received CYP-IAPT training and those who had not (t (112) = 1.57, p = .12, d = .40). There was however, a significant difference in clinical usage between the two groups (t (108) = 2.41, p < .05, d = .62), representing a moderate effect size. Interestingly, no difference was observed between the two groups regarding competency (t (108) = 1.85, p = .07, d = .48) or evaluative practice (t (108) = 1.4, p = .16, d = .39)

4.5.3 Service related differences

A series of service related questions were asked to further understand the context of participants' daily clinical practice and how their PROM use might be influenced by this. These questions included which Trust that respondents worked in, whether the service was a member of a routine outcome monitoring initiative such as CORC and CYP-IAPT, and the length of time their service had been using PROM

4.5.3.1 Comparing attitudes, competency and usage of PROM across participating Trusts

In order to investigate whether being employed within different Trusts had a bearing on any of the study's main variables, a series of one way between groups analysis of variance tests were carried out. Group means for the main variables across participating Trusts are outlined in Table 36.

Table 36: Group means for attitudes, competency and usage across participating Trusts

Trust	Attitudes	Competency	Clinical use	Evaluative use
Trust A	4.8*	3.6	2.5	2.1
Trust B	3.5*	3.4	2.2	1.5*
Trust C	4.3*	3.0	2.0	1.7
Trust D	4.2*	3.5	1.9*	2.0
Trust E	4.7*	3.6	2.7*	2.2*
Trust F	3.1*	3.3	1.9	1.6*

Results demonstrated significant differences among multiple variables including attitudes, with significant mean differences existing between Trust A and both Trust B (1.4) and Trust F (1.7); between Trust C and Trust F (1.1); between Trust E and both Trust B (1.2) and Trust F (1.5); Trust D and Trust F (1.1) all of which are significant at the .05 level. Interestingly these manifold differences across attitudes were not replicated in the area of perceived competency, as there were no significant differences between Trusts on this variable. Regarding clinical usage, there were only two Trusts which differed significantly, as Trust D and Trust E had a mean difference of .78, representing a significant difference at the .05 level. Finally, with regards to evaluative use of measures, significant mean differences were found between Trust E and both Trust B (0.7) and Trust F (0.6), again significant at the 0.05 level.

4.5.3.2 Group differences based on whether participant's services are members of the CAMHS Outcome Research Consortium

To investigate whether there were significant differences across the main indices between employees who worked in CORC services and those who did not, a series of independent samples t-tests were carried out with membership to CORC as the independent variable and attitudes, competency and PROM usage as the dependent variables. Group means and standard deviations are outlined in Table 37.

Table 37: Group means and standard deviations for attitudes, competency and usage according to whether the service is a member of CORC

		Attitudes	Competency	Clinical use	Evaluative use
In CORC	N	74	72	72	72
	Mean	4.18	3.48	2.3	1.89
	S D	1.16	1.09	.74	.58
Not in CORC	N	44	41	41	41
	Mean	4.14	3.3	2.15	1.9
	S D	1.18	1.2	.76	.73
Effect size		.03	.16	.20	0.0

* p < .05

Results showed that there were no significant differences in attitudes between those services which were members of CORC and those who were not (t (116) = 0.16, p = .87, d = .03); nor in the area of perceived competency (t (113) = 0.71, p = .48, d = .16); nor individual usage of PROM (t (113) = 0.94, p = .35, d = .20), or group (evaluative) usage of the measures (t (113) = -0.07, p = .94, d = 0.0.

4.5.3.3 Group differences based on whether participant's services are part of CYP-IAPT initiative

To investigate whether there were significant differences across the main indices between employees who worked in CYP-IAPT services and those who did not, a series of independent samples t-tests were carried out with membership to CYP-IAPT as the independent variable and attitudes, competency and PROM usage as the dependent variables. Group means and standard deviations can be found in Table 38.

Table 38: Group means and standard deviations for attitudes, competency and usage according to whether the service is part of CYP-IAPT

		Attitudes	Competency	Clinical use	Evaluative use
CYP-IAPT	N	56	53	53	53
	Mean	4.12	3.54	2.4	1.86
	S D	1.29	1.07	.79	.6
Not CYP-IAPT	N	62	60	60	60
	Mean	4.2	3.3	2.15	1.93
	S D	1.03	1.2	.7	.67
Effect size		.07	.21	.33	.11

* p < .05

Results showed that there were no significant differences in attitudes between those services which were members of CYP-IAPT and those who were not (t (116) = -0.36, p = .72, d = .07); nor in perceived competency (t (113) = 1.09, p = .27, d = .21); nor clinical usage of PROM (t (113) = 1.3, p = .19, d = .33), or evaluative usage of the measures (t (113) = -0.55, p = .58, d = .11).

4.5.3.4 Exploring the relationship between the length of time that PROM were used in the team and main indices

To explore the impact of the amount of time that the team had been using PROM on the main indices as per Q17 (*How long have your team been using Patient Reported Outcome Measures?*), a series of correlations were carried out. The length of time was grouped into periods such as 6-12 months, 1-2 years etc and spearman rho correlations were used to ascertain the strengths of relationships. Table 39 outlines the results of the analyses.

Table 39: Correlations between attitudes, competency, usage and length of time PROM had been used at the team level

	Attitudes	Competence	Clinical Usage	Evaluative Usage
Length of time team using PROM	.04	.17	.06	.29**

** Correlation is significant at the 0.01 level

A moderate positive relationship was noticed between evaluative usage of PROM and the length of time that the participant's team had been using PROM, r = .29, n = 83, p < .01.

4.6 Prediction models: multiple regression analyses

As results showed the existence of significant positive relationships between all the main study indices, it was appropriate to develop a prediction model for the usage of PROM as outlined by the further aim of the study in the introduction. In doing so, two multiple regression analyses were carried out to see how much variance that attitudes and perceived competency can account for in relation to clinical and evaluative use of PROM.

4.6.1 Predicting the clinical use of PROM

The first multiple regression analysis sought to identify how much of a contribution that attitudes to PROM and perceived competency made in predicting clinical use of the measures. The assumptions of linearity, independence of errors and normality of residuals were met. These variables statistically significantly predicted clinical use of PROM, F (2, 111) = 29.42, p < .0005**,** adj. R squared = .34. Both variables added statistically significantly to the prediction, p < .05, with attitudes making the slightly larger contribution of the two. Regression coefficients and standard errors can be found in Table 40.

Table 40: Summary of multiple regression analysis for variables predicting clinical PROM use (N = 113)

	B	*S E (B)*	*β*	*t*
Attitude	.25	.05	.38	4.8*
Competency	.24	.05	.36	4.5*

* p < 0.05

4.6.2 Predicting the evaluative use of PROM

The second multiple regression analysis sought to identify how much of a contribution that attitudes and perceived competency made in predicting the evaluative use of the measures. The assumptions of linearity, independence of errors and normality of residuals were met. These variables statistically significantly predicted evaluative use of PROM, F (2, 111) = 17.16, p < .0005**,** adj. R squared = .22. Both variables added statistically significantly to the prediction, p < .05, but it was perceived competency in this analysis which made the larger contribution of the two. Regression coefficients and standard errors can be found Table 41.

Table 41: Summary of multiple regression analysis for variables predicting evaluative PROM use (N = 113)

	B	*S E (B)*	*β*	*t*
Attitude	.14	.05	.26	3.0*
Competency	.19	.05	.35	4.0*

* p < 0.05

Summary table of key results

Overall level of endorsement of PROM	**Just above the *neither agree nor disagree* point on the Likert scale regarding whether PROM are useful and appropriate**
Overall perceived level of competence around PROM use	Between *fairly* competent and *quite* competent
Number of staff who reported collecting PROM data at assessment and follow up	67% reported collecting data at these key points for *most* or *all* of their clients
Percentage of sample who *use* or *have ever used* the following CORC 'core suite' of PROM	SDQ- 51% HoNOSCA- 23% CGAS- 33% GBO- 30%
Ways that the data collected from PROM were used by sample	Clinical use: Just above the *sometimes* point on the Likert scale Evaluative use: *Sometimes*
Percentage of staff who have received PROM training of some sort	54%
Strength of relationships between main indices- attitudes, perceived competency, clinical use and evaluative use	All moderate strength relationships
Percentage of variance that attitudes and perceived competency account for in respective prediction models	Clinical PROM usage: 34% Evaluative PROM usage: 22%

5. Discussion

5.1 Overview

This study had various aims, which are explored in turn throughout the discussion. The first objective was to explore the three main indices, namely how staff felt about routine outcome measurement practices; whether they used them or not and if so, how they used the information gathered from PROM; and finally how competent they felt using them. In line with the fifth and sixth questions outlined in the aims section of the study, comparisons between different groups within the sample were also made in the hope that that the study could offer insight into the different circumstances that make PROM more valuable, easier to use and useful for staff. Thereafter, the fourth question set out in the aims section is addressed in discussing the relationships between attitudes, perceived competence and PROM usage. Because of strong emergent results, it was decided that a prediction model would be developed to see how well attitudes and competency could predict clinical and evaluative PROM behaviours. In doing so, parallels between outcome monitoring practices and other clinical behaviours are discussed, thereby linking the research field to existing psychological theory and frameworks. The ensuing clinical relevance and implications are discussed, particularly in relation to the Contextual Feedback Intervention Theory and training which would improve attitudes. Strengths and limitations of the study as well as possible directions for further research are also outlined.

5.2 Participants

Complete responses were collected from 112 clinicians, 106 of whom belonged to 6 mental health Trusts. This represents a respectable final figure compared to similar research carried out recently in the UK (Batty et al., 2012; Hall et al., 2013; Norman et al., 2013), but does not have as high a response rate as other survey research in the UK, with 24% completing this survey as compared to Batty et al. (42%), Norman et al. (90%) and Johnson and Gowers (36%). However, a relatively equal number of respondents took part from each of the participating Trusts, meaning that data would not be unduly influenced by the particular set of practices or organisational culture of one Trust or another. Furthermore, representative numbers from each profession participated in making up a roughly proportionate mix of different professionals as might be found in child and adolescent mental health services.

5.3 Attitudes to PROM

In line with the first question to be answered in the research, participants' attitudes to PROM are discussed overall and then attitudes of different subsets of respondents are investigated more closely. Thereafter, attitudes to the provision of feedback to clients are discussed.

Questionnaire development

Whereas the original Outcome Measurement Questionnaire (Willis, Deane & Coombs, 2009) was found to have good internal consistency, it was felt that various items included in it represented constructs other than attitudes, such as self efficacy, intentionality and attitudes to feedback. Results from a principal component analysis and test of internal consistency found that the shortened 6 item measure had better content validity and internal consistency than the original measure. The eight items of the 'attitudes to feedback' subscale of the original questionnaire were kept and used to good effect in the analysis.

Distribution of scores

Results show that 50% of respondent's mean scores on the attitudes scale fell between 3.3 and 5.1 (see Figure 8) while the mean and median were both 4.2, which corresponds with the position just above the 'neither agree nor disagree' position on the questionnaire Likert scale. As such, there was a very small endorsement of outcome measurement practices overall, but the sample was virtually split down the middle in terms of those who endorsed them and those who did not.

Previous research on attitudes to routine outcome monitoring has not been univocal in the UK. The findings from this survey parallel a recent study carried out by Norman et al. (2013) who explored 50 London based CAMHS practitioners' attitudes to PROM using semi structured interviews, and found similarly mixed views across the two services, with the number of perceived advantages of ROM (55%) slightly outweighing the number of perceived disadvantages (45%). However, compared to Batty et al.'s (2012) recent survey in the Midlands, attitudes in the present study were found to be significantly less favourable.

Commentary on individual items

A closer look at the results of the 6 item Attitudes Index suggest that respondents had concerns regarding the *validity* of outcome measures, as they agreed slightly that the measures 'don't capture what's happening for my patients' (Table 15). This concern corresponds with the 'scientific merit' barrier to PROM use, found in previous research (Table 5), which calls into question the psychometric properties of outcome measures. Results also found that there was a bit of an issue regarding the perceived *feasibility* of PROM, as the sample marginally agreed that 'outcome measures take too long' (Table 15), which is also often cited as a barrier to use in the UK and abroad (Table 5). Despite these perceived limitations, the sample very slightly agreed overall with the statement that the measures would 'help them to make better treatment decisions with patients' and similarly that they found the measures 'useful for working with patients' (Table 15), both of which lend support to the clinical *utility* of the measures. It might be said that the former also endorses confidence in the *reliability* of the measures. Regarding the *patient-centeredness* and *acceptability* of the measures, participants neither agreed nor disagreed overall with the suggestion that 'outcome measures take the human aspect out of my work' (Table 15), which corresponds with the *depersonalization* of patients that is often cited as a barrier (Table 5). The single most positive endorsement observed on the Attitude Index is that the item 'I see the value in changing my clinical practice to support the use of the service user self-assessment measures' holds the highest mean score on the questionnaire. This is the most action focused and future oriented item on it and clinicians 'slightly agree' that there is value overall to changing their practice. All in all, the items on the Attitudes Index reflected an ambivalence among the sample regarding all aspects of routine outcome monitoring practices.

