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A Naturalistic Pilot Study Assessing the Impact of Assessment Pathways and Intake Methods within Improving Access to Psychological Therapies (IAPT) Services

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A Naturalistic Pilot Study Assessing the Impact of Assessment Pathways and Intake Methods within Improving Access to Psychological Therapies (IAPT) Services

Abstract

Fast access pathways characterise many Improving Access to Psychological Therapy (IAPT) services, allowing them to see increasing numbers of referrals year-on-year. At the same time, emerging research is highlighting potential care inefficiencies developing including early treatment disengagement, inappropriate treatment allocation, less than optimal clinical outcomes and repeat referrals. Integrating more stratified models based on in-depth and comprehensive assessment techniques which include some therapeutic input could help better target interventions. This could lead to improved engagement and clinical outcomes while also providing enough therapeutic support to those attending one-session only. This pilot study assesses the impact of assessment pathways and intake methods involving a 90-minute face-to-face Therapeutic Consultation (TC) compared with a 45-minute over-the-phone assessment session across two IAPT providers in the south of England and three assessment pathways involving elements of either method and service. Using an observational analysis of routinely collected data across 12-months, intake scores, attendance data, and clinical measures of reliable recovery and improvement were considered. The comparisons of intake method reported no significant differences when both services were included, however there

were significant differences in treatment effect sizes and session attendance on an assessment pathway basis. Where assessment sessions were delivered, there was a higher rate of disengagement between sessions one and two indicating increased attrition. Based on the initial findings and supporting literature, there appears to great promise in exploring pathway modelling and intake processes within IAPT services.

Keywords: Improving Access to Psychological Therapies; Assessment; Stepped-Care; Stratified-Care; Therapeutic Consultation

Introduction

Modelling a mental health service is important for meeting the needs of the local population and ensuring best clinical practice is delivered in an efficient manner. The stepped-care model, as recommended by the National Institute for Health and Care Excellence (NICE, 2011) and widely adopted throughout the English national Improving Access to Psychological Therapy (IAPT) programme, organises care along low-intensity (e.g. psychoeducation or guided self-help) and high-intensity interventions (e.g. face-to-face Cognitive Behavioural Therapy (CBT) or Counselling for Depression) (IAPT, 2018a). In general terms, psychotherapeutic interventions involve a set of techniques which focus on alleviating suffering by helping individuals learn about their condition, feelings, thoughts, and behaviours. Within a stepped-care model, patients referred to IAPT services receive the least intrusive intervention available according to their current level of distress and impairment. Individuals with mild-to-moderate condition severities

are initially offered low-intensity before a correcting mechanism of stepping up to higher intensity interventions is utilised should the initial course be deemed unsuccessful (Bower & Gilbody, 2005). Stepped-care models attempt to address limited accessibility to services by intentionally allocating patients to less resource intensive options, optimising delivery efficiency with the understanding that high-intensity treatments are reserved for those experiencing greater distress, impairment, and difficulty engaging with lower intensity alternatives.

As part of the stepped-care model within IAPT services, there has been a growing deployment of Psychological Wellbeing Practitioners (PWPs) delivering telephone-based, low-intensity interventions to cope with the volume of referrals accessing treatment (IAPT Manual, 2018; (Jones, Bale, & Morera, 2013). Accordingly, this has had ramifications for intake processes and in particular, the assessment session. Service models vary widely between services due to numerous organisational factors, including staff and treatment availability, local geography, and commissioning requirements (Clark et al., 2018). Perhaps in a bid to optimise intake capacity, PWPs and less expensive therapists working within closely defined clinical parameters are being expected to undertake assessment duties, including triaging and risk appraisals, often over-the-phone (Cairns, 2013; IAPT Manual, 2018; Jones et al., 2013; Rizq, 2012). The stepped care model permits a broader group of practitioners, including PWPs, to conduct assessments, as any issues in allocation can be corrected during the course of treatment. There is evidence to suggest telephone working can be preferable for patients

as it helps resolve geographical boundaries and offers a platform of relative anonymity (Bennett-Levy, 2010; Jones et al., 2013). Although patients might be initially apprehensive about over-the-phone working, with appropriate early support this can be overcome (Bennett-Levy, 2010; Jones et al., 2013). Elsewhere, research has reported outcome equivalency between high and low-intensity over-the-phone therapies, with the latter delivering cost-savings overall (Hammond et al., 2012).

Nevertheless, according to the literature and latest annual data tables, a large proportion of referrals appear to disengage between their first and second appointments (Glover, Webb, & Evison, 2010; Richards & Borglin, 2011). The latest annual data tables report that around 40% of those entering treatment do not attend more than one session (IAPT, 2018b). While this is not necessarily indicative of a negative outcome, it is notable that almost half are discharged having attended one session only (IAPT, 2018b; (Richards & Borglin, 2011). Other evidence finds wide variability in stepped-care modelling between services (Clark et al., 2018; Glover et al., 2010; Richards et al., 2012), little discrimination in condition severity between low and high-intensity interventions (Bower et al., 2013; Chan & Adams, 2014), highly complex cases including those with personality disorders being referred, assessed and treated (Goddard, Wingrove, & Moran, 2015; Hepgul et al., 2016), poor to variable rates of stepping up (Clark et al., 2018; Delgadillo, Gellatly, & Stephenson-Bellwood, 2013; Richards et al., 2012), moderate rates of re-referral (Cairns, 2013; Hepgul et al., 2016), and poor durability of low-intensity treatments beyond one

year (Ali et al., 2017). These findings suggest that referrals might not be receiving adequate treatment initially or during the course of treatment.

