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Systematic client feedback in therapy for children with psychological difficulties: pilot cluster randomised controlled trial

Mick Cooper ^a, Barry Duncan^b, Sarah Golden^c and Katalin Toth ^c

^aDepartment of Psychology, University of Roehampton, London, UK; ^bBetter Outcomes Now; ^cDepartment of Research and Evaluation, Place2Be, London, UK

ABSTRACT

The use of systematic client feedback tools are known to enhance outcomes in adults psychotherapy clients, but their effects with children have yet to be adequately tested. Hence, we piloted a cluster randomised controlled trial of the Partners for Change Outcome Management System (PCOMS) with children aged 7–11 years old; comparing play-based counselling with, and without, the use of this tool. Ten UK primary schools were randomly allocated to either the intervention or control condition. Data were available for 38 children in total: 20 girls and 18 boys, of predominantly a white ethnic origin (mean age = 8.5 years). Clinical outcomes were the total difficulties scores on the teacher and parent completed Strengths and Difficulties Questionnaire (SDQ). Fifty percent of the schools left the trial between initial recruitment and end of data collection, but participant dropout was low and recruitment rates were satisfactory. Participants in the PCOMS condition showed significantly greater reductions in parent completed total difficulties than those in the control condition, with small to moderate effect sizes on all outcomes in favour of PCOMS. Overall, our design appeared feasible, but needs to ensure adequate school retention and counsellor adherence.

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Around ten percent of 5–10 year olds in England meet criteria for a mental disorder, with evidence that prevalence rates in children and adolescents are increasing (Sadler et al., 2018). Globally, ten to 20 percent of children and young people experience mental disorders, with approximately half of all problems beginning by the age of 14 (Jones, 2013; Kim-Cohen et al., 2003; World Health Organisation, 2018). Mental health difficulties in childhood can lead to many longer-term problems. These include low levels of educational attainment, financial hardship, and high levels of unemployment (Colman et al., 2009).

Schools have been identified as a “prime site” for addressing these difficulties (Kavanagh et al., 2009) and, in the UK, have become central to the government’s mental health strategy (Department of Health and Department of Education, 2017; Department of Health & NHS England, 2015). This is backed by evidence showing that locating mental health services in schools can substantially increase their use by young people

(Kaplan, Calonge, Guernsey, & Hanrahan, 1998). Placing services in this way may also help address inequalities in mental health treatment, by maximising the accessibility of interventions (Knopf et al., 2016).

In the most recent meta-analysis, the overall effect size (Cohen's *d*) for school-based counselling and psychotherapy interventions was 0.45 (Baskin et al., 2010). Although these gains are moderate, an essential question – as in all areas of treatment – is how these outcomes might be improved. In recent years, one approach to improving therapeutic outcomes is through the use of systematic client feedback (Castonguay, Barkham, Lutz, & McAleavey, 2013). Two such systems now have randomised controlled trial (RCT) support for adult clients, and are included in the US Substance Abuse and Mental Health Administration's National Registry of Evidence-Based Programs and Practices (NREPP). First is the Outcome Questionnaire–45.2 System (OQ; Lambert, 2015), which has shown a small but significant impact of $SMD = 0.14$ against treatment as usual (TAU) (Lambert, Whipple, & Kleinstäuber, 2018). Second is the Partners for Change Outcome Management System (PCOMS; Duncan, 2012, 2014; Duncan & Reese, 2015).

Emerging from clinical practice and designed with the front-line clinician in mind, PCOMS employs two, four-item scales, one focusing on outcome (the Outcome Rating Scale [ORS]; Miller, Duncan, Brown, Sparks, & Claud, 2003) and the other assessing the therapeutic alliance (the Session Rating Scale [SRS]; Duncan et al., 2003). The ORS and SRS are for adults and adolescents while the Child Outcome Rating Scale (CORS; Duncan, Sparks, Miller, Bohanske, & Claud, 2006) and Child Session Rating Scale (CSRS; Duncan, Miller, & Sparks, 2003) are for children aged 6–12 years old. PCOMS directly involves clinicians and clients in an ongoing process of measuring and discussing both progress and the alliance, the first system to do so. There are over 40,000 registered users of the ORS and SRS in at least 20 countries around the world and over 1.5 million administrations in data bases.