Comparisons between groups

In line with the fifth and sixth questions addressed in the research, investigations were carried out into existing differences between groups of respondents to see whether attitudes varied according to a variety of individual, professional and contextual factors:

Individual differences

In relation to the individual characteristics of respondents, differences in attitudes were explored according to participant's age, the length of time they'd been using PROM and personality factors. Interestingly, none of these variables was shown to impact significantly on attitudes among the sample.

Professional differences

Regarding one's professional background, differences in attitudes were explored between the different professions, the length of time in aforementioned professional role, therapeutic orientation, caseload size and whether they had received PROM training or not. Perhaps unsurprisingly, results showed that those who practiced psychodynamic therapeutic approaches had less favourable attitudes to PROM. This falls in line with traditional views of psychodynamic thinking which are more insight oriented and less focused on symptoms of psychological distress, behaviours or overt constructs. On the other hand, participants who practiced humanistic therapy approaches showed significantly more positive attitudes to PROM than other groups. This finding runs somewhat counter to the previous one as the humanistic school of therapies, which includes person centred therapy, gestalt therapy, existential therapy and transpersonal therapy could also be seen as an insight oriented approach, much like psychodynamic thinking. This finding ought to be treated with caution however, as most participants who practiced this model of therapy came from the same Trust - Trust A, meaning any differences found between this group and others might be related to the organisational culture towards PROM in that Trust rather than stemming from therapeutic orientation.

A small but significant negative relationship was also found between attitudes and caseload. A plausible explanation for this finding might be that clinicians saw routine outcome monitoring practices as increasingly unfeasible or impractical as their caseloads expand, due to the associated administrative workload, time burden and potential IT constraints, all of which are well known barriers to use (Table 5).

Regarding PROM training, responses around what specific training had been received ranged from informal arrangements such as in-house CPD events or clinical supervision, to more formal and organised ones such as workshops or measure specific training.

Surprisingly, whether participants had received training or not did not have a significant impact on their attitudes to PROM, and a closer look at the effect size (*d* = .1) suggests any difference between groups is negligible. Furthermore, comparisons between those who had completed CYP-IAPT training and those who had not also showed that it had no bearing on attitudes.

Past research in relation to whether training improves attitudes to PROM specifically has not been univocal, as Willis, Deane and Coombs (2009) found that training did improve attitudes, whereas Trauer Callaly and Hermann (2009) did not. Interestingly, a closer look at the training packages provided in the two studies highlighted different emphases in the training, with the former deliberately focusing on improving attitudes, whereas the latter did not.

Further findings related to one's professional role, as well as the length of time in that role were found to be non-significant.

Service related differences

A series of service related questions were asked to further understand the organisational context of the participants' environment and how they might be influenced by these factors, including the Trust that someone worked in, the length of time their service had been using PROM and whether the service was a member of a routine outcome monitoring initiative such as CORC or CYP-IAPT. Results showed that attitudes between Trusts fluctuated significantly, with services in Trust B and Trust F demonstrating significantly lower attitude scores than various other Trusts. It was not intended in this survey to fully understand the wider contextual factors in each of the Trusts and how they might be impacting on attitudes, but this finding suggests that further research is needed in the area. One issue to consider when exploring clinicians' receptivity to routine outcome monitoring practices at this time, is that the present study coincided with much restructuring of the NHS as a consequence of the economic downturn. It may be that getting used to new service models and team governance has left managers and clinicians with little time, resources or morale to promote and adapt to new ways of working.

In an attempt to understand more about what might contribute to the differences among Trusts as well as within them, investigations into whether differences in attitudes existed between employees of services who were members of CORC or CYP-IAPT and those who were not. This was found not to be the case, which suggests that nominal membership to service initiatives does not significantly impact the attitudes of those working within them. This is in spite of the decision by the management to invest and participate in an organised effort to collect outcome data.

Finally, the length of time that the participant's team had been using PROM was not found to have a significant bearing on an individual's attitudes.

5.3.1 Attitudes to Feedback

A particularly relevant finding of this research pertains to the results from the Attitudes to Feedback subscale which was embedded in the original Outcome Measurement Questionnaire (Willis, Deane & Coombs, 2009), with data showing that attitudes to feedback had a noticeably stronger correlation with clinical use of the measures than general attitudes. Correlations with competency and evaluative use were roughly the same for both the Attitude Index and Attitudes to Feedback scale however. This finding resonates with previous research on the provision of feedback, which is purported to improve various aspects of the therapeutic enterprise (Allen et al., 2003), which in turn leads to improved outcomes (Lambert, 2001; 2005). As clinicians begin to see these benefits for themselves, it is of little surprise that providing feedback to clients would be associated with increased clinical use. This finding has implications for training which will be discussed later.

5.4 Usage of Patient Reported Outcome Measures

In line with the second question asked in the aims section, participants' PROM usage is discussed overall and then PROM usage among different subsets of respondents are investigated more closely.

5.4.1 Collection of PROM data at assessment and follow up

An investigation into the collection of data that is suitable to measures *outcomes* (which requires information be gathered at least two points in time), reveals that 35% of participants claim to administer outcome measure(s) at assessment and then again at discharge (or six months later) with *all* of their patients. A further 50% say that they do this with either *a few* or with *most* of their patients and 15% state that they *never* do this. CORC and CYP-IAPT have suggested that outcome data must be collected for at least 90% of patients before the results can be confidently said to represent the work done in the service (www.CORC.uk.net), which suggests that services are a long way off this target. With regards to the Benefits Pyramid outlined in Figure 1, there is also little chance that services can reap the benefits outlined in level 2- *Profiling services and assessing needs at Trust level* and *Enabling comparisons of needs across teams within a Trust a*s the amount of data collected would not lead to sufficiently reliable results.

Comparisons to past UK research with respect to the collection of outcome data are difficult to conduct, as the methodologies of the various studies differ significantly. In 2005, Johnston and Gowers collected information from clinical leads in 186 CAMH services and found that nearly 80% of services *reported* collecting measures on at least two points in time over the course of treatment. Significant methodological limitations of this research have been outlined in the introduction. In Batty et al. (2012) and Hall et al.'s (2013) audit cycle which involved case note audits in the same Trust s over a two year period, the 2012 audit found that only 30% of case-notes included at least one repeated PROM, whereas in the re-audit 60% of case-notes had at least one repeated measure. The present research utilises a less reliable approach than the audit cycle, but more rigorous than the survey of service leads. 67% of clinicians in the current study suggesting they use outcome measures at assessment and discharge at least *most* of the time and a further 18% do it with a few of their patients. Although using separate study designs, a superficial look at the figures suggest that findings from the 2012/2013 audit cycle would roughly approximate those in the present study. All three services involved in the audit cycle were members of CORC, which suggests they would be more cognisant of PROM overall than the current sample.

5.4.2 Use of outcome monitoring data in day to day practice

Questionnaire development

To the best of the authors knowledge, no measure existed which satisfied the needs of this survey in relation to PROM usage in the UK. Results from the various statistical investigations carried out showed that whereas the PCA found that items in the clinical use subscale had good construct validity, the evaluative use subscale did not. A look at the component loadings in the PCA suggest that the item ‘my team uses outcomes data for evaluation’ is lower than the others and represents a slight departure from the other items as it asks about the culture of the organisation rather than the clinician’s behaviour. As such, it did not measure clinician’s behaviour as the questionnaire intended and represented a weakness in the measure. Internal consistency of the clinical use items of the measure was shown to be very good, whereas the evaluative use ones items were not very good.

Distribution of scores

Results from the *clinical* use component of the usage questionnaire showed that 50% of respondents mean scores fell between 1.75 and 2.75, while the median was 2.2 (see Figure 11). A mean score of 2 corresponded to a Likert scale position of ‘sometimes’ carrying out the clinical activities listed in the questionnaire. Results from the *evaluative* use component of the usage questionnaire showed that 50% of respondents mean scores fell between 1.3 and 2.3, while the median was 1.9 (Figure 9). Once again this corresponds to a Likert scale position of ‘sometimes’ carrying out the evaluative activities listed on the questionnaire, with a score of 1 meaning that a participant ‘never’ carried out the activity. Results from Table 21 found that there was small to moderate sized relationship between the regularity with which respondents administered PROM at assessment and follow up, and their clinical and evaluative use of the measures. This suggests that the measures are not only seen as a ‘tick box’ exercise by those who use them, but are being used to enhance clinical and evaluative practice.

Past research pertaining to what is seen as the best use of outcome measurement data is not univocal however, as similar inclinations toward clinical use over service development purposes are found in Trauer Callaly and Hermann’s (2009) study in Australia, on which they comment ‘since the primary purpose of OM is to assess consumers’ mental health status and progress, this is no bad thing.’ (p.295) However, studies by Huffman et al. (2004) in the US and Norman et al. (2013) in the UK found that participants saw data gleaned from outcome measures as more relevant for service evaluation and funding than for clinical treatment purposes.

5.4.3 Use of CORC and CYP-IAPT approved outcome measures

A look at the use of individual measures reveals that the SDQ was the only CORC ‘core suite’ measure which ‘had been used or is currently being used’ by over half of respondents, while other measures in the suite including the HoNOSCA, CGAS and GBO had not been used even once by the vast majority of participants. With regards to measures which are not in the CORC ‘core suite’, the RCADS is promoted as an important component of the CYP-IAPT suite of outcome measures and is shown to be used relatively regularly considering that the majority of participants did not work in a CYP-IAPT service. The discrepancy between those reporting to collect PROM in section 5.3.2.1 and findings from this part of the survey is likely to be explained by the fact that clinicians are actually administering PROM as regularly as they state, but just aren’t using CORC or CYP-IAPT approved ones. This is evidenced by the fact that a further 17 separate measures (see Appendix F) are listed by 25 respondents in the section where participants are asked to specify outcome measures they use which are not listed in the survey questionnaire, which is made up of CORC approved measures.

As the same *kind* of measures are required in order that data can be aggregated, thereby allowing movement to higher levels in the ‘Benefits Pyramid’ (Figure 1), this represents a further obstacle to meeting the criteria outlined in the best practice guidelines (National Institute for Mental Health in England, 2005). However, if people are already in the habit of collecting outcome data of sorts, it means they have already incorporated this practice into their clinical work and may be more able and willing to make the switch to collect CORC measures than those who don’t collect PROM at all.

The prevalence of use of CORC measures in this survey are relatively low compared to the case note audits carried out by Hall (2013), in which the HoNOSCA, CGAS and SDQ were found in well over half of all case notes audited.

5.4.4 Session by session measures

An interesting facet of the present survey was the exploration of the use of session by session measures, both in terms of how many clinicians were using them and how regularly they were being used. Results found that over half of participants (54%) stated that they used these relatively new PROM tools with at least a few of their patients. It is interesting to speculate on the reasons that clinicians are beginning to take up the use of these measures. One possible reason may stem from the fact that therapy failure rates are higher in children and adolescent services than in adult services (Whipple and Lambert, 2011), and due to session by session measures particular effectiveness with ‘not-on-track patients’, perhaps there is recognition among clinicians that these measures are a useful addition to therapy with this population. Further research into what it is that clinicians find most useful about these measures is needed.

Looking at the regularity with which the measures are being used, results show that the vast majority (89%) do not use them in every session as recommended. It is interesting to reflect on what may be gained and what might be lost with this practice. For instance, while the burden of filling questionnaires in every session is avoided, an opportunity might be missed to explore what helped to significantly reduce a patient’s symptoms from one week to the next. Clinicians may be deliberately using the measures at points when they feel they would be most beneficial in furthering their clinical understanding of the therapy case, rather than how they should be used in theory. This sporadic use of PROM does not allow for reliable use of the data gleaned from session by session measures as intended by CORC, namely to develop prediction models for expected recovery trajectories (Wolpert, 2012)

<u>Comparisons between groups</u>

Once again, in line with the fifth and sixth objectives of the study, investigations were carried out into existing differences between groups of respondents to see whether clinical and evaluative PROM related activities varied according to different individual, professional and contextual factors:

Individual differences

In relation individual differences among respondents, differences in PROM use were explored according to participant's age, the length of time they'd been using them and personality factors. Results found that the length of time that participants had used PROM was shown to have a small but significant relationship with the *evaluative* use of the measures. A plausible explanation for this is that the evaluative use of measures requires a higher degree of competence and understanding than clinical use, which comes with experience and time.

Personality factors were again explored to check if any of the main findings were mediated by clinician's personalities. Results showed that a small correlation existed between clinical and evaluative PROM use and 'openness to experience', which makes sense in light of this type of person's willingness to try a new way of working. The small significance of the results provide assurance that the findings of the survey are not the result of hidden mediators related to clinician's personalities and reflect the effects of the independent variables at hand.

Findings related to participant's age were not shown to bear on clinical or professional use of PROM.