Intake assessments can be undertaken in various ways and for different purposes. It is an opportunity to screen and triage incoming referrals for their eligibility and level of priority, including activities such as problem formulation, risk screening, mental health condition clustering, treatment planning, and in some cases, therapeutic support (Jones et al., 2013). Indeed, many IAPT services now combine both the assessment and the first therapeutic session into one appointment (Clark et al., 2018) IAPT, 2018b). Depending on several organisational factors and external pressures, assessments can take place face-to-face, over-the-phone or online, with varying levels of experienced staff, and follow structured or flexible protocols (Jones et al., 2013). Standardised assessment tools and disorder-specific psychometric questionnaires can facilitate professional judgment which, in keeping with patient preferences, treatment guidance and availability in the dose, intensity, and frequency of treatment, allocate individuals to suitable intervention types through shared-decision making. Although stepped-care modelling has shown promise within IAPT services, the assessment and allocation of referrals has received less attention (Clark et al., 2018).

While the use of less expensive therapists working within closely defined clinical parameters might be a strategy to increase the volume of referrals entering services, it is no guarantee the patients they are assessing and, in some cases, treating, are suitable for

their credentials, role, and prior experiences or training. A greater emphasis on stratified techniques, such as targeting interventions on the basis of a robust and in-depth assessments with more experienced staff represents a possible alternative (Cowley & Groves, 2016; van Straten, Hill, Richards, & Cuijpers, 2015). Evidence has demonstrated in-depth assessments can better identify the baseline characteristics linked with poorer outcomes, such as comorbidity, impairment, and lower social functioning (Cairns, 2013; Goddard et al., 2015; Hepgul et al., 2016). By systematically exploring an individual's condition and circumstances, allocation to treatments may be more efficient leading to enhanced engagement and clinical outcomes. As this might be the only session a patient needs or wants, a greater inclusion of therapeutic components might be an effective way of providing support while freeing up other resources (Cowley & Groves, 2016). Services which focus on treatment, rather than providing only assessment, advice, or signposting have been associated with improved clinical outcomes (Clark et al., 2018).

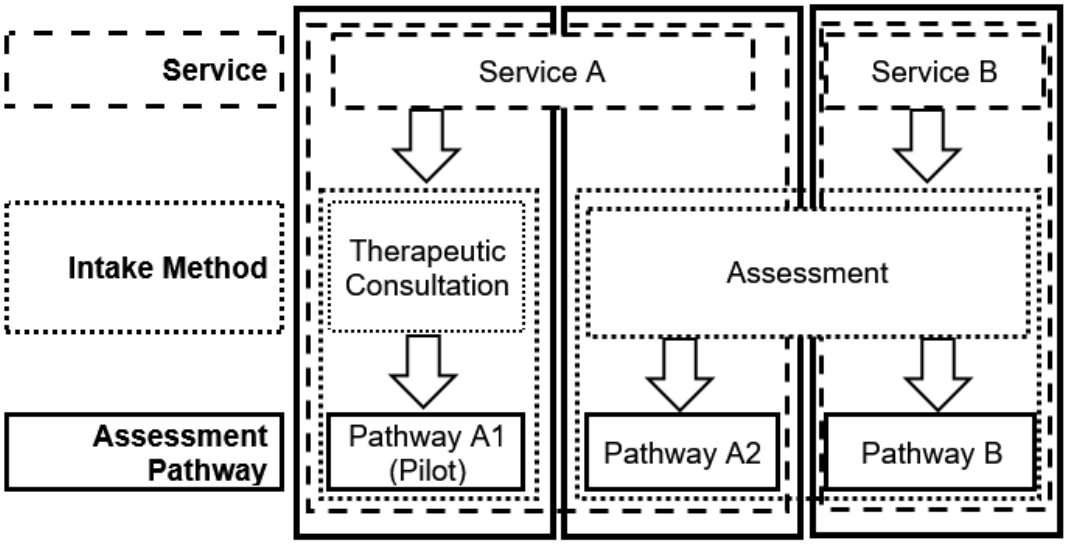
This paper presents the findings of a piloted implementation of a more in-depth and systematic Therapeutic Consultation (TC) session within an IAPT service setting. Considering the influence of organisational factors and service pathways, this research will consider the effects of intake methods, service differences, and assessment pathways for its effects on clinical outcomes, session attendance, and discharge categories.