A review of eight RCTs by Duncan and Sparks (2018) supported the efficacy of PCOMS over treatment as usual in individual, couple, and group therapy with adults. Overall effect sizes ranged from $d = 0.28$ (group therapy) to 0.54 (individual therapy). Lambert et al. (2018) in their meta-analysis of nine trials of PCOMS against TAU, found an average effect size (SMD) of 0.40, with significant heterogeneity across outcomes and evidence of publication bias. Østergård, Randa, and Hougaard (2018), in their meta-analysis of findings from 18 studies across the age range (14 randomised and four non-randomised), found a mean ES (Hedges' *g*) of 0.27 for PCOMS against TAU. They reported a small effect in counselling settings and no effect in psychiatric settings. Østergård et al. concluded that studies finding effects were likely impacted by researcher allegiance and the use of only one outcome measure, the Outcome Rating Scale. However, Østergård et al.'s findings have been heavily criticized by Duncan and Sparks (2019) on the basis of (a) including studies in which the intervention was likely too brief to realize an intervention effect (four studies < 4 sessions, two studies approximately 2 sessions); (b) including studies with low, intermittent, or even absent adherence to the PCOMS protocol; (c) failing to report study findings that contradicted their interpretations. Consistent with this critique, Fortney et al.'s (2017) analysis of 51 articles examining the effects of feedback – including PCOMS – found that, across RCTs, frequent and timely feedback of client-reported progress was consistently associated with improved treatment outcomes.

In the first study that extended systematic client feedback to an adolescent population, Bickman, Kelley, Breda, de Andrade, and Riemer (2011) found that 11–18 year olds whose clinicians could access weekly feedback showed faster improvement than those who did not. Kornør et al., in their 2015 *Cochrane Review* of the field, found six published RCTs of client feedback with this age group, but concluded that there was a, “paucity of high-quality data and considerable inconsistency in results from different studies” (p. 2). In a more recent meta-analysis, Tam and Ronan (2017) found a significant effect size (Hedges’ g) of 0.20 for systematic feedback with youth though, again, considerable heterogeneity across outcomes.

To date, no controlled studies have evaluated the impact of systematic client feedback with children alone (i.e. ≤ 11 years old). Preliminary but promising evidence for PCOMS was found in a cohort study with children (ages 7–11 years old; Cooper, Stewart, Sparks, & Bunting, 2013). This study found gains on the caregiver (i.e. parent or carer) completed Strengths and Difficulties Questionnaire (SDQ) that were almost twice those of school-based counselling in the UK where PCOMS was not used, with a small but significant advantage also for teacher completed SDQs. Also promising is a benchmarking evaluation of the effectiveness of services provided to 469 impoverished, racially and ethnically diverse children and young people presenting with a depression-related diagnosis at a public behavioural health agency that implemented PCOMS (Kodet, Reese, Duncan, & Bohanske, 2019). Outcomes for children ($n = 199$, aged 6–12 years old) were similar to those achieved in clinical trials of depressed children ($d = 1.39$), and superior to wait-list control benchmarks ($d = 0.53$).

The present study aimed to test the feasibility of running a RCT of PCOMS with children aged 7–11 years old. Our aim was also to contribute data to an estimate of the effectiveness of PCOMS with this age group, as required for a power analysis for a definitive trial.

Method

Design

We designed our pilot study as a clustered controlled trial, with counsellors within schools delivering one of two forms of intervention. The first of these was treatment as usual (TAU condition), consisting of play-based counselling of up to nine months in duration. The second was TAU plus the use of the PCOMS systematic feedback tools (PCOMS condition). Participants were referred in to the study between January and June 2017.

The target size of our pilot was 32 participants, following a recommendation by Torgerson and Torgerson (2008). This enables a large effect of $d = 1$ to be detected with 80% power (two-tailed test, 5% significance level). Torgerson and Torgerson also argue that anything over $N = 30$ allows a reasonably precise estimate of the variance.

It has been argued that the PCOMS intervention shows larger changes on PCOMS measures as compared with more traditional symptom based instruments (Østergård et al., 2018), although significant exceptions exist (e.g. Brattland et al., 2018), and this may be because PCOMS measures are more sensitive to change (DeSantis, Jackson, Duncan, & Reese, 2017). However, to avoid potential criticisms of over-inflating outcomes we chose to use an independent measure as our primary outcome.

Participants

Initially, we aimed to recruit participants from ten *primary* schools in the UK (typical age range: 5–11 years old), with five schools randomised to the PCOMS condition and five schools to TAU. We recruited schools through the school counselling managers (SCMs) of a large school counselling organisation in the UK. The SCMs were contacted by the research department of the organisation and invited to volunteer to take part in the trial. SCMs at ten schools agreed to participate, but one was expecting a delay to having counsellors in place so they were excluded from the trial. The remaining nine schools were randomly allocated to experimental ($n = 5$) and control conditions ($n = 4$). However, two schools in the experimental condition left the trial prior to training and participant recruitment due to key members of staff leaving. This left seven schools participating in the trial: three in the experimental condition and four in the control condition. A further two experimental schools then left the trial prior to the end of the academic year due to termination of their partnership with the school counselling organisation.

The seven schools that took part in the trial were located in England ($n = 5$), Wales ($n = 1$), and Scotland ($n = 1$). The average roll for schools in the experimental condition was 329 pupils, and 249 for schools in the control condition. The experimental schools had an average of 36.8% pupils eligible for free school meals (26.1% for control schools); 58.5% of pupils meeting expected standards in reading, writing, and maths (65.5% for control schools); 34.5% of pupils with English as an additional language (40.6% for control schools); and average absences of 5.4% (4.7% for control schools). Chi-squared tests indicated that differences between experimental and control schools on these variables were not significant ($p > .05$).