Professional differences

Regarding professional background, differences in PROM usage were explored between different professions, the length of time in a role, therapeutic preferences, caseload size and whether participants had received PROM training or not. Results indicated that there was a significant difference in the *clinical* use of outcome measures between counsellors and psychiatrists. This finding was not very surprising considering psychiatrists generally have less time to engage in the various activities associated with outcome monitoring practices due to having very large caseloads. As mentioned above, a caveat to be considered is that all of the participants who stated that 'counselling' was their primary professional role came from the same Trust- that of Trust A. For this reason, any differences found between this group and others might be related to the organisational culture towards PROM in that Trust rather than stemming from professional background.

Some interesting results were found in relation to whether therapeutic orientation played a role in PROM use. In line with past research, the CBT category, which also included both cognitive therapies and behavioural therapies independently, was associated with increased clinical use of outcome measures. This might have been expected as these models of therapy have strong traditions of symptom tracking and quantification of psychological distress. Similarly unsurprisingly, psychodynamic therapies were shown to be negatively correlated with the clinical use of outcome monitoring practices, for reasons mentioned previously. These findings are supported by a survey of psychologists carried out by Hatfield and Ogles (2004) which found that insight oriented clinicians were less likely than behavioural or cognitive therapists to use PROM and suggested that this probably reflects differences in the way that different professions are trained in relation to outcome measurement. The authors also suggested it might reflect fundamental philosophical differences in the purpose of the assessment process in general and that these differences suggest a need for a greater variety of PROM, which are deemed suitable for a range of theoretical orientations.

Those who practiced humanistic therapies were also found to use measures significantly more for clinical as well as evaluative purposes than in other groups, but the same caveat regarding Trust A applies.

Regarding PROM training, there was a significant difference in the clinical use of PROM, but not in their evaluative use, between those who had undergone some form of training and those who had not. A similar result was found in relation to CYP-IAPT training whereby completion of training led to increased clinical use of the measures, but not in their evaluative use.

The length of time in one’s professional role or size of one’s caseload were not shown to significantly impact clinical or evaluative use of PROM.

Service related differences

A series of service related questions were asked to further understand the context of the participant's daily clinical practice and how their use of PROM might be influenced by this, including which Trust one worked in, whether the service was a member of a routine outcome monitoring initiative such as CORC or CYP-IAPT and the length of time their service had been using PROM. Comparisons across the participating services demonstrated that clinical use and evaluative use of measures did indeed vary significantly from Trust to Trust. Further research is required to explore the potential reasons for such variation.

Interestingly, employees of a service which was a member of CAMHS Outcome Research did not demonstrate increased usage of PROM in its employees, despite the management level of the service deciding that they were going to invest and participate in an organised effort to collect outcome data. Surprisingly it was also found that employees of a CYP-IAPT service did not demonstrate increased PROM use compared to employees of non CYP-IAPT services, unless they had undergone associated training.

The length of time that a service had been using PROM was shown to have a moderately significant effect on participants' evaluative use of the measures. This finding makes sense as the ability to aggregate data and making sense of it at a service level presumably comes with time and familiarity with practice.

5.5 Perceived competency around the use of Patient Reported Outcome Measures

In line with the third question in the study aims, participants' perceived competencies around PROM use are discussed overall and then differences among subsets of respondents are investigated more closely.

Questionnaire development

Before this study, to the best of the authors knowledge, no measure existed which looked at the different competencies associated with ethical and effective PROM administration. Results from the various statistical investigations carried out showed that the measure which was developed had good content validity and was reliable. A strength of the questionnaire was that it not only asked about the various skills in administering and interpreting results, but also included items related to the ethical use of PROM.

Distribution of scores

Results showed that 50% of respondent's mean scores on the competency index fell between 2.7 and 4.1 (see Figure 10) while the mean and median were both 3.5, which corresponds to a position between 'Fairly well' and 'Quite well' on the questionnaire Likert scale. As such, it appears that most people feel reasonably skilled in the use of PROM, although the presence of 2 respondents who scored the minimum value of 1 suggests that there are still some clinicians who feel altogether lost with this practice.

As this is the first piece of research which looks at individual competencies, there is no existing literature with which to directly compare the findings. However, the importance of how competent clinicians feel when choosing, introducing, selecting PROM etc in relation to whether people will take up PROM is very well established in the literature on outcome measure use. Recently in the UK, 'lack of training and awareness' was cited as the main barrier to the use of assessment and outcome measures, with 76% of participants of a survey stating that they would like to receive additional training regarding the measures (Batty, 2012). Similarly, concerns around not being able to score measures, or not being able to understand what the scores meant when they were completed have been cited as barriers in other studies here and abroad (see Table 5) Results of the present survey do not provide strong evidence that the same concerns exist in the current sample, as most feel that they are either *fairly* able or *quite* able to carry out the vast majority of administrative and interpretive tasks associated with PROM.

Commentary on individual items

The results of the survey suggest that perceived levels of competency prevalent among clinicians are quite uniform across the spectrum of competencies associated with PROM use. 'Judging when to use, and not to use, measures' was cited as the aspect of PROM that clinicians felt most competent at. This is an interesting finding in light of results outlined above and suggests that relatively low administration rates of PROM and in particular session by session measures, could partly be the consequence of client-centred decision making rather than forgetfulness or negligence. All the other skills except that of the ability to 'present outcomes data in supervision and discuss the implications of the data' were seen as being carried out between 'fairly well' and 'quite well' and are placed in the midrange of the competency spectrum. The ability to 'present outcomes data' has the lowest mean score and it is interesting to note the link between this skill and the evaluative use of measures subscale, which has an inherent social component to it.

Comparisons between groups

As before, in line with the fifth and sixth objectives of the study, investigations were made into whether competencies differed among participant across a variety of individual, professional and contextual factors:

Individual differences

Once again, differences in perceived competency were explored according to participant's age, the length of time they'd been using them and personality factors. The length of time that participants had used PROM was shown to have a small but significant relationship with perceived competence, as one might expect. These results are promising for participants who are struggling with this new way of working, as they can expect to feel more confident and competent in their PROM skills as time goes on.

An exploration of personality factors showed that 'conscientiousness' had a small but significant correlation with perceived competency, which makes sense as this trait is associated with diligence, a sense of duty and achievement. Again, the strength of the relationship suggests that findings of the survey are not the result of hidden mediators related to clinician's personalities.

Findings related to participant's age were not shown to bear on perceived competency around PROM use.

Professional differences

Regarding one's professional background, differences in perceived competency were explored between different professions, the length of time in a role, therapeutic preferences, caseload size and whether they had received training or not. As was found with the other indices, a significant relationship existed between respondents who practiced humanistic forms of therapy and perceived competency using the measures. The caveat around whether this in a true finding or related to a particular pocket of respondents applies once more and means that one cannot draw clear conclusions about the significance of this finding.

As one might expect, receiving PROM training had a moderate sized impact on a participant's perceived competency (see Table 34) Similar results were not found for those who had completed CYP-IAPT training however. Coupled with the finding from the impact of training on attitudes, results from the survey suggest that the type of training provided to clinicians is more orientated towards developing skills than providing information on the benefits of PROM use and providing a rationale for their uptake. This has implications for training which will be discussed later.

Past research has consistently demonstrated the importance of training in PROM use to instil the confidence and competence to be able to use the measures appropriately and effectively (Trauer Callaly & Hermann, 2009; Willis, Deane & Coombs, 2009; Hatfield & Ogles, 2004; Batty et al., 2012; Callaly et al., 2006)

None of the other group comparisons in relation to professional differences yielded significant results regarding respondent's perceived competency around PROM use.

Service related differences

A series of service related questions were asked in order to compare competency across Trusts that respondents worked in, the length of time their team had been using PROM and whether the service was a member of ROM initiatives such as CORC and CYP-IAPT. Interestingly, perceived competence in using the measures did not differ significantly across any of the six main Trusts who participated.

It was shown once again that employees of CORC or CYP-IAPT services did not demonstrate higher perceived competency than employees of services not involved in the initiatives.

Finally, the length of time that the service had been collecting outcome data was not shown to significantly impact perceived competency either.

5.6 Exploring the strength of relationships between the main indices

In order to address the fourth objective of the study, as well as the further aim of the research based on emerging results- namely to develop a prediction model for PROM usage- the following section will be divided into two parts. The first will investigate the relationship between competency and attitudes alone and relate the findings to cognitive dissonance theory. The second part will explore the relationships between attitudes, competency and PROM usage. Thereafter, a prediction model will be outlined and discussed in relation to existing psychological theory.

5.6.1 Relationship between perceived competency and attitudes

As one might expect, results demonstrated that a moderate strength relationship existed between attitudes and competency. A useful psychological theory to understand this finding is cognitive dissonance theory (Festinger, 1957), which suggests that individuals who hold two or more contradictory beliefs or values at the same time will experience mental distress or discomfort because individuals strive for internal consistency. Consequently, if someone held the beliefs that (i) outcome measurement practices were valuable and that (ii) they did not have the skill set to use them, the person would experience a stressful state which they would in turn try to reduce. Reduction of the stressful state could take two forms in this instance- the first would be to devalue the use of PROM, while the second would be to increase one’s skill set in using them.

Likewise, if a clinician was confident and competent in employing the full range of benefits that can be elicited from routine outcome measurement practices, it is unlikely that they would harbour poor attitudes towards them, as (i) it would lead to cognitive dissonance because they would be dismissing a skill set which they had worked hard to achieve and (ii) because competent PROM use is shown to have significant therapeutic benefits.

5.6.2 Relationships between perceived competency, attitudes and PROM usage

Results from the correlational analyses demonstrated that attitudes and competency were also significantly correlated with both clinical and evaluative PROM usage (see Table 26) Based on the strength of these correlations, it was hypothesised that attitudes and perceived competency would make a significant contribution in predicting both the clinical and evaluative use of outcome measures.

5.6.2.1 Predicting the clinical use of outcome measures

The first multiple regression model (see Table 40) found that 34% of the variance of *clinical* use of PROM was accounted for by attitudes to the measures and perceived competency, with each of them making significant contributions to the regression model. Interestingly, both variables were shown to have relatively equal importance in predicting clinical use, with attitudes (β = .38) having a fractionally bigger impact than perceived competency (β = .36). That both variables are almost equally significant in predicting clinical use of measures is relevant for the design of implementation strategies and training programs.

5.6.2.2 Predicting the evaluative use of outcome measures

The second multiple regression model (see Table 41) found that 22% of the variance of evaluative use of outcome measures was accounted for by attitudes and perceived competency. Interestingly, competency was shown to be a stronger predictor of this particular behaviour than attitudes, with beta values of .35 and .26 respectively. One viable explanation for this difference in impact between the two predictors is that the evaluative use of the measures requires a better understanding of the data gleaned from them and therefore requires a greater level of competence. A second explanation for the reduced predictive impact of individual clinician's attitudes in evaluative practice is that the activities involved in this form of practice are usually carried out at a group level or driven by clinical management requirements, neither of which are as intimately connected with an *individual's* attitude towards the activities as might be expected in clinical practice.

5.6.3 Linking findings to existing psychological theory

Taking a theory-based approach to the questions such as those outlined in the present study helps to create a replicable methodology for uncovering factors that predict clinical behaviour and informs appropriate interventions (Bonetti, 2003). There have been calls in various health professional fields to increase use of psychological frameworks (developed to understand, predict and influence behaviour) to better inform the design of interventions to modify healthcare staff's behaviour (Bonetti, 2003; Godin, 2008; Cote, 2012). These authors suggest that the problem of understanding why healthcare staff do or do not integrate research findings into their practice can be seen as similar to studying why people in general do or do not take up a certain behaviour such as health related behaviours.