Methods

Settings and procedure

This study undertook a retrospective observational analysis of routinely collected data across two IAPT services in the south of England operating under a single IAPT contract. Services supported referrals with common mental health problems within a primary care setting, including depression and anxiety disorders within the mild, moderate and severe range of condition severities. The area covered six GP practice clusters and all referrals were undertaken by one service (Service B) who would either continue to treat or triage individuals to other providers within the area. Within one service (Service A), a TC was piloted in place of an assessment during a 12-month period within one GP cluster. Incoming referrals were registered on a shared system and those in the pilot GP cluster were allocated automatically to Service A to receive a TC. All other clusters were allocated to Service B for an assessment and each pathway was independent meaning no individual received both a TC and an assessment. All other referrals in the remaining GP clusters treated at Service A continued with the traditional assessment pathway via Service B. Referrals treated could therefore be split by service (Service A; Service B), intake method (TC; Assessment), or assessment pathway (Pathway A1 (Pilot); Pathway A2; Pathway B) (Figure 1). Both services achieved the national access rate targets for treating 75% of referrals within 6-weeks and 95% within 18-weeks (IAPT Manual, 2018). An analysis was undertaken to assess the impact of service, intake method, and assessment pathway on clinical outcomes, session attendance, and discharge categories.

Figure 1: A conceptual diagram mapping the Service, Intake Method and Assessment Pathways between settings.



The therapeutic consultation

The TC is a 90-minute, in-depth, solution-focused session undertaken by an experienced practitioner. Also known as the 'Cardiff Model', it was first developed and trialled in University student wellbeing services to meet increasing demands and academic scheduling (Cowley & Groves, 2016). The session involves a greater inclusion of therapeutic components to support individuals and more thoroughly understand their condition and circumstances compared with shorter assessment sessions. It was determined that a TC might improve the allocation of referrals and provide adequate care to those receiving one-session only. Considering the TC may have been the only session required, a follow-up appointment was scheduled one-week later to assess the change in outcome scores for those attending a TC only.

Within the pilot service, half of the practitioners delivered high-intensity interventions only and were selected to conduct the TC, with the other half delivering a mixture of low and high-intensity treatments. All practitioners contributed to treatment regardless of assessment pathway and allocation was based on treatment availability, patient preferences, problem description, and condition severity. A designated administrator scheduled all TCs based on workforce availability and organisational capacity. Training was provided at the start of the project and at the midpoint as a top-up by an external team of skilled practitioners over a one-day workshop. The external team monitored the project throughout using ongoing data analyses and quarterly meetings with practitioners.

The assessment session

Service B was responsible for conducting all assessment sessions for the remaining GP clusters outside of the pilot. This session involved a 45-minute, telephone triage assessment with a qualified, low-intensity PWP using a screening schedule designed to gather information regarding a referral's presenting condition and preferences for therapy. Once completed, referrals were either allocated to Service B or Service A for treatment or discharge.

Measures

The primary measures used within IAPT services, including these, were the 9-item Patient Health Questionnaire-9 (PHQ-9) for depression (Kroenke, Spitzer, & Williams, 2001) and the 7-item Generalised Anxiety Disorder-7 (GAD-7) for generalised anxiety (Spitzer, Kroenke, Williams, & Löwe, 2006). Both items use a self-report Likert-scale to rate the frequency of disorder-specific symptoms over the last 2-weeks. The PHQ-9 score ranges from 0 to 27 with a cut-off of 10 or above distinguishing clinical and non-clinical populations and includes example items such as '*Little interest or pleasure in doing things*' and '*Feeling down, depressed, or hopeless*' (Kroenke et al., 2001). The GAD-7 score ranges from 0 to 21 with a cut-off of 8 or above distinguishing clinical and non-clinical populations within the IAPT programme and includes example items such as '*Feeling nervous, anxious, or on edge*' and '*Trouble relaxing*' (IAPT Manual 2018; Spitzer et al., 2006).

These measures are used to screen referrals and monitor change during treatment through the collection of sessional, routine outcome monitoring. Although they are not intended as a substitute for clinical decision-making, they are a useful indicator for indicating initial severity and clinical outcome. Reliable improvement is determined as a shift in scores that is above measurement error between the first and final scores, while reliable recovery is defined as a shift in scores that is above measurement error while moving from above a clinical cut-off, used to detect the clinical range and presence of conditions, to below cut-off upon completing treatment. For the PHQ-9, a score change of 6 or more denotes reliable change (Kroenke et al., 2001), while a score change of 4 or more denotes reliable change for the GAD-7 (IAPT Manual 2018; Spitzer et al., 2006).

Discharge category

Upon discharging a referral, a therapist is required to assign a discharge category to provide more information and context about the nature of their outcome, including whether they completed scheduled treatment, declined treatment, or dropped out of treatment. These categories were assessed to gage the nature of a referral's discharge beyond clinical outcome and engagement data.

Interventions

Both Service A and Service B offered a range of evidence-based psychotherapeutic interventions, as recommended by NICE (2011), including one-to-one or group-based treatments, delivered face-to-face or via telephone. These interventions are identified by the final intervention type and grouped according to Step-2 Course (e.g. *Anger Management*; *Improving Self-Esteem*), Step-2 One-to-one (e.g. *Low-intensity CBT*) and Step-3 One-to-one (e.g. *High-intensity CBT*; *Counselling for Depression*).