In total, 38 children who met age inclusion criteria were assessed and considered suitable for counselling by the SCMs at the seven schools. However, of the 38 children, two did not have teacher completed SDQs at baseline (5.2%), and a further five did not have teacher completed SDQs at endpoint (13.1%), giving paired teacher completed SDQ data on 31 children (81.6%). Caregiver completed SDQs were missing from three children at baseline (7.9%), and 12 children at endpoint (31.6%), with paired caregiver completed SDQ data available on 24 children (63.2%).

The 38 participants were between 7 and 11 years old, with a mean age of 8.5 years ($SD = 1.3$) (Table 1). Twenty participants were female and 18 were male. Most commonly, participants were from a White ethnic background ($n = 27$). The most frequent sources of referral into the study were headteachers ($n = 16$), SENCOs (Special Educational Needs Coordinator ($n = 11$), pastoral support workers ($n = 6$), and other teachers ($n = 6$). Eight of the participants had special educational needs. The most common presenting issues were family tensions ($n = 29$), low self-esteem ($n = 29$), and general anxiety ($n = 26$).

Chi-squared tests indicated that participants in the TAU group were significantly more likely to have been referred into the study by their headteacher or SENCO than participants in the PCOMS group, and were significantly less likely to have separation anxiety as a presenting issue. No other baseline differences between conditions were significant.

At baseline, the average caregiver completed score on the 0–40 SDQ total difficulties scale was 16.8, and 17.2 on the teacher completed scale. There were no significant differences between conditions. Approximately 40% of the children were rated by both caregivers and teachers, at baseline, as having “very high” levels of difficulties; with

Table 1. Demographic and referral information for randomised participants.

	TAU (n = 20)	PCOMS (n = 18)	Total (n = 38)
Mean age in years (M, SD)	8.2 (1.3)	8.8 (1.2)	8.5 (1.3)
Gender			
Female (n, %)	8 (40%)	12 (66.7%)	20 (52.6%)
Male (n, %)	12 (60%)	6 (33.3%)	18 (47.4%)
Ethnic origin			
White (n, %)	13 (65.0%)	14 (77.8%)	27 (71.1%)
Black (n, %)	5 (25.0%)	1 (5.6%)	6 (15.8%)
Mixed/multiple (n, %)	2 (10.0%)	3 (16.7%)	5 (13.2%)
Referral source ¹			
Headteacher**	13 (65.0%)	3 (18.8%)	16 (42.1%)
SENCO**	11 (55.0%)	0 (0%)	11 (28.9%)
Pastoral support	1 (5.0%)	5 (27.8%)	6 (15.8%)
Teacher	3 (15.0%)	3 (16.7%)	6 (15.8%)
Caregiver	1 (5.0%)	4 (22.2%)	5 (13.2%)
Self	0 (0%)	2 (11.1%)	2 (5.3%)
Other	2 (10.0%)	4 (22.2%)	6 (15.8%)
Special educational needs	6 (30.0%)	2 (11.1%)	8 (21.1%)
Presenting issue ¹²			
Family tensions	14 (70.0%)	15 (83.3%)	29 (76.3%)
Low self-esteem	14 (70.0%)	15 (83.3%)	29 (76.3%)
General anxiety	11 (55.0%)	15 (83.3%)	26 (68.4%)
Social anxiety	12 (60.0%)	14 (77.8%)	26 (68.4%)
Attention difficulties	17 (85.0%)	9 (50.0%)	26 (68.4%)
Peer problems	14 (70.0%)	12 (66.7%)	26 (68.4%)
Separation anxiety**	7 (35.0%)	16 (88.9%)	23 (60.5%)
Impulsive	14 (70.0%)	9 (50.0%)	23 (60.5%)
Emotional problems	12 (60.0%)	10 (55.6%)	22 (57.9%)
Mood swings	11 (55.0%)	10 (55.6%)	21 (55.3%)
Depressed	7 (35.0%)	12 (66.7%)	19 (50.0%)
Anger	9 (45.0%)	9 (50.0%)	18 (47.4%)
Callousness	8 (40.0%)	7 (38.9%)	15 (39.5%)
Traumatic event	7 (35.0%)	6 (33.3%)	13 (34.2%)
Bullying (victim)	6 (30.0%)	6 (33.3%)	12 (31.6%)
Bullying (perpetrator)	6 (30.0%)	4 (22.2%)	10 (26.3%)

¹ Total % may be greater than 100 as respondents could endorse multiple options

² In descending order, for all presenting issues where Total frequency ≥ 10

* $p < .05$

** $p < .01$

approximately 20% rated by both groups as having “close to average” levels of difficulties, and a similar percentage rating the children as having “slightly raised” difficulties.

The 38 children attended, on average, 19.9 sessions ($SD = 11.1$), with the number of sessions ranging from 3 to 39.