The Theory of Planned Behaviour (TPB)

A useful psychological theory with which to link the findings of this research is the Theory of Planned Behaviour (Ajzen, 1991), which proposes that three independent constructs determine an intention to act. The first one is the *attitude* that one holds towards an action and pertains to how favourably or unfavourably one perceives the intended behaviour to be. The second construct is a social one called *subjective norm* and is related to the perceived social pressure that one feels to carry out the behaviour. The final antecedent of an intention to act is the *perceived behavioural control* that one has, which refers to the degree of difficulty that one expects in carrying out the behaviour. This construct is also related to past experiences with similar behaviours as well as any obstacles or impediments that one anticipates in performing the behaviour. The model posits that the more positive an attitude and subjective norm with regards to a given behaviour, and the better the perceived behavioural control, the stronger the intention will be to perform the particular behaviour (see Figure 12). Ajzen (1991) states that the degree of importance which each of the three constructs holds in relation to its prediction power can vary across different situations and behaviours. Thus, in some manifestations of the model it could be found that only perceived behavioural control has a significant impact on one’s intentionality; whereas in others, perceived behavioural control and social norms are sufficient to account for intentions; in yet others, all three constructs might contribute significantly to the model. (Ajzen, 1991)

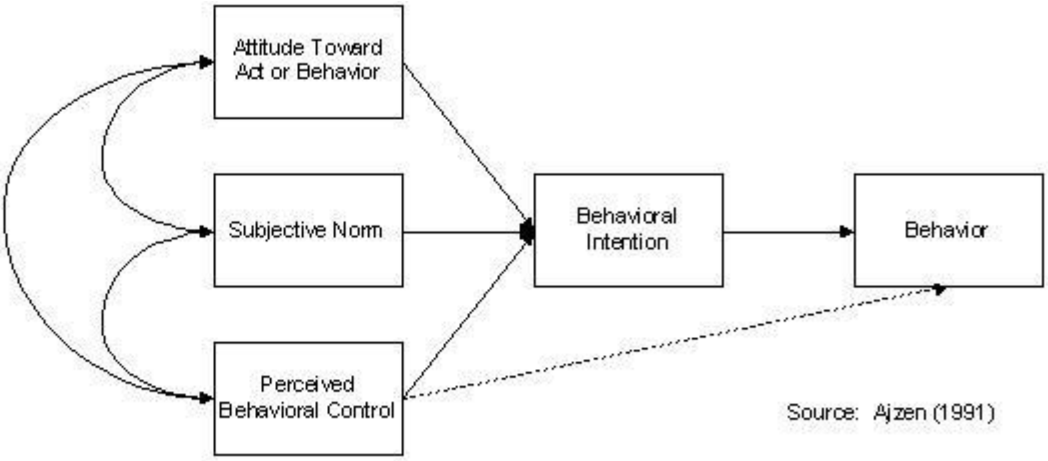

Figure 12: The Theory of Planned Behaviour model

In accounting for 34% of variance of *clinical use* of outcome measures while using just two of the three components, the TPB model compares favourably to previous research in the field. In their systematic review of the use of social cognitive theories in explaining healthcare professional's behaviour, Godin et al. (2008) found that the Theory of Reasoned Action (TRA) and its extension, the TPB, explained 31% of variance in the prediction of clinical behaviour. Furthermore, several meta-analyses of the use of the Theory of Planned Behaviour to explain health related behaviours in normal populations (Conner & Sparks, 2005; Godin & Kok, 1996), suggest that between 26% and 34% of variance of such behaviours can be explained by the model.

Results for the predictive power of the model in determining *evaluative use* of the measures for the two variables (adj. R squared = .22) was not quite as strong as with the clinical use model above. The results suggest that utilisation of the TPB model would also be useful for predicting the evaluative use of measures though, because of the importance of the missing construct in this case, namely *subjective norms*. As the evaluative use of measures is thought to have an inherent social element- often requiring team involvement or an audience of sorts- the subjective norms component of the TPB is likely to play an important role in predicting this particular behaviour and would probably boost the predictive power of the model if it was included in future research.

5.7 Clinical relevance and implications of the findings

Results from the present survey suggest that mental health staff in England are falling short of the targets set in recent key policy documents and best practice guidelines. As outlined in the introduction, the CAMHS Outcome Research Consortium suggest that services ought to be providing pre- and post-treatment outcome measure scores for at least 90% of clients so that the data gathered can be reliably used to inform local benchmarking, help pilot payment by results tariffs, improve patient satisfaction monitoring etc., of which it is clear that we are falling short. The requirement for such a large portion of outcome data stems from the fact that data analysis can only be as useful as the data which is analysed- data that is incomplete or erroneous can significantly change a service's outcomes. If a service wants to evaluate its performance, it is crucial that the data reflect the true outcomes of the service and not just a subsample of outcomes. The old saying, 'garbage in, garbage out' is nowhere truer than in the field of practice-based evidence. Furthermore, according to the National Institute for Mental Health in England's 'Outcome measures implementation: Best practice guidance' (2005), good practice at the base of the pyramid (Figure 1) provides the necessary foundations for higher level benefits such as service profiling, benchmarking or the development of normative data. Without the basic building blocks at the bottom of the pyramid, the guidelines posit that services will become lost when attempting to translate the data into meaningful service improvements at local and national levels. Results from the present study suggest that due to the numbers of staff who report collecting PROM, as well as the diverse range of PROM which are being collected (which means that the different types of data cannot be reconciled with one another), it is unlikely that the base level of requirements are being met in order that managers or commissioners can move up to level 2 of the Benefits Pyramid. In order to reach the goal whereby PROM data can inform local and national service development as well as commissioning decisions, changes need to be made at the day to day frontline level- that is, increasing the numbers of staff consistently and reliably administering and using PROM. The results from this survey and the prediction model drawn out from it suggest that this can be done primarily through improving staff attitudes towards PROM, coupled with the maintenance of the existing skill set that they appear to have.

5.7.1 Contextual Feedback Intervention Theory

To further understand the relevance of the findings of the present survey for mental health staff on a day to day level, it is useful to revisit the CFIT to see how attitudes towards, perceived competence around, and usage of PROM, all contribute to improved therapeutic interventions in clinical practice. According to the CFIT, it is the cognitive dissonance that arises from the discrepancy between actual client status (provided by feedback) and perceived client status (in the mind of the clinician), which ought to motivate clinicians to change therapeutic approach if therapy is not progressing well. However, individuals have several ways to reduce the cognitive dissonance that arises from receiving unfavourable feedback, not all of which serve the client's best interest. For example, upon seeing the results from PROM that suggest the client is not progressing as they should, a clinician may 1) attribute the failure to external and uncontrollable factors, such as resource constraints or think that the client is resisting treatment anyway (thereby reducing the clinician's motivation to change); 2) decide that outcome measure doesn't really capture what's going on for the client anyway (related to their attitudes to outcome measures); or 3) doubt their own administration or interpretation of findings and feeling they may have utilised the PROM inappropriately or incorrectly, thereby minimising the relevance of the results (related to their competency in using the measures). And so, in order that feedback can effectively play its role in the process of behavioural change in mental health and not be dismissed in the face of cognitive dissonance, clinicians must:

1. *Be able to effectively and confidently use feedback tools*

Effective use of PROM requires various competencies at multiple stages of the Contextual Feedback Intervention Theory (see Figure 2). To begin, one must know which measures are most appropriate to use and how to administer them in order to get the *feedback about actual status*, thereby setting up the conditions necessary for behaviour change; thereafter in order to gauge what the *actual status* of the clients psychological needs are, one must be able to interpret the results into meaningful information in light of the clients life; furthermore, one must be able to meaningfully incorporate the questionnaire findings into an *action plan* for the clients recovery; and finally, one should assess the effectiveness of any subsequent *action* taken to address the psychological need through the use of outcome monitoring tools, thereby starting the process again. Findings from the present study suggested that participants felt reasonably able to carry out the various steps outlined above.

2. *Believe that the feedback is valid*

If clinicians do not consider the feedback valid, credible, informative, or useful, they are less likely to use PROM and more likely to disregard it whenever it does not fit their own preferences when faced with cognitive dissonance. The CFIT suggests that the effectiveness of feedback is influenced by the level of attention that the clinician pays to the feedback and the degree to which he or she accepts the feedback as accurate (Reimer, 2003). Findings from the present survey suggest that clinicians are roughly split down the middle with regards to their general attitudes to PROM and therefore many will not get past the first steps outlined in the theory which requires that the feedback is acquired, attended to and accepted. In order that clinicians will use PROM feedback to modify their practice, rather than dismiss it if it doesn't suit their preferences, attitudes to PROM need to improve. One important way to improve attitudes to PROM is through training, discussed below.

5.7.2 Training

All in all results found that endorsement of PROM translates into corresponding behaviour, as there was a substantial correlation between attitudes and PROM usage behaviour. However, only about half of the staff surveyed had positive attitudes toward PROM, thereby presenting a significant obstacle on the path to widespread PROM usage. Furthermore, the PROM usage prediction model outlined above showed that both attitudes and perceived competency contribute equal variance to clinical use of PROM. However, results from the group comparisons found that PROM training improved clinicians' sense of competency but not their attitudes. These results suggests that any future training should focus equally on improving clinicians' attitudes to routine outcome measurement practices, by offering more information on the rationale for PROM use and promoting the benefits for clinicians' own daily practice. Previous research into such 'value-focused interventions' (Hulleman & Harackiewicz, 2009), which encouraged teachers to tailor their curriculum to help pupils make links between the material they learn in school and their own lives, has been shown to be effective by raising their interest in the material (Hulleman & Harackiewicz, 2009).

Another interesting and relevant implication of this study stems from the finding that clinician's who had more positive attitudes to providing PROM feedback to clients were more likely to use outcome measures. A likely reason for this is that clinicians practicing in this way have noticed the benefits of doing so, as outlined in previous research (Allen et al., 2003) which purports that providing feedback about their PROM results increases client motivation and participation (Allen et al., 2003), which in turn leads to a better therapeutic relationship and collaborative experience in psychotherapy (e.g. Allen et al., 2003; Hilsenroth et al., 2004). These factors in turn lead to better therapeutic outcomes (Lambert, 2001; 2005). These manifold studies on the benefits of providing feedback to clients mean that the provision of feedback ought to be something of a professional obligation. Consequently, any training program or workshop should incorporate this important element of outcome management practice.

Regarding the development of routine outcome measurement training programs which aim to improve both clinicians' attitudes as well as their attitudes to feedback, Willis, Deane and Coombs (2009) have developed such a program in Australia which could be used as a basis for similar efforts in the UK. The program utilises an interactive approach including role plays, the completion of PROM, as well as practice in the provision of feedback. Throughout the workshop outlined in their research, some time was given to focusing on the skill of offering and providing feedback from PROM to clients, but most of the workshop was used to focus on PROM in general. This involved an overview of specific measures which were commonly used and opportunities to practice these measures using case scenarios from video vignettes. Role plays were employed to further participant's understanding and confidence in administering PROM as well as providing the feedback from the assessment. Opportunities for trouble shooting and problem solving around these tasks were facilitated in group discussions following these role plays and video vignettes. The study showed that participant's attitudes to PROM, as well as attitudes to feedback had increased following the training program (Willis, Deane & Coombs, 2009).

Another aspect of PROM usage which should be incorporated into training programs in England is around the benefits of using CORC approved measures which can be aggregated at a national level. Results from the present study suggest that a range of PROM are being used which are useful for clinical work, but cannot contribute to the next steps on the Benefit Pyramid (Figure 1) as they are not standardised and therefore cannot be collated with the results of other measures. As these secondary uses of outcome measurement practices are seen as a crucial part of the enterprise (National Institute for Mental Health in England, 2005), an effort must be made to promote the benefits of doing so for clinicians as well as service managers.

The need for training is further backed by the finding that participants who worked in services that were members of CORC or CYP-IAPT were no more likely to have improved attitudes, competency or usage unless they received the associated training. This suggests that nominal membership to an initiative does not lead to attitudinal or behavioural change without training input. Glisson (2002) comments on these processes of organisational culture, suggesting that ‘it is the expectations and norms that are most visible and shared, and not necessarily the deeper assumptions and values espoused by management’ that lead to changes in the workplace.

An area of research which potentially has significant implications for the field in general and training in particular is about whether the increased benefits of PROM assisted therapy persist once therapy has finished, as doubts have been cast over this assertion by Knaup et al. (2009). Depending on the findings of future long term and follow up studies, there may be implications for clinicians who use PROM. For example, if improved outcomes are shown to be artificially generated by clients who are eager to please their therapists by boosting their PROM scores, then this will need to be anticipated and minimised by clinicians. If, on the other hand, it was shown that the benefits of PROM use could only be maintained if they were used after therapy had ended, then one solution might be to train clients in how to administer and score their own PROM. Any such findings of this area of research have important repercussions for the understanding of PROM and would in turn have implications for training.

5.7.3 Organisational and external drivers

Despite results from the present study suggesting that there were no significant differences in clinician behaviour between groups who were members of CORC or CYP-IAPT and those who were not, Hall et al. (2013) felt that organisational supports and drivers were useful in increasing the uptake of PROM in their research. In discussing the potential reasons for increased usage of PROM in their one year audit cycle, they suggested that a variety of initiatives and incentives may have contributed to the significant uptake of PROM over a short period of time. One particularly significant initiative included the involvement of a local research organisation- Collaborations for Leadership in Applied Health Research and Care – Nottinghamshire, Derbyshire, Lincolnshire (CLAHRC-NDL) who carried out a lot of work to promote the benefits of PROM use across the region. The work involved the use of local champions and the secondment of ‘Diffusion Fellows’ to disseminate and translate knowledge from research studies into clinical practice. This involved holding seminars and conferences for local services and communicating findings from the field of outcome measures into ‘simple summary bites’ for managers and clinicians. This ‘educational outreach’ strategy resonates with past research which has demonstrated the important role that local champions play in promoting PROM use (Grimshaw et al., 2001; Ford et al., 2006) and would be a useful addition to any PROM promotion strategy.

Another strategy utilised in the Midlands at the time of the audit was the introduction of a Commissioning for Quality and Innovation (CQUIN) commissioning strategy which ties financial incentives to the collection of outcome data. Davis, Taylor and Vaisey’s (1997) systematic review of the effectiveness of guideline implementation suggest that financial incentives such as CQUINs can be an effective way to effect behaviour change in professionals and may be another useful strategy for the NHS to employ.