Ethical statement

Approval for accessing the anonymised referral records was granted by the local Clinical Commissioning Group research ethics committee and participating IAPT providers. Restrictions in the data meant that no patient identifiable information, including demographic data, was obtainable.

Statistical analysis

All activity was recorded using the IAPTus software programme. Extracted data were obtained via a Microsoft Excel file in an anonymised format and cleaned for analysis. Descriptive statistics were used to profile the samples and inferential statistics were undertaken using SPSS v23. Pre and post-treatment scores across service, intake method, and assessment pathway were compared using effect sizes and a one-way ANCOVA to control for pre-treatment score severity. Likewise, a sub-group analysis assessing final intervention types between variables were also conducted using this method. Differences in session attendance between variable and intervention types were assessed using one-way ANOVAs and independent t-tests and a chi-squared test of independence was performed when comparing discharge categories.

Results

Patient progress

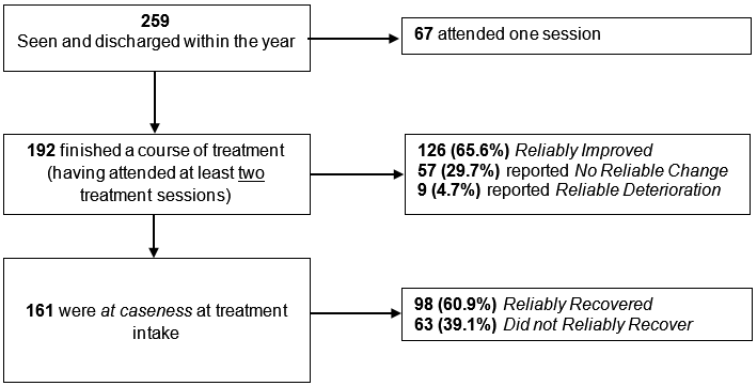
During the reporting period, between entering to completing treatment, attrition rates were evaluated to assess the transition between sessions one and two. Transition rates were higher for the TC 74.1% compared with assessment 70.3%, with 25.9% attending one session for the TC and 29.7% for the assessment method (Figure 2). These differences were more extreme when reviewing individual assessment pathways with Pathway B reporting 51.2% and Pathway A2 reporting 2.3% attending one session only.

On a service level, Service A reported a rate of 6.5% compared with Service B of 51.2% attending one session only.

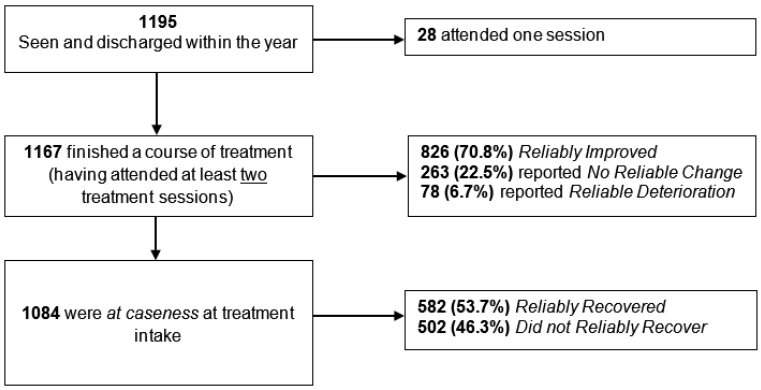
A series of chi-squared tests of independence were performed between the session attendance categories and each intake method, service, and assessment pathway. The session attendance categories were split according to those who attended one session only versus those attending at least two. All expected cell frequencies were greater than five. The analyses found there were no statistically significant associations between session attendance categories and intake method ($X^2(1)=2.40$, $p=.122$) but there were between the service ($X^2(1)=484.43$, $p<.001$, Cramer's $V=.398$) and the assessment pathways ($X^2(2)=517.84$, $p<.001$, Cramer's $V=.412$). The session attendance categories of one session only were more common as a proportion on expected frequencies in Service B and Pathway B.

Figure 2: Progress maps per assessment pathway method for referrals seen and discharged within the year.

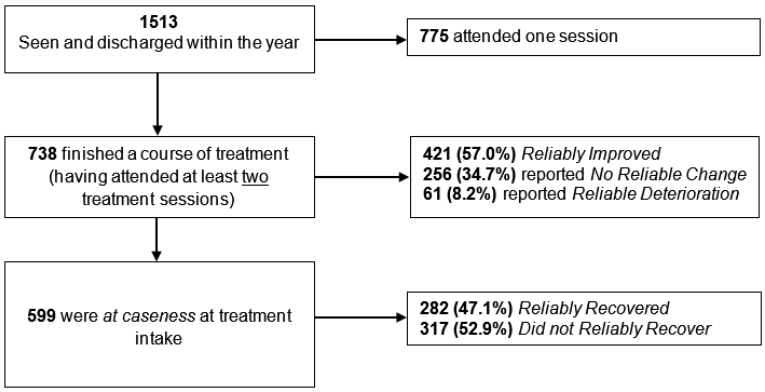
Pathway A1



Pathway A2



Pathway B



Clinical outcomes

In terms of reliable improvement, the TC (65.6%) and Assessment (65.5%) intake methods were equivalent, while Service A (70.1%) reported higher rates than Service B (57.0%) and Pathway A2 (70.8%) produced higher rates than Pathway A1 (Pilot) (65.6%)

and Pathway B (57.0%). As for reliable recovery, the TC (60.9%) showed higher rates than the Assessment (51.3%), and Service A (54.6%) reported higher rates than Service B (47.1%), while Pathway A1 (Pilot) (60.9%) produced higher rates than Pathway A2 (53.7%) and Pathway B (47.1%) (Table 1).