Measures

As a pilot study, we used just one main outcome measure: the Strengths and Difficulties Questionnaire (SDQ): both teacher and caregiver completed versions. The SDQ is a brief behavioural screening instrument for children and young people in the 3–16 age range that can also be used to evaluate the efficacy of specific interventions (Goodman, 2001). It has been recommended for use as part of a minimum dataset for child and adolescent mental health services (CAMHS) in the UK Department of Children Schools and Families and Department of Health’s Review of Outcome Measures for children (Wolpert et al., 2008).

The SDQ consist of 25 items grouped into five subscales: emotional symptoms, conduct problems, hyperactivity, peer problems, and prosocial. Caregivers and teachers are asked to score each of the items on a three-point scale – *Not true*, *Somewhat true*, and *Certainly true* – in terms of how the child has behaved over the past six months (baseline), or one month (endpoint). The total difficulties score (SDQ-TD), the principal measure of distress, is calculated by adding the scores for the first four scales. Total difficulties scores have been shown to have good concurrent validity with other measures of child psychological distress (e.g. Goodman, 1997). Reliability of the total difficulties score is generally satisfactory, with a mean internal reliability of .73, mean retest stability after four to six months of .62 (Goodman, 2001), and acceptable levels of caregiver–teacher inter-rater reliability ($r = .62$) (Goodman, 1997). In the present sample, internal reliabilities for all subscales on both the teacher and caregiver completed versions were $> .72$, except for the caregiver completed peer problem subscale ($\alpha = .60$).

In addition to the 25 items, we used the SDQ *impact supplement*, which asks teachers and caregivers to rate the extent to which the child's difficulties interfere with their life in different domains (e.g. "home life" for caregivers, and "classroom learning" for teachers). Impact is rated on a 0 (*Not at all/Only a little*) to 2 (*A great deal*) scale, and summed to give an impact score.

PCOMS intervention: systematic client feedback

The CORS and CSRS are both visual analogue scales consisting of four 10 cm lines (Figure 1). The four 10 cm lines of the CORS total to a score of 40, three around major domains assessed by the OQ45 (Individually, Interpersonally, and Socially) and a fourth, Overall. The CSRS, like the CORS, was designed to facilitate routine monitoring and to encourage therapeutic conversations that privilege the client's experience of therapy. The CSRS monitors 6- to 12-year-olds' views of four alliance-based domains: "Listening", "How Important", "What We Did", and "Overall", with smiley/frowny faces at each end. The CSRS aims to encourage both positive and negative client feedback, and create a "safe space" for clients to voice their honest opinions about their connection to their therapist, specifically aiming to identify alliance ruptures before they may negatively impact outcome. The CORS is administered at the beginning of every session, while the CSRS is typically administered during the last five minutes of a session. In our study, it was just the child that completed the CORS and CSRS at each session, though caregiver- and teacher-completed measures can also form part of the PCOMS intervention.

Both measures can be completed either via paper/pencil or digitally on iPads/tablets. The latter form of administration is generally preferable because a graph of the scores is immediately displayed, facilitating a discussion about progress or the lack thereof. Digital administration also eliminates the need for entering scores from paper forms into a data file, thereby enhancing feasibility for front-line clinicians. Clients place a mark or move a cursor on each line according to their perception of how they are doing.

PCOMS is a "light touch, checking-in process" that usually takes about 5 minutes for administering, scoring, and integrating into the therapy (Duncan & Reese, 2015, p. 394). It aims to gently guide models and techniques toward the client's perspective, with a focus on outcome. Besides the brevity of its measures, PCOMS differs from most feedback systems in that client involvement is routine and expected; client scores on

Child Outcome Rating Scale (CORS)

Name _____ Age (Yrs.): _____
 Gender: _____
 Session # _____ Date: _____
 Who is filling out this form? Please check one: Child _____ Other person _____
 If other person, what is your relationship to this child? _____

How are you doing? How are things going in your life? Please make a mark on the scale to let us know. The closer to the smiley face, the better things are. The closer to the frowny face, things are not so good. If you are another person filling out this form, please fill out according to how you think the child is doing.

Me (How am I doing?)
 Family (How are things in my family?)
 School (How am I doing at school?)
 Everything (How is everything going?)

Better Outcomes Now
<https://www.betteroutcomesnow.com>

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Child Session Rating Scale (CSRS)

Name _____ Age (Yrs.): _____
 Gender: _____
 Session # _____ Date: _____

How was our time together today? Please put a mark on the lines below to let us know how you feel.

Listening
 I did not always listen to me. I listened to me.

How Important
 What we did and talked about was not really that important to me. What we did and talked about was important to me.

What We Did
 I did not like what we did today. I liked what we did today.

Overall
 I wish we could do something different. I hope we do it same kind of things next time.

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Figure 1. The child outcome rating scale and child session rating scale.

the progress and alliance instruments are openly shared and discussed at each administration.