5.7.4 Exploration of what might be causing attitudinal variations between Trusts

The question which arises from results of the present study, which shows large variations in attitudes and PROM usage between Trusts, is about the set of conditions and circumstances that are required in an organisation so that clinicians will take up a new way of working. For example, one of the Trusts in this survey- Trust B- is a CYP-IAPT pilot site, meaning that it has had a standardised and rigorous policy for PROM collection for some time now. Furthermore, the Trust has financial incentives attached to the collection of outcome data in the form of a CQUIN. Whereas these organisational drivers were thought to increase PROM use in the aforementioned audit cycle (2013), Trust B was shown to have significantly less favourable attitudes to PROM than some other Trusts (see Table 36) as well as significantly less *evaluative* PROM usage than Trust E. Further exploration is required to uncover what might be contributing to such discrepancies and develop our understanding of mediating and moderating factors in attitudes and usage of PROM. Some past research has shown that too much external pressure is likely to raise resistance (Trauer, Callaly & Hermann, 2009; Reimer, Rosof-Williams & Bickman, 2005), which may be the case in Trust B. Another likely contributing factor is level of service restructuring that the Trust was undergoing at the time of the survey, with many teams having to deal with redundancies and pay cuts as well as new clinical governance guidelines, all of which could lead to increased resistance and reduced resources to use PROM. Any further investigations into this area might want to take into account the organisational culture of the staff; the provision of supervision in PROM use; the professional expectations in the organisation; attitudes of colleagues and peers toward outcome management; as well as attitudes and opinions of clients to PROM, all of which may be influencing staff behaviour. Furthermore, practical constraints and allocation of resources to PROM are likely to vary from Trust to Trust .

5.8 Strengths and limitations

Strengths

A strength of this study included the critiquing of the existing Outcome Measurement Questionnaire (Willis, Deane & Coombs, 2009), which did not have appropriate construct validity in light of the aims of this study. As a result, a more reliable and valid attitudes to feedback questionnaire was developed based on established criteria for measuring the usefulness of outcome measures (Long & Dixon, 1996). Furthermore, a valid and reliable competency questionnaire which met the needs of the study was developed. Finally, the study went some way to bridging the gap between the field of outcome measurement practices and existing psychological theory. In beginning to do so, the integration of routine outcome practices can be conceptualised like any other behaviour, rather than as negligence or ignorance, which could go some way to providing ideas for increasing PROM usage.

Limitations

Sampling bias

Some notable limitations of the study include some issues with the sample. A self-selected, opportunity sample was used because of the convenience and time efficiency of such a sampling strategy. However, this form of recruitment has limitations for the generalisability and external validity of any findings. While recruiting for the study, the following barriers were encountered which limited the sample obtained:

- Not receiving responses from Research and Development (R & D) departments following initial attempts to make contact. Outdated contact information from R and D contacts database[2] was partly responsible for this.
- R and D departments requesting onerous amounts of documentation for ethical approval which was unrealistic to obtain in the timeframe for this research.
- R and D departments requesting a significant processing fee to carry out the approval process
- In one instance, even though R and D approval had been obtained for the Trust, attempts to establish contact with someone who could distribute the survey failed.

Whereas this limitation was offset in some Trusts with high return rates, it is possible that people who did not use PROM did not participate in the study as they felt there would be no point, thereby skewing results in the direction of those who used them. Likewise, people who chose not to participate may have been the ones with greater time constraints, and may have had less favourable attitudes to PROM (as results suggest those with greater caseloads have less favourable attitudes) Furthermore, while there was an even spread of professionals surveyed overall, the study could have been improved if there was a more even spread of responses from different professions in each of the participating Trusts. For

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[2] (http://www.rdforum.nhs.uk/044.asp)

instance, most of the counsellors in the survey were from Trust A, nearly all of whom practiced humanistic therapy. It meant we couldn’t draw reliable conclusions about humanistic therapies or counsellors, as the improved attitudes may have been mediated by organisational cultural factors.

Statistical power

Overall, the reliability of the findings and prediction model could have been improved if the response rate had been higher and the statistical power was greater. Furthermore, the return rate was significantly lower than in similar studies in the field (Norman et al., 2013; Batty et al., 2012; Johnston & Gowers, 2005).

Suitability of questions

As mentioned above, results from the various statistical investigations carried out showed that the evaluative use subscale did not have good construct validity (see Table 12). A look at the component loadings in the principal component analysis showed that the item ‘my team uses outcomes data for evaluation’ was not suitable as it asked about the culture of the organisation rather than the clinician’s behaviour. As such, it did not measure clinician’s behaviour as the questionnaire intended and represented a weakness in the measure.
Another limitation of the measure is that the wording of the first item on the behaviour questionnaire in this study includes both behaviours of reflecting on the client’s problem as well as their progress in treatment (‘Reflecting on a patients problem *or* progress’) This does not allow for a differentiation of whether the measures are used more at the assessment phase or the treatment progression phase, as is pertinent in some previous research (Johnson & Gowers, 2005; Hatfield & Ogles 2004; Huffman et al., 2003).

5.9 Conclusions and future research

All in all, results of the survey show that PROM collection targets are falling short of targets set by recent policy documents. This study helped to unpick some of the reasons for this shortfall, namely by looking at the roles that attitudes and perceived competency play in the uptake of this clinical practice. Clinicians’ attitudes were found to be roughly split down the middle in terms of how they viewed PROM, but showed a slight endorsement of PROM overall. Regarding perceived competency, the average clinician had a mean score equivalent of between *quite* competent and *fairly* competent on the questionnaire Likert scale. Two thirds of clinicians reported collecting PROM at assessment and follow up with at least most of their patients, although many of these were not using the CORC approved suite of measures. Disparate sets of outcome data cannot be collated and translated into meaningful information for commissioners or policy makers, and so one of the various challenges facing the NHS is to get those already using PROM to switch over to CORC approved measures. Training was shown to lead to increased competence and clinical use, but surprisingly did not lead to improved attitudes. As both attitudes and competency contributed equally to the prediction model outlined in the study, the tailoring of existing training programs to improve attitudes to PROM was the single most important implication of the research findings.

As emergent results from correlational analyses found that the relationships between the main indices of the study were all significant, with moderate effect sizes, two prediction models were developed for the clinical and evaluative uses of PROM. Further to this, links were made with existing psychological theory in terms of understanding clinician behaviour and the study made an important contribution in conceptualising clinician's uptake of PROM within the Theory of Planned Behaviour framework. Preliminary results for the suitability of this model in understanding PROM uptake are promising and ought to be carried forward into future research.

The use of PROM to support and improve practice has been promoted since the turn of the century. However, it has only been in the past 3 to 5 years that rigorous outcome management practices are being pushed as a matter of policy in services across the UK. As such, the results of this survey bode well for these practices if the push to use them continues. Quite a significant amount of PROM data is being collected despite the fact that almost half of staff had not been formally trained in their use. If a good quality standardised training program was designed, which focused equally on improving attitudes to PROM as well as developing skills, it might not be very long before data collection targets are being met. The effectiveness of any such programs ought to be evaluated with research studies, as this would help tailor them to the needs of mental health staff in the UK.

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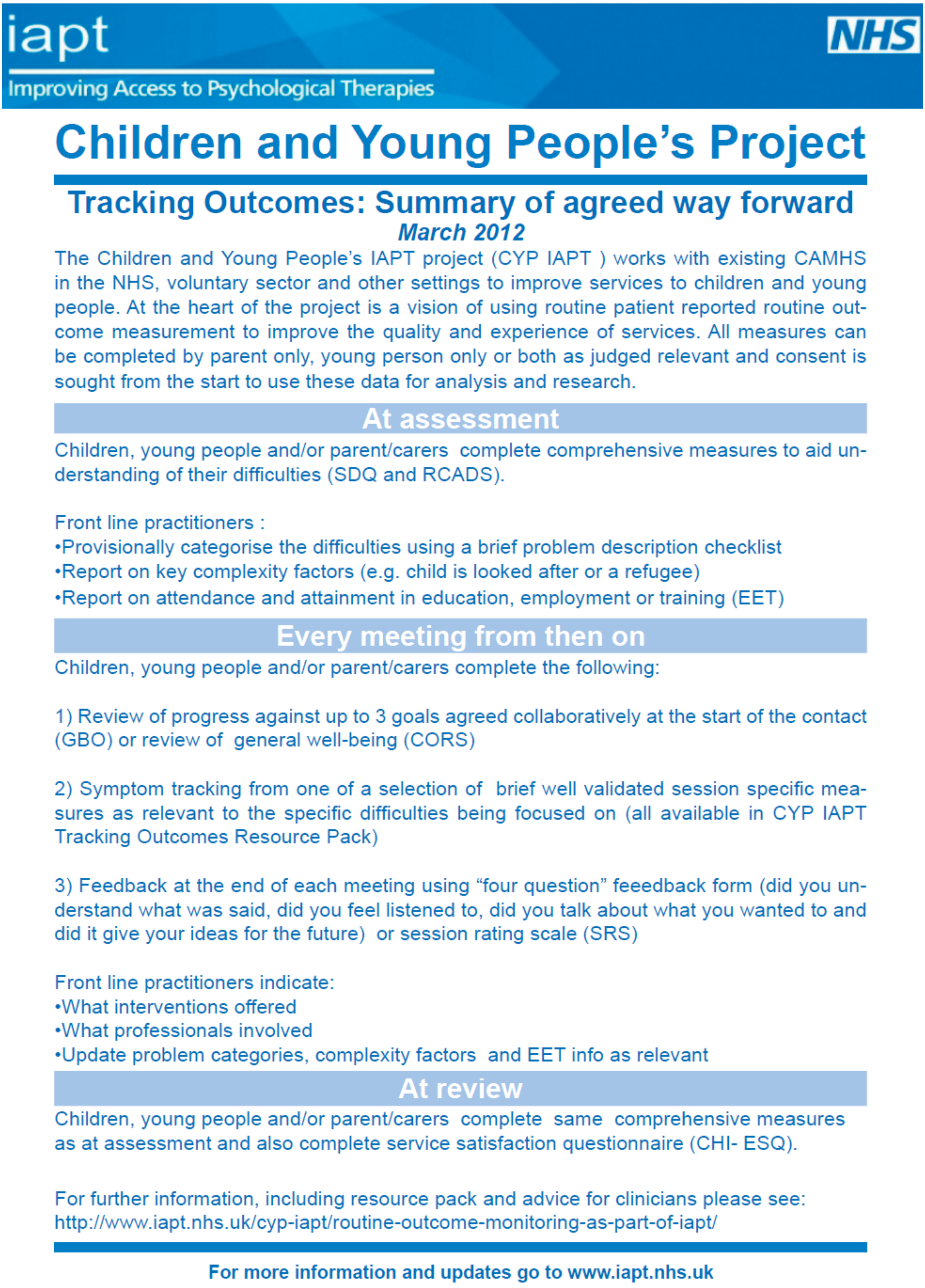
7 Appendices

Appendix A: Measures to be collected routinely as part of the CYP-IAPT initiative



iapt

Improving Access to Psychological Therapies

NHS

Children and Young People's Project

Tracking Outcomes: Summary of agreed way forward

March 2012

The Children and Young People's IAPT project (CYP IAPT) works with existing CAMHS in the NHS, voluntary sector and other settings to improve services to children and young people. At the heart of the project is a vision of using routine patient reported routine outcome measurement to improve the quality and experience of services. All measures can be completed by parent only, young person only or both as judged relevant and consent is sought from the start to use these data for analysis and research.

At assessment

Children, young people and/or parent/carers complete comprehensive measures to aid understanding of their difficulties (SDQ and RCADS).