Table 1: A comparison of reliable recovery and improvement across intake method, service and assessment pathway

	Service A	Pathway A1 (Pilot) TC	Pathway A2	Service B Pathway B	Assessment
Reliable Improvement					
N completed treatment	1359	192	1167	738	1905
Overall rate (%/n)	70.1% (952/1359)	65.6% (126/192)	70.8% (826/1167)	57.0% (421/738)	65.5% (1247/1905)
Reliable Recovery					
N above caseness at intake completing treatment	1245	161	1084	599	1683
Overall rate (%/n)	54.6% (680/1245)	60.9% (98/161)	53.7% (582/1084)	47.1% (282/599)	51.3% (864/1683)

For the PHQ-9 measure, the TC reported pre (M=13.36, SD=6.51) and post (M=7.52, SD=6.79) outcomes and effect size (d=0.91) similar to Assessment (Pre: M=13.73, SD=6.27; Post: M=8.79, SD=6.87; d=0.99) as did the GAD-7 pre (M=11.95, SD=5.34) and post (M=6.92, SD=5.73) outcomes and effect size (d=1.02) compared with Assessment (Pre: M=12.44, SD=5.33; Post: M=8.20, SD=5.87; d=1.09). Service A reported pre (M=14.59, SD=5.94) and post (M=8.48, SD=6.91) PHQ-9 outcomes and effect size (d=0.98) higher than Service B (Pre: M=12.88, SD=6.49; Post: M=9.01, SD=6.79 ; d=0.63) as did the pre (M=13.09, SD=4.98) and post (M=7.48, SD=5.78) GAD-7 outcomes and effect size (d=1.09) compared with Service B (Pre: M=11.77, SD=5.56; Post: M=8.93, SD=5.90; d=0.73).

Pathway B reported pre (M=12.88, SD=6.49) and post (M=9.01, SD=6.79) PHQ-9 outcomes and effect size (d=0.63) lower than Pathway A1 (Pilot) (M=13.36, SD=6.51; Post: M=7.52, SD=6.79; d=0.91) and Pathway A2 (M=14.86, SD=5.77; Post: M=7.52, SD=6.79; d=0.99), while Pathway B reported pre (M=11.77, SD=5.56) and post (M=8.93, SD=5.90) GAD-7 outcomes and effect size (d=0.63) lower than Pathway A1 (Pilot) (M=11.95, SD=5.34; Post: M=6.92, SD=5.73; d=1.02) and Pathway A2 (M=13.34, SD=4.87; Post: M=7.58, SD=5.79; d=0.63).

A one-way ANCOVA was undertaken to determine the effect of the intake method, service, and assessment pathway on post-treatment outcomes after controlling for intake scores for both the PHQ-9 and GAD-7. For PHQ-9, after adjustment, it was found there were no significant differences between intake methods, $F(1,2097) = 2.202$, $p = .138$, partial $\eta2 = .001$) but there were significant differences between services, $F(1,2097) = 24.238$, $p< .001$, partial $\eta2 = .014$) and assessment pathways $F(2,2096) = 12.230$, $p < .001$, partial $\eta2 < .014$. Post-hoc analyses using a Bonferroni adjustment found that the adjusted post-treatment scores were significantly higher in Pathway B (M=9.92, SE=.306) than Pathway A1 (Pilot) (M=8.00, SE=.435) (Mdiff=1.919, 95% CI [0.647, 3.191], $p = .001$) and Pathway A2 (M=8.23, SE=.183) (Mdiff=1.691, 95% CI [0.831, 2.55], $p < .001$) but there were no significant differences between Pathway A1 (Pilot) and Pathway A2 (Mdiff=0.228, 95% CI [-0.905, 1.361], $p = 1.00$). For GAD-7, there were significant differences in post-treatment scores between intake methods $F(1,2097) = 6.388$, $p = .012$, partial $\eta2 = .004$), services, $F(1,2097) = 52.396$, $p< .001$, partial $\eta2 = .029$, and assessment

pathway, F(2,2096) = 26.670, p < .001, partial η2 = .029. Post-hoc analyses using a Bonferroni adjustment found that the adjusted post-treatment scores were significantly higher in Pathway B (M=9.33, SE=.237) than Pathway A1 (Pilot) (M=6.97, SE=.380) (Mdiff = 2.361, 95% CI [1.29, 3.432], p < .001) and Pathway A2 (M=7.37, SE=.160) (Mdiff = 1.96, 95% CI [1.273, 2.646], p < .001) but there were no significant differences between Pathway A1 (Pilot) and Pathway A2 (Mdiff = .401, 95% CI [-0.587, 1.390], p = .993) (Table 2).