After the first session, PCOMS is used to ask: Are things better or not? The CORS scores engage the child in a discussion about progress. When clients reach a plateau, or what may be the maximum benefit they will derive from service, planning for continued recovery outside of therapy starts. A more important discussion occurs when CORS scores are not increasing. The longer therapy continues without measurable change, the greater the likelihood of dropout and/or poor outcome. PCOMS is intended to stimulate all interested parties to reflect on the implications of continuing a process that is yielding little or no benefit.

Play-based counselling

The therapeutic intervention used in this trial, *play-based counselling*, is a one-to-one, evidence-based integrative approach (Cooper & Swain-Cowper, 2018; McClaughlin, Holliday, Clarke, & Ilie, 2013; Midgley & Kennedy, 2011; Ray, Armstrong, Balkin, & Jayne, 2015). It draws from three principal therapeutic traditions: person-centred (Axline, 1974; Landreth, 2002), psychodynamic (Alvarez, 2012; Lanyado & Horne, 2009; Stern, 1985), and systemic (Dowling & Osborne, 2003; Youell, 2006). The aims of play-based counselling are to (a) enable the child to settle and find a place alongside their peers in the classroom, (b) understand, and manage more effectively, their emotions and behaviour, and (c) feel more free to be curious, to learn, and to make as much educational progress as possible.

Between 12 and 36 sessions of play-based counselling are offered to each child. These are typically weekly, 50 minutes in length, at the same time each week, and in a playroom on the school site equipped with a range of toys and creative materials. Counsellors devise a contract with the child at the start of the work to articulate the

rationale for the intervention, the nature of the therapeutic relationship, the agreed boundaries, and the hoped-for outcomes of the work. Once that is established, the activities in the room are led by the child and the contract is revisited periodically to review progress. The counsellors use skills of empathic active listening, non-verbal attunement, verbal reflections, and the capacity to join dynamically with the child's play as required. Each counselling relationship is considered unique and the play-based counsellors are trained to communicate with the child in whatever way most suits that relationship. The therapy is typically terminated by mutual agreement when both the therapist and child feel it is appropriate.

Procedures

The proposal to undertake the trial was reviewed by the Research Advisory Group of the counselling organisation and approved. Ethical approval for project collaboration was provided by the University Ethics Committee of the University of Roehampton, ref PSYC 16/252.

Baseline SDQ forms were completed by caregivers and teachers typically during a meeting with the SCM, the purpose of which was to gather relevant background information about the child to inform the assessment. Endpoint SDQ forms were completed by caregivers and teachers when children reached the end of their counselling again, typically as part of a meeting with the caregiver and with the child's teacher. In some cases, the SDQ was provided for the teacher or caregiver to complete separately. Only one caregiver was ever involved in completing the SDQ forms.

There were seven SCMs across the two arms of the trial, one per school. The SCMs were all qualified therapists, based in their schools, that oversaw the mental health services.

Each child was assessed by an SCM. They were then allocated to a counsellor who was on placement at that school who was supervised by the SCM. There were ten counsellors across the three experimental schools, and 16 counsellors in the TAU schools.

Children's sessions were provided by SCMs or counsellors on placement. Of the 38 children who received counselling, 20 had their sessions provided by a counsellor who was qualified to Level 3 (equivalent to the final year of school-level education) and working towards a Level 4 qualification (equivalent to the first year of a degree qualification), and 18 had sessions with a counsellor already qualified at Level 4 and above.

Counsellors and supervisors in the experimental arm were trained online using the PCOMS tools via the Better Outcomes Now (BON) website. They were required to watch three online videos: "The Nuances of the Outcomes Rating Scale", "The Nuances of the Session Rating Scale," and "Youth, Families and Better Outcomes Now: Dealing with Complexities". They then participated in an online "Question and Answer" webinar with the second author, a founder of PCOMS. Some counsellors were not able to join the live webinar which was recorded so they could view it afterwards.

Data analysis

Feasibility of our design was assessed descriptively. We examined recruitment rates, informal feedback from the school-based counsellors, and counsellors' use of the PCOMS training and intervention tools.

Outcome data were analysed using STATA 14 (StataCorp, 2015). Multilevel modelling was considered, but rejected, as there was no evidence of a school level effect. Hence, we conducted single-level regression analyses, using endpoint scores on the caregiver completed and teacher completed SDQ scales and subscales as our dependent variables, and the respective baseline score as our initial independent variables. For each analysis, we then entered the treatment allocation to see if it significantly predicted the endpoint score, reporting both raw and standardized beta coefficients.

Effect sizes between conditions at endpoint were calculated using Hedges' g . This is similar to Cohen's d but adjusts for small sample sizes.

As an exploratory study, we tested at $p < .05$, and conducted a complete analysis rather than imputing missing scores.

Results

Feasibility

On average, we recruited into the trial 4.9 children per school, or 2.4 children per school per term.