Front line practitioners :
- Provisionally categorise the difficulties using a brief problem description checklist
- Report on key complexity factors (e.g. child is looked after or a refugee)
- Report on attendance and attainment in education, employment or training (EET)

Every meeting from then on

Children, young people and/or parent/carers complete the following:

1) Review of progress against up to 3 goals agreed collaboratively at the start of the contact (GBO) or review of general well-being (CORS)

2) Symptom tracking from one of a selection of brief well validated session specific measures as relevant to the specific difficulties being focused on (all available in CYP IAPT Tracking Outcomes Resource Pack)

3) Feedback at the end of each meeting using "four question" feeedback form (did you understand what was said, did you feel listened to, did you talk about what you wanted to and did it give your ideas for the future) or session rating scale (SRS)

Front line practitioners indicate:
- What interventions offered
- What professionals involved
- Update problem categories, complexity factors and EET info as relevant

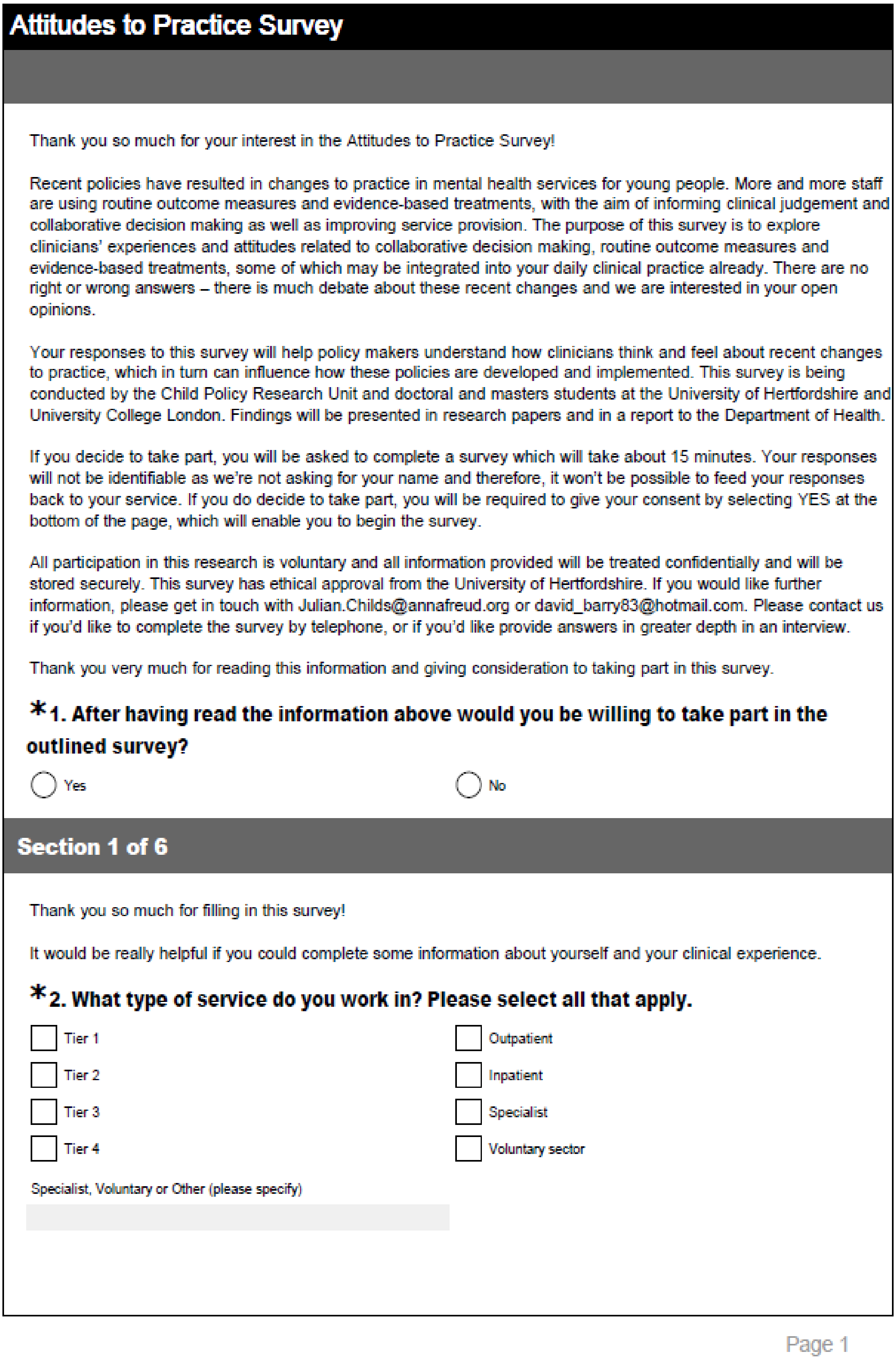
At review

Children, young people and/or parent/carers complete same comprehensive measures as at assessment and also complete service satisfaction questionnaire (CHI- ESQ).

For further information, including resource pack and advice for clinicians please see:
http://www.iapt.nhs.uk/cyp-iapt/routine-outcome-monitoring-as-part-of-iapt/

For more information and updates go to www.iapt.nhs.uk

Appendix B: Survey questionnaire



Attitudes to Practice Survey

Thank you so much for your interest in the Attitudes to Practice Survey!

Recent policies have resulted in changes to practice in mental health services for young people. More and more staff are using routine outcome measures and evidence-based treatments, with the aim of informing clinical judgement and collaborative decision making as well as improving service provision. The purpose of this survey is to explore clinicians' experiences and attitudes related to collaborative decision making, routine outcome measures and evidence-based treatments, some of which may be integrated into your daily clinical practice already. There are no right or wrong answers – there is much debate about these recent changes and we are interested in your open opinions.

Your responses to this survey will help policy makers understand how clinicians think and feel about recent changes to practice, which in turn can influence how these policies are developed and implemented. This survey is being conducted by the Child Policy Research Unit and doctoral and masters students at the University of Hertfordshire and University College London. Findings will be presented in research papers and in a report to the Department of Health.

If you decide to take part, you will be asked to complete a survey which will take about 15 minutes. Your responses will not be identifiable as we're not asking for your name and therefore, it won't be possible to feed your responses back to your service. If you do decide to take part, you will be required to give your consent by selecting YES at the bottom of the page, which will enable you to begin the survey.

All participation in this research is voluntary and all information provided will be treated confidentially and will be stored securely. This survey has ethical approval from the University of Hertfordshire. If you would like further information, please get in touch with Julian.Childs@annafreud.org or david_barry83@hotmail.com. Please contact us if you'd like to complete the survey by telephone, or if you'd like provide answers in greater depth in an interview.

Thank you very much for reading this information and giving consideration to taking part in this survey.

***1. After having read the information above would you be willing to take part in the outlined survey?**

○ Yes ○ No

Section 1 of 6

Thank you so much for filling in this survey!

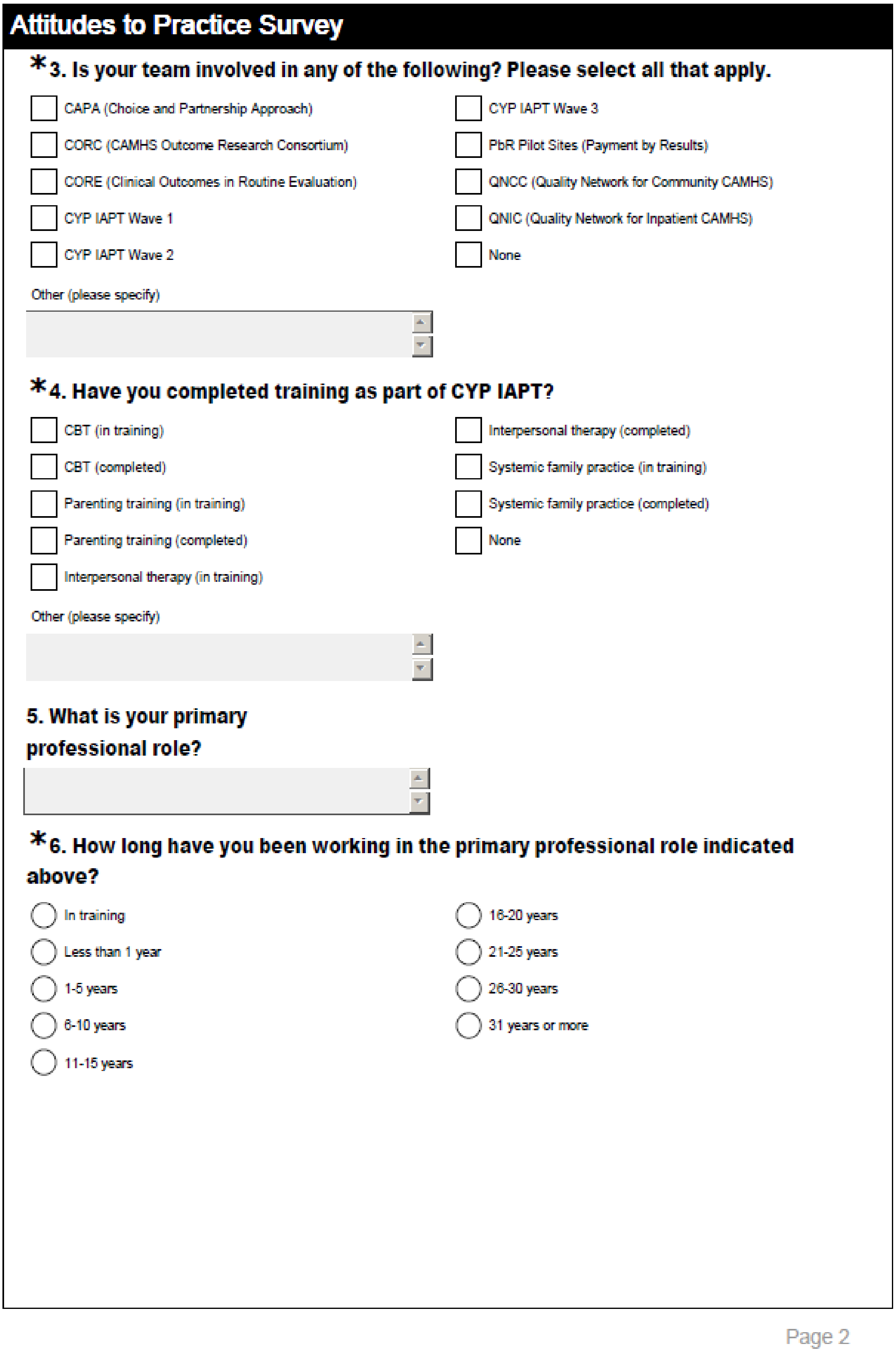
It would be really helpful if you could complete some information about yourself and your clinical experience.

***2. What type of service do you work in? Please select all that apply.**

☐ Tier 1
☐ Tier 2
☐ Tier 3
☐ Tier 4
☐ Outpatient
☐ Inpatient
☐ Specialist
☐ Voluntary sector

Specialist, Voluntary or Other (please specify)

Page 1



Attitudes to Practice Survey

***3. Is your team involved in any of the following? Please select all that apply.**

☐ CAPA (Choice and Partnership Approach)
☐ CORC (CAMHS Outcome Research Consortium)
☐ CORE (Clinical Outcomes in Routine Evaluation)
☐ CYP IAPT Wave 1
☐ CYP IAPT Wave 2
☐ CYP IAPT Wave 3
☐ PbR Pilot Sites (Payment by Results)
☐ QNCC (Quality Network for Community CAMHS)
☐ QNIC (Quality Network for Inpatient CAMHS)
☐ None

Other (please specify)

***4. Have you completed training as part of CYP IAPT?**

☐ CBT (in training)
☐ CBT (completed)
☐ Parenting training (in training)
☐ Parenting training (completed)
☐ Interpersonal therapy (in training)
☐ Interpersonal therapy (completed)
☐ Systemic family practice (in training)
☐ Systemic family practice (completed)
☐ None

Other (please specify)

5. What is your primary professional role?

***6. How long have you been working in the primary professional role indicated above?**

○ In training
○ Less than 1 year
○ 1-5 years
○ 6-10 years
○ 11-15 years
○ 16-20 years
○ 21-25 years
○ 26-30 years
○ 31 years or more

Page 2

Attitudes to Practice Survey

*7. To what extent do you use the following therapy approaches?

	Never	Occasionally	Sometimes	Often	Always
Psychodynamically oriented treatment methods	○	○	○	○	○
CBT, cognitive or behavioural treatment methods	○	○	○	○	○
Humanistic	○	○	○	○	○
Systemic	○	○	○	○	○
Other	○	○	○	○	○

Other (please specify)

Section 2 of 6

This part asks about your attitudes towards decision-making in mental health care.

*8. Please read each statement and decide how much you disagree or agree.

	Strongly disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Strongly agree
The consultation between the professional and patient should be viewed as a negotiation between equals.	○	○	○	○	○	○	○
Professionals should respect the validity of their patients' personal beliefs and coping strategies.	○	○	○	○	○	○	○
The best use of treatment is that which is compatible with what the patient wants and is capable of achieving.	○	○	○	○	○	○	○
Just as recommending a treatment is an experiment carried out by the professional, so too is adhering to the treatment an experiment carried out by the patient.	○	○	○	○	○	○	○
Professionals should give patients the opportunity to communicate their thoughts about their illness and negotiate how it is treated.	○	○	○	○	○	○	○
Enhanced health outcomes would follow from cooperative interaction between professionals and patients.	○	○	○	○	○	○	○
A high priority in the consultation between professional and patient is to establish a therapeutic alliance.	○	○	○	○	○	○	○
Professionals should be sensitive to patient desires, needs and capabilities.	○	○	○	○	○	○	○
Professionals should try to assist patients to make as informed a choice as is possible about the benefits and risks of alternative treatments.	○	○	○	○	○	○	○
During the professional-patient consultation, it is the patient's process of deciding that is most important.	○	○	○	○	○	○	○
I believe that professionals should be more sensitive to how patients react to the information they give.	○	○	○	○	○	○	○
I believe that professionals should try to learn about the beliefs their patients hold about their treatments.	○	○	○	○	○	○	○

Section 3 of 6

Attitudes to Practice Survey

This part asks about your feelings and attitudes to Patient Reported Outcome Measures (PROMs) in general. PROMs are any questionnaire filled in by a parent or child that gives feedback about their experience of progress in relation to symptom change, general wellbeing or functioning. PROMs are measures that capture change associated with treatment and are completed at assessment and follow up (e.g., six monthly or discharge) or on a session-by-session basis.

*9. Please read each statement and decide how much you disagree or agree.