Table 2: Adjusted and unadjusted assessment pathway means and variability for post-PHQ-9 and GAD-7 scores with intake scores as a covariate

		Unadjusted		Adjusted	
PHQ-9	**N**	**M**	**SD**	**M**	**SE**
Service A	1359	8.46	6.93	8.20	.169
Pathway A1 (Pilot)/TC	192	7.56	6.79	8.00	.435
Pathway A2	1167	8.62	6.94	8.23	.183
Service B/Pathway B	738	9.08	6.96	9.92	.306
Assessment	1905	8.74	6.95	8.68	.158
GAD-7	**N**	**M**	**SD**	**M**	**SE**
Service A	1359	7.49	5.81	7.31	.147
Pathway A1 (Pilot)/TC	192	6.67	5.60	6.97	.380
Pathway A2	1167	7.63	5.83	7.37	.160
Service B/Pathway B	738	8.86	5.87	9.33	.237
Assessment	1905	8.02	5.87	7.98	.133

N= Number of scores; M= Mean; SD = Standard Deviation; SE = Standard Error

Session attendance

Descriptive statistics indicated that the TC (M=6.59, SD=4.23) and Assessment (M=6.83, SD=4.08) intake methods reported equivalent attendance levels, while Service B (M=6.22, SD=4.37) had a lower session attendance than Service A (M=7.16, SD=3.88), and Pathway

B (M=6.22, SD=4.37) reported the lowest session attendance, followed closely by Pathway A1 (Pilot) (M=6.59, SD=4.23), and then Pathway A2 (M=7.25, SD=3.81) (Table 3).

Independent t-tests indicated there were no significant differences between the TC and Assessment intake methods, t(2052) = .783, p=.434, but there were significant differences between services, t(1441.05) = 4.890, p<.001. A one-way ANOVA reported the differences in the number of sessions between assessment pathways to be statistically significant, Welch's F(2,517.75) = 14.472, p<.001. Games-Howell post hoc analyses, with a Bonferroni adjustment for multiple comparisons, reported a statistically significant mean difference between Pathway A2 and Pathway B (1.04, 95% CI [.577, 1.50], p < .001) but no differences between Pathway A1 (Pilot) and Pathway A2 (-.665, 95% CI [-.104, 1.43], p = .105) or Pathway A1 (Pilot) and Pathway B (.371, 95% CI [-.439, 1.18], p = .528) (Table 3).

Table 3: A comparison of the number of attended sessions between intake method, service, and assessment pathway

				Test Statistic	***p-value***
	Pathway A1 (Pilot)	***Pathway A2***	***Pathway B***		
Assessment pathway	6.59 (4.23)	7.25 (3.81)	6.22 (4.37)	*Welch's F(2,517.75) = 14.472*	*<.001**
	TC	***Assessment***			
Intake method	6.59 (4.23)	6.83 (4.08)		*t(2052) = .783*	*.434*
	Service A	**Service B**			
Service	7.16 (3.88)	6.22 (4.37)		*t(1441.05) = 4.890*	*<.001**

*statistically significant

Discharge categories

A series of chi-squared tests of independence were performed between discharge categories and each intake method, service, and assessment pathway. Due to the low numbers in certain categories, the discharge categories for comparison were 'Completed scheduled treatment', 'Declined Treatment', 'Dropped out of treatment' and 'Other'[1]. Table 4 provides a cross-tabulation of discharge categories per each variable using an absolute standardised residual of two to three or more to identify cells which deviated greatly from independence (Agresti & Franklin, 2014). All expected cell frequencies were greater than five.

There was a statistically significant association between discharge categories and intake method ($X^2(3)=7.91$, $p=.048$) and this association was small (Cramer's $V=.052$) (Cohen, 1998). Within these parameters, the discharge category of 'Completed scheduled treatment' was higher in the TC (59.4%) compared with Assessment (50.8%), while 'Declined treatment' was lower in the TC (9.8%) than Assessment (13.7%), and 'Dropped out of treatment' was equivalent between TC (25.8%) and Assessment (28.6%).

There was also a statistically significant association between discharge categories and each service ($X^2(3)= 407.59$, $p<.001$) and this association was moderate (Cramer's $V=.371$)

[1] '*Other'* includes '*Never attended anything'*, '*Not Suitable – No Action Taken'*, '*Not Suitable – Signposted'*, '*Referred to another therapy service*' and '*Deceased'*

(Cohen, 1998). Across services, the discharge category of 'Completed scheduled treatment' was more common in Service A (66.4%) than Service B (37.1%), while the discharge categories of 'Declined treatment' (4.4%) and 'Other' (1.7%) in Service A were lower than those of 'Declined treatment' (22.1%) and 'Other' (11.7%) in Service B. The proportions for 'Dropped out of treatment' was equivalent between Service A (27.6%) and Service B (29.0%).