There were several indications that counsellors' adherence to the PCOMS intervention was low. First, due to a lack of access to tablets in schools and other technical issues (e.g. poor internet access), the CORS and CSRS had only been completed using the online option, rather than paper, for three of the 18 children in the PCOMS group. Second, there was little evidence that the counsellors had used the Better Outcomes Now online resources. Third, the self-adherence rating form, to assess adherence to the PCOMS intervention, was not used. Fourth, nine of the 18 clients (50%) in the PCOMS condition had baseline CORS scores that should have been considered "invalid" by their counsellors. This is because they were over a cutpoint (32 out of 40) which, in PCOMS training material, is considered indicative of good levels of mental health. Fifth, aside from an initial webinar, the SCMs had not had contact with the second author/PCOMS consultant, for further training and consultation.

Informal feedback from the three SCMs at the experimental schools indicated a number of issues with the PCOMS training and intervention. They reported it had been difficult, for them and their counsellors, to find time to do the measures and enter them on the website; and that there were practical challenges with accessing the PCOMS website and using it efficiently. They also felt that having purely online, webinar training was less effective than face-to-face training; and that, even with online training, it had been difficult to find agreed days, with teams dispersed across the UK. The SCMs also said that, as some of the counsellors used in this trial were trainees, a higher level of supervision was required.

Indicators of effect

Table 2 presents results for our linear regression analysis of treatment effects, and Table 3 presents baseline and endpoint scores with between group effect sizes at endpoint.

On the teacher completed SDQ-TD, participants in the treatment as usual group improved by 1.1 point, while participants in the PCOMS group improved by 5.3 points (Figure 2). The treatment effect was not significant ($p = .063$). Hedges' g at endpoint was 0.53 in favour of the PCOMS group (95% CI: -0.20 – 1.20). On the caregiver completed

Table 2. Regression coefficients for treatment effects.

	Treatment effects			
	<i>b</i>	Std. Error	Beta	<i>p</i> -value
Predicting Teacher Completed SDQ				
Endpoint Total SDQ	-4.16	2.15	-0.27	0.063
Endpoint Emotional SDQ	-0.40	0.85	-0.07	0.638
Endpoint Conduct SDQ	-1.48	0.64	-0.31	0.029*
Endpoint Hyperactivity SDQ	-1.62	0.77	-0.28	0.045*
Endpoint Peer SDQ	-0.66	0.56	-0.16	0.248
Endpoint Prosocial SDQ	0.97	0.86	0.21	0.268
Endpoint Total Impact Score	-1.02	0.76	-0.23	0.192
Predicting Caregiver Completed SDQ				
Endpoint Total SDQ	-6.64	2.51	-0.42	0.015*
Endpoint Emotional SDQ	-2.64	1.13	-0.52	0.030*
Endpoint Conduct SDQ	-0.71	0.63	-0.17	0.273
Endpoint Hyperactivity SDQ	-1.72	1.11	-0.24	0.136
Endpoint Peer SDQ	-0.27	0.85	-0.05	0.752
Endpoint Prosocial SDQ	0.78	0.68	0.22	0.262
Endpoint Total Impact Score	-1.77	1.13	-0.33	0.134

**p* < 0.05

Table 3. Baseline and endpoint scores for TAU and PCOMS groups, with effect sizes at endpoint.

	TAU		PCOMS		N	Baseline		Endpoint		N	Hedges' <i>g</i>	CI 95%
	Baseline		Endpoint			Baseline		Endpoint				
	Mean	SD	Mean	SD		Mean	SD	Mean	SD			
Teacher completed SDQ												
Total SDQ	17.2	7.0	16.1	8.3	16	17.3	8.7	12.0	7.2	15	0.51	-0.195 1.201
Emotional Subscale SDQ	5.3	3.2	3.6	3.2	16	4.6	3.4	2.9	2.5	15	0.25	-0.438 0.940
Conduct Subscale SDQ	2.9	2.4	3.7	2.2	16	3.4	3.4	2.5	2.6	15	0.49	-0.209 1.186
Hyperactivity Subscale SDQ	5.9	2.9	5.5	2.8	16	6.1	3.3	4.0	3.0	15	0.51	-0.191 1.206
Peer Subscale SDQ	3.1	2.4	3.3	2.3	16	3.3	2.9	2.7	1.9	15	0.27	-0.422 0.957
Prosocial Subscale SDQ	6.4	2.9	5.9	2.7	16	6.6	2.4	6.9	1.9	15	-0.41	-1.097 0.291
Total Impact Score SDQ	2.6	2.1	2.2	2.5	16	2.1	2.1	1.0	2.0	15	0.52	-0.185 1.213
Caregiver completed SDQ												
Total SDQ	14.6	7.4	15.9	7.9	13	19.2	6.4	13.2	8.6	11	0.32	-0.461 1.101
Emotional Subscale SDQ	3.2	2.3	4.2	2.2	13	5.9	2.4	2.8	2.9	11	0.54	-0.260 1.322
Conduct Subscale SDQ	2.8	2.5	2.3	2.2	13	4.2	2.4	2.5	2.1	11	-0.07	-0.841 0.710
Hyperactivity Subscale SDQ	6.2	3.3	6.4	3.8	13	5.5	1.8	4.1	2.9	11	0.64	-0.165 1.430
Peer Subscale SDQ	2.5	2.0	3.0	2.5	13	3.6	1.7	3.8	2.7	11	-0.30	-1.080 0.481
Prosocial Subscale SDQ	8.2	1.9	8.0	2.2	13	9.0	0.9	9.2	0.9	11	-0.65	-1.442 0.155
Total Impact Score SDQ	1.8	1.7	2.3	3.0	13	3.4	3.3	1.1	2.3	11	0.43	-0.357 1.214