	Strongly disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Strongly agree
Outcome measures do not capture what is happening for my patients.	○	○	○	○	○	○	○
I am confident integrating outcome measures into my work.	○	○	○	○	○	○	○
Providing feedback from outcome measures will help to motivate service users.	○	○	○	○	○	○	○
I intend to discuss the results of the service user's self-assessment with the service user.	○	○	○	○	○	○	○
Outcome measures take the human aspect out of my work.	○	○	○	○	○	○	○
Providing feedback from outcome measures will help the clinician and service user work more collaboratively in treatment.	○	○	○	○	○	○	○
I find outcome measures very useful for working with patients.	○	○	○	○	○	○	○
Providing feedback from outcome measures will help to engage service users more actively in their own treatment.	○	○	○	○	○	○	○
I need to develop my understanding and use of normative comparison data.	○	○	○	○	○	○	○
I avoid using outcome measures as much as possible.	○	○	○	○	○	○	○
There is value in developing my skills to provide feedback on progress with service users.	○	○	○	○	○	○	○
Using outcome measures will help me make better treatment decisions with patients.	○	○	○	○	○	○	○

*10. Please read each statement and decide how much you disagree or agree.

	Strongly disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Strongly agree
Outcome measures take too long.	○	○	○	○	○	○	○
If explained properly, patients will not mind using outcome measures.	○	○	○	○	○	○	○
Most of the questions in outcome measures are not relevant to the patient.	○	○	○	○	○	○	○
I see the value in changing my clinical practice to support the use of the service user self-assessment measures.	○	○	○	○	○	○	○
It would be useful to provide service users with feedback on their outcome self-assessment measure.	○	○	○	○	○	○	○
I intend to routinely offer the service user self-assessment measure to service users.	○	○	○	○	○	○	○
I intend to learn more about outcome measures.	○	○	○	○	○	○	○
Providing feedback from outcome measures will encourage the service user to accept more responsibility in their own treatment.	○	○	○	○	○	○	○
I do not really know how to use outcome measures to help monitor treatment progress.	○	○	○	○	○	○	○
Providing feedback from outcome measures will help with my treatment planning.	○	○	○	○	○	○	○
Nobody has time to use outcome measures routinely.	○	○	○	○	○	○	○

Section 4 of 6

This part asks about your use of Patient Reported Outcome Measures (PROMs) in general. PROMs are any questionnaire filled in by a parent or child that gives feedback about their experience of progress in relation to symptom change, general wellbeing or functioning. PROMs are measures that capture change associated with treatment and are completed at assessment and follow up (e.g., six monthly or discharge) or on a session-by-session basis.

*11. With how many of your patients do you use the following measures?

	None	A few	Most	All
Assessment only	○	○	○	○
Assessment and follow up (e.g., six monthly or discharge)	○	○	○	○
Session by session	○	○	○	○

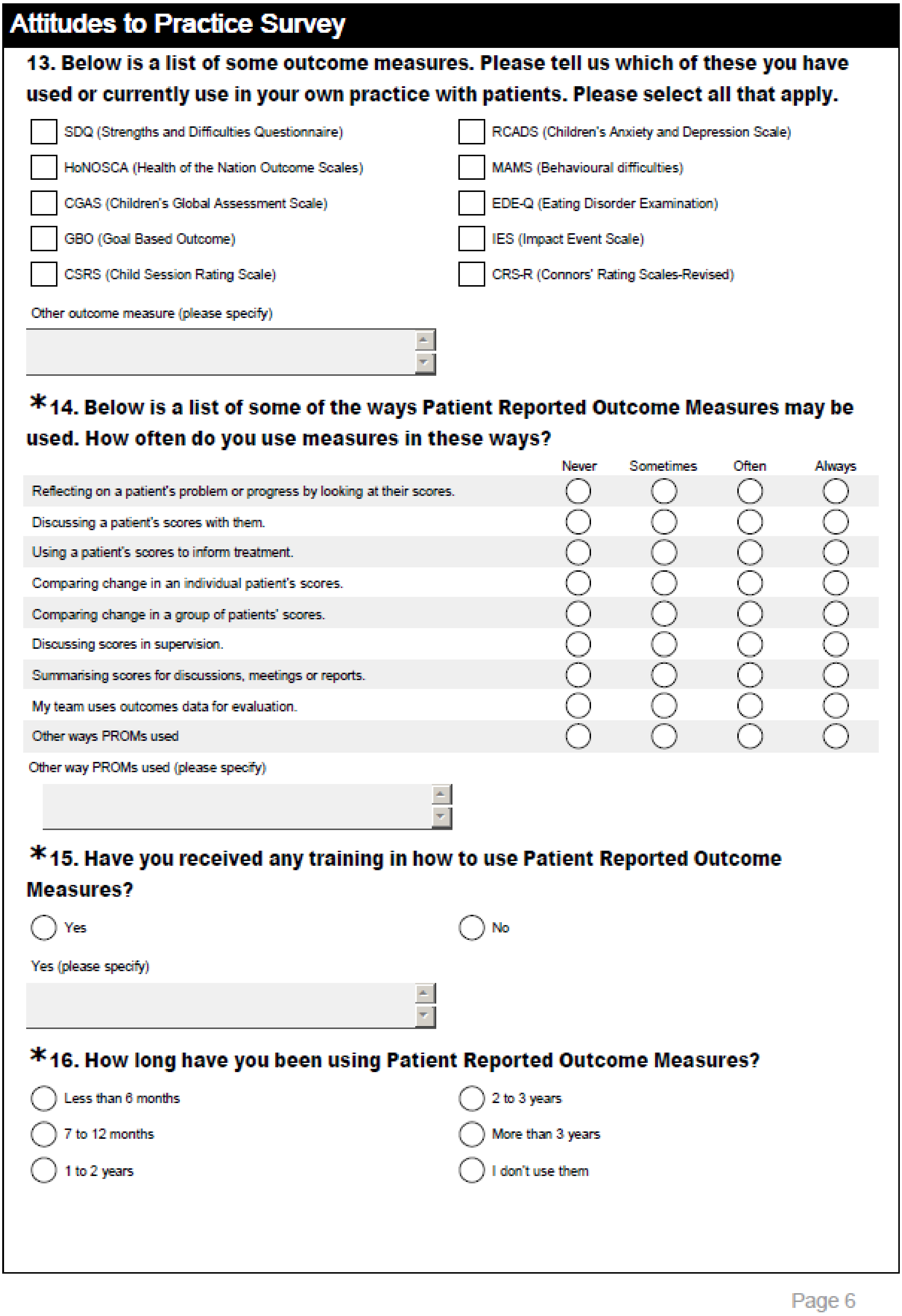
12. Of those with whom you use session by session measures, how often do you use them?

○ In a few sessions

○ In some sessions

○ In most sessions

○ In every session



Attitudes to Practice Survey

13. Below is a list of some outcome measures. Please tell us which of these you have used or currently use in your own practice with patients. Please select all that apply.

☐ SDQ (Strengths and Difficulties Questionnaire)	☐ RCADS (Children's Anxiety and Depression Scale)
☐ HoNOSCA (Health of the Nation Outcome Scales)	☐ MAMS (Behavioural difficulties)
☐ CGAS (Children's Global Assessment Scale)	☐ EDE-Q (Eating Disorder Examination)
☐ GBO (Goal Based Outcome)	☐ IES (Impact Event Scale)
☐ CSRS (Child Session Rating Scale)	☐ CRS-R (Connors' Rating Scales-Revised)

Other outcome measure (please specify)

***14. Below is a list of some of the ways Patient Reported Outcome Measures may be used. How often do you use measures in these ways?**

	Never	Sometimes	Often	Always
Reflecting on a patient's problem or progress by looking at their scores.	○	○	○	○
Discussing a patient's scores with them.	○	○	○	○
Using a patient's scores to inform treatment.	○	○	○	○
Comparing change in an individual patient's scores.	○	○	○	○
Comparing change in a group of patients' scores.	○	○	○	○
Discussing scores in supervision.	○	○	○	○
Summarising scores for discussions, meetings or reports.	○	○	○	○
My team uses outcomes data for evaluation.	○	○	○	○
Other ways PROMs used	○	○	○	○

Other way PROMs used (please specify)

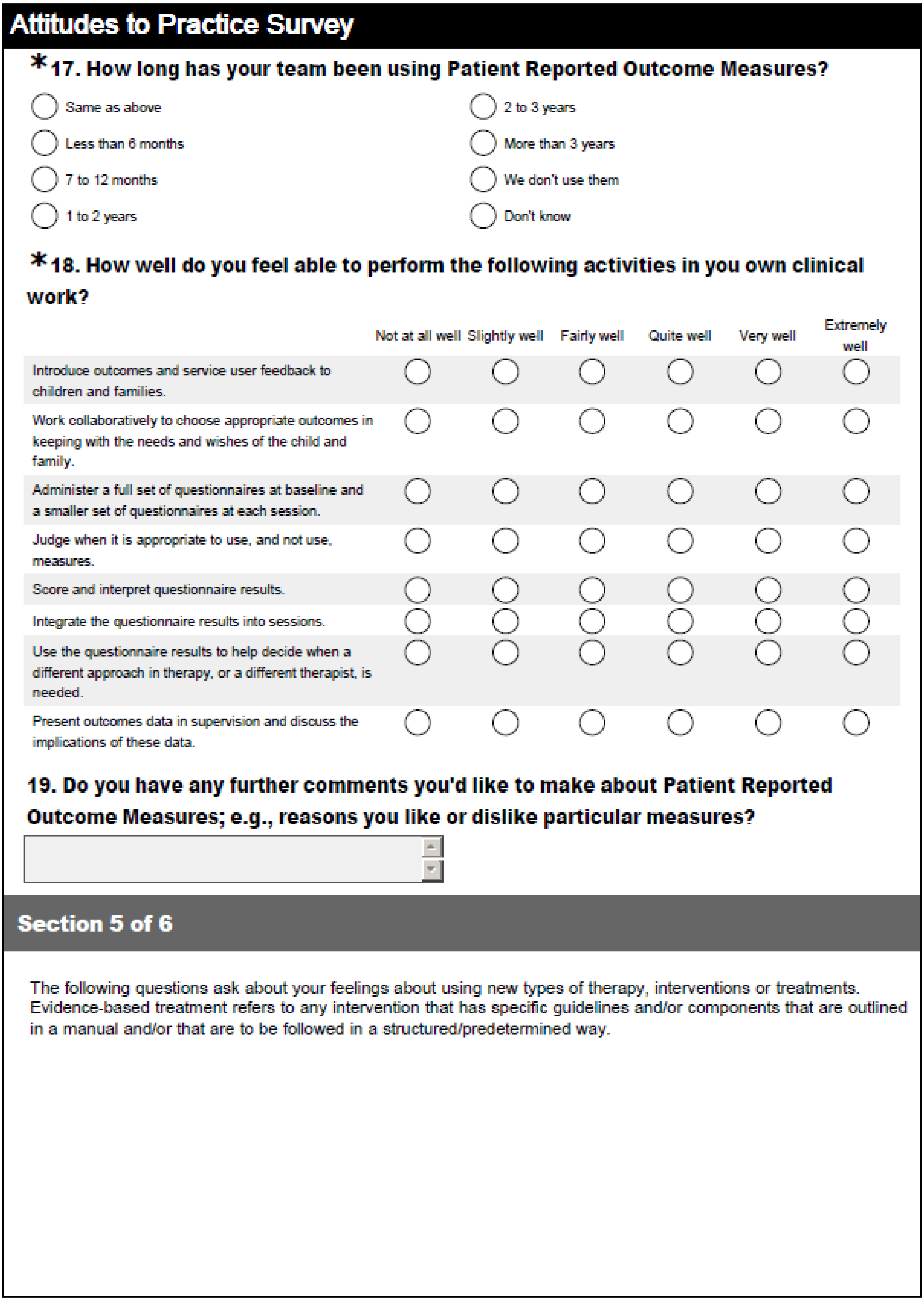
***15. Have you received any training in how to use Patient Reported Outcome Measures?**

○ Yes ○ No

Yes (please specify)

***16. How long have you been using Patient Reported Outcome Measures?**

○ Less than 6 months	○ 2 to 3 years
○ 7 to 12 months	○ More than 3 years
○ 1 to 2 years	○ I don't use them



Attitudes to Practice Survey

***17. How long has your team been using Patient Reported Outcome Measures?**

○ Same as above
○ Less than 6 months
○ 7 to 12 months
○ 1 to 2 years
○ 2 to 3 years
○ More than 3 years
○ We don't use them
○ Don't know

***18. How well do you feel able to perform the following activities in you own clinical work?**

	Not at all well	Slightly well	Fairly well	Quite well	Very well	Extremely well
Introduce outcomes and service user feedback to children and families.	○	○	○	○	○	○
Work collaboratively to choose appropriate outcomes in keeping with the needs and wishes of the child and family.	○	○	○	○	○	○
Administer a full set of questionnaires at baseline and a smaller set of questionnaires at each session.	○	○	○	○	○	○
Judge when it is appropriate to use, and not use, measures.	○	○	○	○	○	○
Score and interpret questionnaire results.	○	○	○	○	○	○
Integrate the questionnaire results into sessions.	○	○	○	○	○	○
Use the questionnaire results to help decide when a different approach in therapy, or a different therapist, is needed.	○	○	○	○	○	○
Present outcomes data in supervision and discuss the implications of these data.	○	○	○	○	○	○

19. Do you have any further comments you'd like to make about Patient Reported Outcome Measures; e.g., reasons you like or dislike particular measures?