There was also a statistically significant association between discharge categories and each assessment pathway ($X^2(6)=429.03$, $p<.001$) and this association was small (Cramer's V=.269) (Cohen, 1998). The discharge category of 'Completed scheduled treatment' was more common in Pathway A2 (68.0%) followed by Pathway A1 (Pilot) (59.4%) and then Pathway B (37.1%). The discharge categories of 'Declined treatment' (22.1%) and 'Other' (11.7%) were more common as a proportion on expected frequencies in Pathway B than 'Declined treatment' (9.8%) and 'Other' (5.1%) in Pathway A1 (Pilot) and 'Declined treatment' (3.0%) and 'Other' (0.9%) in Pathway A2. The proportions of 'Dropped out of treatment' was equivalent across Pathway A1 (Pilot) (25.8%), Pathway A2 (28.0%), and Pathway B (29.0%).

Table 4: Cross-tabulation of discharge categories and each intake method, service and assessment pathway

Discharge Categories	Service A	Pathway A1 (Pilot) TC	Pathway A2	Service B Pathway B	Assessment
N	1454	256	1195	1513	2708

Completed scheduled treatment	66.4%	59.4%	68.0%	37.1%	50.8%
	(15.9)	(2.6)	(14.8)	(-16.0)	(-2.6)
Declined treatment	4.4%	9.8%	3.0%	22.1%	13.7%
	(-14.2)	(-1.8)	(-13.6)	(14.3)	(1.8)
Dropped out of treatment	27.6%	25.8%	28.0%	29.0%	28.6%
	(-0.9)	(-1.0)	(-0.3)	(0.8)	(1.0)
Other	1.7%	5.1%	0.9%	11.7%	6.9%
	(-10.9)	(-1.1)	(-10.4)	(10.9)	(1.1)

Note: Proportion of discharge categories by intake method, service and assessment pathway appear as values. Adjusted residuals appear in brackets below observed frequencies.

Discussion

Summary

This pilot study evaluated the effects of a TC on clinical outcomes, session attendance, and discharge categories compared with a shorter intake assessment within two IAPT service settings. It also evaluated these effects across two services and three assessment pathways. While those receiving a TC reported similar reliable improvement and higher reliable recovery rates than the assessment condition across the two settings, once the intake scores were controlled for, the adjusted post-treatment score differences disappeared. Considering that any differences between the assessment Pathways A1 (Pilot) and B disappeared once Service A2 was included, this identifies an appreciable service effect. Research comparing stepped with usual or stratified care models have reported differential benefits of stepped-care which are likely influenced by service quality (Bower & Gilbody, 2005; Firth, Barkham, & Kellett, 2015; van Straten et al., 2015), a finding which may have been replicated here. Assuming the psychotherapeutic dose-effect literature is accurate (Owen et al., 2015), clinical outcomes may have been affected

by a higher level of engagement at Service A, in keeping with previous findings (Clark et al., 2018).

Moving from entered to completed treatment

The IAPT programme defines referrals entering treatment as attending at least one session and those completing as attending at least two (IAPT, 2018a). While it might seem like a small increase, the proportions completing having entered treatment across IAPT services constitute a substantial minority. In the IAPT (2018b) annual 2016/17 data tables, of those who received an assessment session only, around 43% were deemed suitable but declined, while only 32% were deemed not suitable or discharged by mutual agreement following advice and support. There are IAPT providers which use a greater proportion of assessment, advice, and signposting procedures which may account for these rates and do not necessarily reflect a poor outcome (Clark et al., 2018). Nevertheless, the categories recorded nationally might warrant a re-interpretation of this.

The reliance on two complete outcome measures meant a sizable minority of referrals entering treatment in this study were not considered when calculating clinical effectiveness. This was especially noticeable in the assessment Pathway B where over half did not progress further than a single session, although this rate reduced once the Service A2 cohort were included, but it was higher still than the TC or assessment Pathway A1 (Pilot).

According to the discharge categories, the TC was associated with a greater likelihood of completing scheduled treatment while the assessment cohort reported more instances of treatment being declined. Considering the higher attrition rate observed across the assessment Pathway B, this could potentially support the TC in being effective at converting referrals entering to completing treatment. That being said, this effect might be the result of the use of a follow-up procedure within the TC methodology which meant additional data was obtainable.

Organisational factors and pathway modelling

Across the two services, the intake methods did not appear to have an influence on clinical outcomes, replicating previous research comparing stepped versus usual or stratified care models (Bower & Gilbody, 2005; Firth et al., 2015; van Straten et al., 2015). Given the treatments and staff delivering them were equivalent, the intake method's effects, if any, would only be detected via an increase in statistical power. Nevertheless, what does seem important, based on this study's findings, is the assessment pathway. Ultimately, it was Service A which benefited from Service B by way of its assessment pathway (A2). Although there were few significant differences, this pathway was more effective than the TC undertaken within the same service. It might be that by offsetting assessment to another service this leads to a more appropriate allocation further on, either due to repeated assessments or early disengagement between settings.