SDQ-TD, participants in the treatment as usual group deteriorated by 1.3 point, while participants in the PCOMS group improved by 6 points (Figure 3). The treatment effect was significant (*p* = .015). Hedges' *g* at endpoint was 0.32 in favour of the PCOMS group (95% CI: -0.46-1.10).

Two of the six secondary outcomes on the teacher completed SDQ showed significant treatment effects in favour of the PCOMS condition. Participants in the PCOMS group showed a significantly greater reduction on the conduct problems subscale (*p* = .03, *g* = 0.49, 95% CI: -0.21-1.19), and a significantly greater reduction on the hyperactivity subscale (*p* = .05, *g* = 0.51, 95% CI: -0.19-1.21). On the caregiver completed SDQ, just one secondary outcome showed a significant treatment effect, with participants in the PCOMS

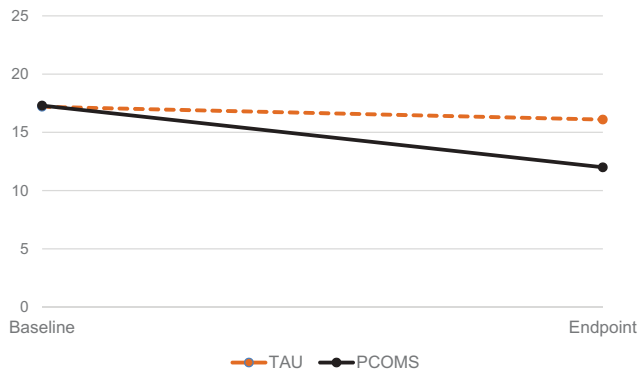


Figure 2. Teacher completed SDQ-TD: change from baseline to endpoint for TAU and PCOMS groups.

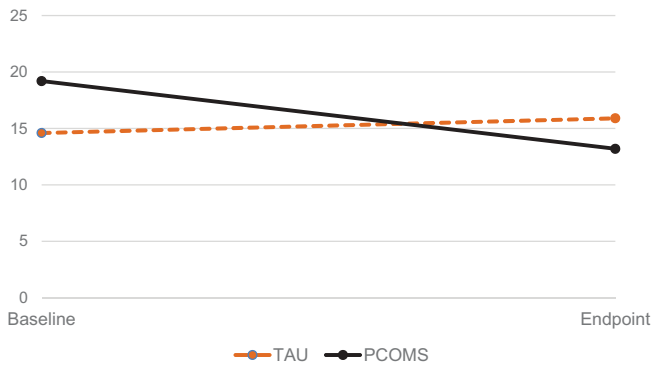


Figure 3. Caregiver completed SDQ-TD: change from baseline to endpoint for TAU and PCOMS groups.

group showed a significantly greater reduction on the emotional symptoms subscale ($p = .03$, $g = 0.25$, 95% CI: $-0.44-0.94$). Across all secondary outcomes, clients in the PCOMS condition showed greater improvement than clients in the TAU condition, with standardised *Beta* coefficients ranging from .05 to .52.

Discussion

Feasibility

Although our study showed that a cluster design of this type was, in principle, feasible, we identified a number of challenges that would need to be addressed for a definitive trial.

First, rates of school dropout were high. To some extent, this could be mitigated by a “rolling” process of recruitment, with additional schools randomized into the trial as it progressed. However, given the need for school staff and counsellors to establish clear and consistent means of adhering to the PCOMS procedures (see below), such “turn-over” may create its own difficulties. Rather, it may be preferable to ensure that schools

only enter the project if they are willing, and able, to commit to its full duration, as far as circumstances can allow.

For a future design of this type, mechanisms are also needed to ensure a greater completion of outcome measures by caregivers. This is a common challenge for research in the school counselling field (e.g. Daniunaite, Cooper, & Forster, 2015). However, there are several ways in which it could be addressed. For instance, eligibility criterion could include a commitment from caregivers to complete endpoint forms, caregivers could be provided with a small incentive for doing so (such as high street vouchers), or research staff could be employed with a specific remit to follow up non-responders. Ideally, a future study would also include completion of the PCOMS measures by caregivers and teachers, as a means of supporting the feedback intervention. However, the added value of attaining such responses would need to be carefully weighed up against the considerable additional effort of striving to achieve this. One compromise solution might be to invite feedback from caregivers and teachers at fairly infrequent intervals: for instance, once a month.