Section 5 of 6

The following questions ask about your feelings about using new types of therapy, interventions or treatments. Evidence-based treatment refers to any intervention that has specific guidelines and/or components that are outlined in a manual and/or that are to be followed in a structured/predetermined way.

Attitudes to Practice Survey

***20. Please read each statement and decide how much you disagree or agree.**

	Strongly disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Strongly agree
I am willing to use new and different types of treatments if they have evidence of being effective.	○	○	○	○	○	○	○
Evidence-based treatments do not allow me to tailor my therapy to each client's individual needs.	○	○	○	○	○	○	○
Clinical experience and judgment are more important than using evidence-based treatments.	○	○	○	○	○	○	○
I like using evidence-based treatments because of the structure they provide.	○	○	○	○	○	○	○
A problem with evidence-based treatments is that you need to learn a different programme for each diagnosis or problem area.	○	○	○	○	○	○	○
Evidence-based treatments allow clinicians to respond to important events in therapy as they come up.	○	○	○	○	○	○	○
I dislike evidence-based treatments because they are too inflexible.	○	○	○	○	○	○	○
Evidence-based treatments are not designed to handle clients with more than one diagnosis or other challenges that are common in real world therapy.	○	○	○	○	○	○	○

Section 6 of 6

Thank you again for filling in this survey!

It would be really helpful if you could provide a few details about youself. This part also contains some open ended questions, if you would like to provide further comments.

21. What is your gender?

○ Female ○ Male

22. What is your age?

○ 18 to 24
○ 25 to 34
○ 35 to 44
○ 45 to 54
○ 55 to 64
○ 65 to 74
○ 75 or older

23. What is your current case load?

24. Of your current case load, how many patients in general...

	None	A few	Most	All
... would you say are able to equally share in treatment decisions?	○	○	○	○
... do you use the NICE recommended treatment for the given presenting problem with?	○	○	○	○

Attitudes to Practice Survey

***25. Below is a list of broad personality traits. These are general descriptions and may or may not apply to you. Still, it would be really useful if you could try to decide how well the following statements describe your personality. This question has been developed and used before by other researchers, and it is intended to provide a snapshot of how we generally perceive ourselves.**
I see myself as someone who ...

	Strongly disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Strongly agree
... is reserved.	○	○	○	○	○	○	○
... is generally trusting.	○	○	○	○	○	○	○
... tends to be lazy.	○	○	○	○	○	○	○
... is relaxed, handles stress well.	○	○	○	○	○	○	○
... has few artistic interests.	○	○	○	○	○	○	○
... is outgoing, sociable.	○	○	○	○	○	○	○
... tends to find fault with others.	○	○	○	○	○	○	○
... does a thorough job.	○	○	○	○	○	○	○
... gets nerous easily.	○	○	○	○	○	○	○
... has an active imagination.	○	○	○	○	○	○	○

26. Do you have any further comments you'd like to make about anything raised in this survey?

27. Which Trust do you work in?
Please leave blank if prefer not to answer.

28. How did you hear about this survey?

Thank you!

This is the end of the survey.

Thank you so much for completing the Attitudes to Practice Survey!

Your responses will not be identifiable as we haven't asked for your name and therefore, it won't be possible to feed your responses back to your service.

If you would like further information or to discuss this survey or your responses further, please get in touch with Julian.Childs@annafreud.org or david_barry83@hotmail.com.

Appendix C: Email invitation to participate in survey

Subject: Please let us know your attitudes to practice

Dear CAMHS staff member,

We are writing to ask for your participation in a survey that we are conducting with the Child Policy Research Unit and University of Hertfordshire. We are asking staff like you in mental health services for young people to reflect on your attitudes to practice.

Your responses to this survey are very important and will help policy makers understand how staff think and feel about recent changes to practice. As part of the survey, we are asking about your experiences and attitudes related to collaborative decision making, routine outcome measures and evidence based treatments. There are no right or wrong answers – there is much debate about these recent changes and we are interested in your open opinions.

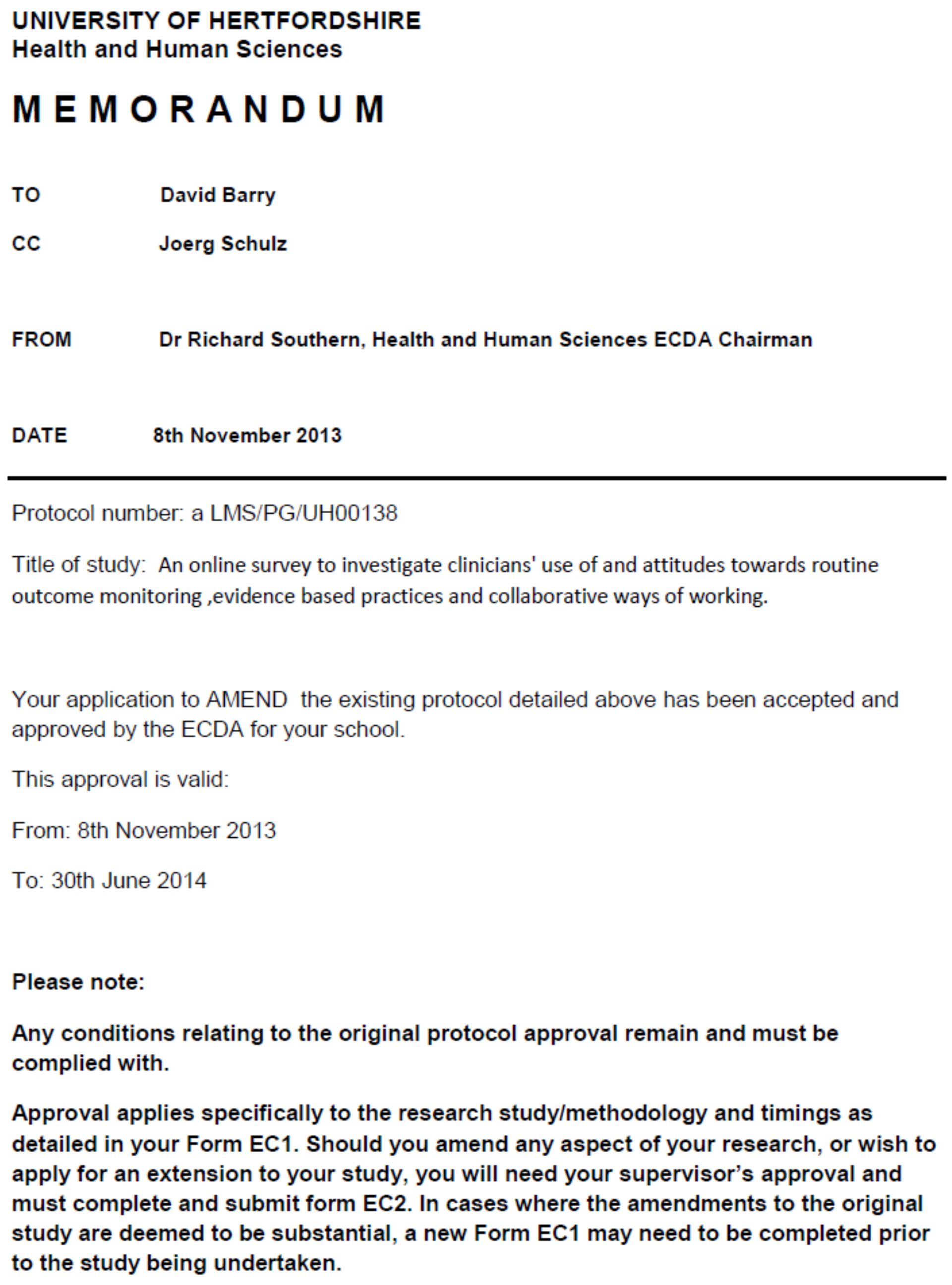
This is a short survey and should take you no more than fifteen minutes to complete. Please click on the link below to go to the survey website (or copy and paste the survey link into your Internet browser).

Survey Link: https://www.surveymonkey.com/.......

Your participation in this survey is entirely voluntary and all of your responses will be kept confidential. Your responses will not be identifiable as we are not asking for your name and therefore, it will not be possible to feed your responses back to your service. Should you have any further questions or comments, please feel free to contact us at Julian.Childs@annafreud.org or david_barry83@hotmail.com

We appreciate your time and consideration in completing the survey. Thank you for participation in the study! It is only through the help of staff like you that we can provide information to help guide the direction of recent changes to practice in mental health services for young people.

Appendix D: Ethical approval form for the research study



UNIVERSITY OF HERTFORDSHIRE
Health and Human Sciences

MEMORANDUM

TO **David Barry**

CC **Joerg Schulz**

FROM **Dr Richard Southern, Health and Human Sciences ECDA Chairman**

DATE **8th November 2013**

Protocol number: a LMS/PG/UH00138

Title of study: An online survey to investigate clinicians' use of and attitudes towards routine outcome monitoring ,evidence based practices and collaborative ways of working.

Your application to AMEND the existing protocol detailed above has been accepted and approved by the ECDA for your school.

This approval is valid:

From: 8th November 2013

To: 30th June 2014

Please note:

Any conditions relating to the original protocol approval remain and must be complied with.

Approval applies specifically to the research study/methodology and timings as detailed in your Form EC1. Should you amend any aspect of your research, or wish to apply for an extension to your study, you will need your supervisor's approval and must complete and submit form EC2. In cases where the amendments to the original study are deemed to be substantial, a new Form EC1 may need to be completed prior to the study being undertaken.

Appendix E: Additional results

Table 42: Percentages for the amount of time that participants use the following therapeutic models

Regularity	Psychodynamic	CBT	Humanistic	Systemic
Never	21.8%	8.2%	25.4%	12%
Occasionally	33.8%	23.9%	23.9%	11.3%
Sometimes	15%	22.4%	19.4%	18.8%
Often	21.8%	39.6%	21.6%	45.1%
Always	7.5%	6%	9.7%	12.8%

Table 43: Percentage frequencies for responses to Attitudes Index (N = 119)

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
Outcome measures do not capture what is happening for my patients.	0	18	17	13	25	20	7
Outcome measures take the human aspect out of my work.	6	19	14	22	25	8	6
I find outcome measures very useful for working with patients.	7	10	8	18	22	32	3
Using outcome measures will help me make better treatment decisions with patients.	8	8	6	23	20	34	2
Outcome measures take too long.	1	10	12	24	28	19	6
I see the value in changing my clinical practice to support the use of PROM	2	4	8	24	23	34	5

Table 44: Percentage frequencies for ways in which PROM are used clinically (N = 114)

Ways measures can be used (clinical)	Never	Sometimes	Often	Always
Reflecting on a patients problem or score	18%	34%	33%	15%
Discussing a patients scores with them	18%	40%	25%	16%
Using a patient's scores to inform treatment	20%	39%	32%	9%
Comparing change in an individual patients score	17%	39%	31%	14%
Discussing scores in supervision	44%	48%	6%	2%

Table 45: Percentage frequencies for ways in which PROM are used evaluatively (N = 114)

Ways measures can be used (evaluative)	Never	Sometimes	Often	Always
Comparing change in a group of patient's scores	62%	27%	9%	2%
Summarising scores for meetings and reports	44%	41%	12%	3%
My team uses outcomes data for evaluation	22%	32%	26%	20%

Table 46: Percentage frequencies for responses to the Perceived Competency Index (N = 114)

	Not at all well	Slightly well	Fairly well	Quite well	Very well	Extremely well
Introduce outcomes	11	14	13	25	31	5
Work collaboratively to choose appropriate measures	9	11	18	25	32	5
Administer PROM at correct times	25	17	13	21	22	3
Judge when to use, and not to use, measures	5	5	23	29	30	8
Score and interpret results	12	12	17	27	23	9
Integrate results into sessions	14	15	18	29	18	6
Use results to identify need to change approach	21	14	17	29	16	4
Present results in supervision	28	17	19	23	8	5

Appendix F: List of PROM used by participants which are not part of the CORC suite

CORE- Clinical Outcomes in Routine Evaluation (CORE)

Outcome stars

Spence Anxiety Inventory

PEDS Quality of Life

Becks Youth Inventory

Paediatric Index of Emotional Distress

Wells Anxiety Scales

Adolescents Dissociative Experiences Scale

General Health Questionnaire

CDS

Developmental Behaviour Checklist

Mood charts

Mood and Feelings questionnaire

Ages and Stages questionnaire (ASQ)

Keys to Interactive Parenting Scale (KIPS)

Parent-Infant Relationship Global Assessment Scale (PIRGAS)

Parental Tree Scale