All the same, evidence does suggest that those organisations converting a greater number of referrals to entering treatment tend to report higher reliable improvement

and recovery rates overall (Clark et al., 2018). Within this pilot study, assessment Pathway B reported the highest rates of attrition and this may be due to an emphasis on assessment, advice, and signposting. Providers mainly signposting to other services must consider the transition between services which could impact continued engagement. As a consequence, service evaluations ought to fully consider the role of assessment pathways in greater detail to confirm these possible explanations.

Considering the financial constraints and growing demand for mental health services, there has been an increasing interest in pathway modelling (IAPT Manual, 2018). The introduction of the IAPT programme has offered a new standard for primary care mental health which delivers transparency on referral, engagement and outcome processes. Recently, the programme has provided valuable insights about the impact of organisational factors on clinical outcomes (Clark et al., 2018). The analysis, involving 537,131 patients across 209 services, found that providers with a larger proportion of attended sessions, referrals entering treatment, cases with a problem descriptor, and reduced waiting times and proportion of sessions missed, achieved significantly higher reliable improvement and recovery rates. Delivering interventions which optimise transition, data quality, and engagement will likely have ramifications for the intake method and assessment pathways. Future studies will consider the complementary nature of these key organisational factors, including how they influence the role of intake processes on clinical outcomes. Depending on its feasibility, to properly evaluate service effects, an assessment session will be introduced within Service A to isolate the

potential differences, or lack thereof, between a more, in-depth TC compared with an assessment session.

Balancing outcomes with high volume

This pilot study did not identify a superior intake method between the TC and assessment in terms of its clinical outcomes. It is worth acknowledging the TC was twice the length of the assessment at 90-minutes long. Likewise, many of the assessments took place over-the-phone with a range of practitioners while the TC was conducted exclusively with high-intensity practitioners in a face-to-face format. Naturally, there are bound to be cost and efficiency implications associated with each method. At a treatment level, over-the-phone techniques have been shown to produce equivalent outcomes in IAPT services while delivering important cost-savings (Hammond et al., 2012). Equally, these approaches afford providers greater flexibility and capacity to achieve the access rate targets of 25% set for 2020/21 (IAPT Manual, 2018).

Whilst shorter assessment techniques might help achieve the access rate targets, it is necessary to recall research which reports moderate rates of re-referral (Cairns, 2013; Hepgul et al., 2016) and relapse (Ali et al., 2017) as well as poor to variable rates of stepping-up (Clark et al., 2018; Delgadillo et al., 2013; Glover et al., 2010; Richards et al., 2012), and treatment allocation practices (Bower et al., 2013; Chan & Adams, 2014; Goddard et al., 2015; Hepgul et al., 2016) within IAPT services. Other factors are of equal importance alongside the drive to increase access volume including converting referrals from entering to completing treatment, securing representative data, and enhancing

session attendance (Clark et al., 2018). Additional reporting in these areas will help contextualise access and clinical outcome rates, providing greater insight for pathway modelling.

Limitations

Many of the limitations of this study are common to observational, naturalistic study designs, most notably in its snapshot analysis of service process data. As services naturally evolve over time, any observed effects could be accounted for by ongoing developments at the service and not strictly due to the intervention itself. Given this is a pilot, restrictions in the methodology also impacted its scope and depth. Although each service was within the same catchment area, the dataset was limited to service-specific data and contained no demographic information which would have allowed for case-matching comparisons. As the data were anonymous, it was not possible to undertake any post assessment interviews nor get a sense of the impact on those attending one session only. Nevertheless, the study's aims were to explore the possible effects of the intake method and assessment pathways on clinical outcomes, attendance, and discharge categories. The analysis presented in this paper reported differential effects across these areas based on the assessment pathways, stimulating further investigation. Moreover, while a lack of pre-and-post outcome scores limits the opportunity for comparing clinical outcomes for a sizeable minority of referrals, it does highlight the transitional drop between those entering to completing treatment.

Recommendations

This pilot study has provided an early indication for the value of testing and refining the assessment pathways across the catchment area. Future research will explore how organisational factors might influence and improve intake methods to optimise engagement and outcomes. To achieve this, an intention-to-treat analysis will be appropriate as it offers a more representative overview of referrals attempting to access and engage in treatment. The TC and assessment will be both undertaken at Service A and Service B to determine the possible intake method effects and transitioning between services. More in-depth interview techniques will also provide insight in to the impact of these interventions and on those attending one session only.

Conclusions

This pilot study evaluated the effects of intake methods and assessment pathways on clinical outcomes and engagement across two IAPT services sharing referral pathways. Comparing a more in-depth TC involving highly experienced practitioners with a traditional assessment session involving a range of experienced practitioners reported no significant differences in post-treatment scores and session attendance when both services were considered. However, when those effects were investigated based on assessment pathways, there were significant differences highlighting the important role of care pathways, particularly concerning the stages of referral to entering and completing treatment. The high proportion of referrals disengaging after one-session only, particularly for the assessment session, requires further exploration. Based on

these initial findings, there appears to be great promise in exploring pathway modelling and intake processes within IAPT services.

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