A third major challenge for a design of this type is technical issues. Clearly, for a future fully-powered study, handheld 4G-enabled tablet devices would need to be factored in to a budget from the start, with adequate software – such as internet browsers – to be able to efficiently use Better Outcomes Now.

Ensuring that school-based counsellors and counsellors on placement utilize, and adhere fully to, the PCOMS intervention emerged as another major challenge for future studies. This may require clearer agreement with, and “buy in” from, counsellors regarding the level of commitment involved. Employing PCOMS “champions” – on site, or across a few local sites – could be a valuable means of maintaining staff motivation and skills, thereby enhancing effectiveness. This could also allow for the possibility of face-to-face training. Clustering the trial within a small geographical area, rather than across the country, may also allow for more coordinated training events. A future trial should also ensure full data collection on counsellors’ characteristics, including demographics, initial training, and training with PCOMS. This was absent in the present study.

The importance of ensuring counsellor adherence in any future trial is underlined by previous research findings. For example, De Jong, Van Sluis, Annet Nugter, Heiser, and Spinhoven (2012) did not find a significant effect for feedback via the OQ over TAU on the total sample, but feedback was effective for those therapists who used the feedback. Similarly, of the RCTs that included both the outcome and alliance components of PCOMS and an adequate dose of treatment (at least four sessions), all three studies that did not find an effect for PCOMS had significant adherence issues and/or therapists who perceived the feedback as not useful (Davidsen et al., 2017; Janse et al., 2017; van Oenen et al., 2016). PCOMS trials that include adherence checks and reinforcements of PCOMS use via supervision, graph checking, and data review have found a significant feedback effect (e.g. She et al., 2018).

Adherence may be particularly important to the PCOMS feedback effect. PCOMS is intended to be used to discuss outcome and alliance with clients in session. It is therefore not only a monitoring system to inform the therapist but also requires discussion and collaboration with clients. Initial training combined with a lack of organizational commitment, as demonstrated in Davidsen et al. (2017), will not sustain implementation or result in therapist perceptions of usefulness. Success requires an

organizational commitment to data collection, timely identification of not-on-track clients, and dissemination of the data to clinicians and supervisors, as well ongoing attention to adherence and data integrity (Duncan, 2014; Duncan & Reese, 2015). It is noteworthy technological obstacles and adherence issues led to the discontinuation of a similar school-based study in the US (Gillaspy, Murphy, Duncan, & Bohanske, 2014).

Outcomes

Given this need for therapist adherence, the low levels achieved in our trial, and our relatively small N, the effects we found for the PCOMS intervention were impressive. Effects were significant on one of our two principal outcome measures, the caregiver completed SDQ-TD, with a trend towards PCOMS superiority on the other ($p = .06$). Change was consistently in favour of the PCOMS group, with effect sizes in the small to moderate range. It should be noted, though, that outcomes in our TAU group were particularly poor, as compared against benchmark norms. For instance, the reduction of 1.1 points on the teacher-rated SDQ-TD compares against a reduction of 3.4 points (95% CI = 3.1–3.6 points) in an evaluation of 3,222 children with the same counselling provider (Daniunaite et al., 2015).

In terms of powering a major trial of this type, our effect sizes of 0.51 and 0.32, on the teacher completed and caregiver completed SDQ-TD, respectively, compare relatively well against effects of systematic feedback for young people ($g = 0.20$, Tam & Ronan, 2017), and of the PCOMS for adults ($SMD = 0.40$, Lambert et al., 2018). Nevertheless, to be prudent, it may be appropriate to use a predicted effect size for PCOMS at the lower end of this range, 0.30 or 0.25, to guard sufficiently against the risks of Type II errors. Given the challenges of collecting caregiver completed outcome forms, it may also be prudent, as with Daniunaite et al. (2015), to use the teacher completed forms as the principal outcome measure.

Summary

Our findings indicate that it is possible to conduct a controlled study of systematic feedback with children, given adequate participant recruitment and retention rates. However, any future study would need to pay close attention to ensuring that counsellors, and organisations, adhered closely to the intended PCOMS procedures. It would also need to ensure adequate levels of school retention, and measure completion by caregivers. Consistent with previous literature, the findings of our study suggest that the PCOMS intervention may have a beneficial effect on therapy with children and is worthy of investigation in a definitive trial.

Disclosure statement

Barry L. Duncan is a co-holder of the copyright of the Partners for Change Outcome Management System (PCOMS) instruments. The measures are free for individual use but Duncan receives royalties from licenses issued to groups and organizations. In addition, the web-based application of PCOMS, BetterOutcomesNow.com, is a commercial product and he receives profits based on sales.

ORCID

Mick Cooper  <http://orcid.org/0000-0003-1492-2260>

Katalin Toth  <http://orcid.org/0000-0002-9387-3614>

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