Received: 18 July 2022 | Revised: 7 September 2022 | Accepted: 8 September 2022

DOI: 10.1002/capr.12584

ORIGINAL ARTICLE

WILEY

The use of goal-based outcome measures in digital therapy with adults: What goals are set, and are they achieved?

Emily Banwell[1] | Louisa Salhi[2,3] | Terry Hanley[1] | Nicole Facey-Campbell[2,3]

[1]Manchester Institute of Education, University of Manchester, Manchester, UK

[2]Kooth Plc., London, UK

[3]School of Psychology, Keynes College, University of Kent, Canterbury, UK

Correspondence
Emily Banwell, University of Manchester, Ellen Wilkinson Building, Oxford Road, Manchester M13 9PL, UK.
Email: emily.banwell@manchester.ac.uk

Funding information
Kooth Digital Health

Abstract

Objectives: The use of idiographic goal-based outcome measures (GBO) to monitor progress in digital therapy with adults has received little research attention. This study aimed to identify broad patterns of GBO engagement in an anonymous digital therapy service for adults, including the extent to which goals are recorded as being met by the measures.

Methods: The GBO measured the progress made towards goal achievement within the service, using a 0- to 10-point scale. This paper analysed GBO data from 442 users of a digital therapy service, using descriptive and inferential statistics. Service-user demographics were examined, along with the level of progress per goal topic, the patterns of engagement with self-set versus collaboratively set goals and the influence of key presenting issues on goal progress.

Results: One thousand two hundred and forty-two goals were set, equating to a mean average of 2.23 goals set per person. Of those who engaged with the service in a sustained way, 31.6% of the goals were recorded as fully achieved, and the mean average progress was 4.35 points of a possible 10. Goals relating to signposting were frequently set. Goals set collaboratively with a practitioner were successfully achieved more often than those set independently, and those with a practitioner-recorded presenting issue made the most goal progress.

Conclusions: Although nuances associated with digital environments should be considered if the findings of this study are to be transferable to other therapeutic settings, our insights suggest that GBOs appear useful for monitoring therapeutic progress with adults within the digital context.

KEYWORDS
digital therapy, E-mental health, goal-based outcome measures, idiographic measure, mental health, therapeutic goals

Contributing authors: Louisa Salhi (lsalhi@kooth.com); Terry Hanley (terry.hanley@manchester.ac.uk); Nicole Facey-Campbell (nfacey-campbell@kooth.com).

1 | INTRODUCTION

Setting and monitoring goals within therapy can enhance service-user motivation, and increase the likelihood of favourable therapeutic outcomes (Geurtzen et al., 2020). Tangible "goals" within psychology were defined by Austin and Vancouver (1996) as "internal representations of desired states" (p. 338), with goal-focused therapy centred on the devising of clear objectives. Progress towards a behaviour change relies first on an individual's intention to pursue a goal. The steps towards achievement should be sufficiently elaborate, with a clear time frame laid out (Hanley et al., 2015; Webb et al., 2010). This level of specificity can make goals seem more realistic, and therefore easier to attain. It is important to acknowledge, however, that change does not always occur in a positive linear direction. Incidences of relapse, or moving further away from goal attainment, are common (Kwasnicka et al., 2016). It is therefore important that practitioners acknowledge that the process of change is not always smooth, and their clients should be appropriately prepared for this.

Goal-based outcome measures, such as the goal-based outcomes tool (GBO; Law & Jacob, 2015), are garnering popularity within psychotherapy, as means of setting goals and interactively recording progress made (Jacob et al., 2016). They can be used with any change-driven evidence-based intervention or theoretical approach (Law & Jacob, 2015), either alone or alongside a practitioner, to set, monitor and revisit goals on a regular basis. Rather than selecting from a predefined list of goals, users can articulate their goal in their own words, and progress is recorded on a sliding numerical scale (Jacob et al., 2020). Such tools have demonstrated success in capturing a range of goal topics and areas of concern that other commonly used therapeutic outcome measures cannot (Jacob et al., 2016). This is because standardised therapeutic outcome measures typically capture symptom, behaviour and functioning change (Wolpert et al., 2012). However, such measures are often too specific, or contrarily, too broad, to capture these concepts. As a result, personalised, idiographic methods of outcome measurement, such as the GBO, have been advocated (Jacob et al., 2020). The majority of children and young people (CYP) who regularly engaged with an idiographic GBO in therapy made more goal progress than those who did not, and they were more engaged with the service. They spent more time in therapy through longer and more frequent interactions (Jacob et al., 2020). These findings suggest, broadly, that goal setting is helpful for addressing personally important areas of change (Jacob et al., 2020). The link with service engagement implies that change *can* be measured as a therapeutic outcome, but only with this demographic. Whilst this research provides valuable insight into the measurement of goal progress, it was conducted with young service-users who predominantly received support through digital settings. Transferability to other settings, populations, and age groups cannot be assumed. The developers of the GBO suggest that the tool, and associated ideas, *can* be applied to adult clients (Law & Jacob, 2015). Studies looking at therapy goals have extended to work with young adults in higher education settings (Hanley et al., 2022), but targeted research that considers general adult populations is currently absent. It is therefore important that the use of the GBO in a wider range of contexts, populations and age groups is documented.

Implications for Practice and Policy

- Adult service-users appear to be receptive to goal-based outcome measures. Services may want to use them to complement existing outcome measures for a more personalised perspective.
- The adult service-users in the study were sporadic in the way that they accessed and made use of this anonymous digital therapy service. Training needs to prepare practitioners for the wide variety of ways that individuals make use of such services.
- Setting collaborative goals with adult clients typically led to higher levels of goal attainment. Practitioners should work to collaboratively develop therapy goals with clients and ensure that goal setting associated with immediate mental health risk is not discouraged.
- Adult digital therapy users identified numerous goals linked to accessing other services (digital and in person). Those commissioning digital services need to be aware of the role they may adopt in triaging individuals to other services.

1.1 | Presenting issues and collaborative goal setting

Certain mental health conditions, or circumstantial life issues, can play a role in the types of goals set. Research that took place within an adult outpatient clinic (Grosse & Grawe, 2002) found that, overall, most set goals related to coping. However, those with anxiety were more likely to set problem or symptom-related goals. Those with depression, on the contrary, were more inclined to set interpersonal goals (Grosse & Grawe, 2002). In addition, another study found that depressed patients articulated goals that were less clear and coherent in the aim that they expressed (Dickson & Moberly, 2010). Higher clarity and tangibility of expressed goals are linked to better therapeutic outcomes, including reduced symptoms, and a lower need for further sessions (Geurtzen et al., 2020). When such goal clarity is achieved through collaborative dyadic goal setting with a therapist, these positive outcomes become even more likely (Tryon et al., 2018; Tryon & Winograd, 2011). A meta-analysis found a moderate positive effect of goal consensus on psychotherapeutic outcomes across 54 studies (Tryon et al., 2018). Most of these studies, however, only assessed goal consensus at one time point. This is not truly reflective of the dynamic nature of measures such as the GBO.

Additionally, much research into adult goal setting has focused on rehabilitative settings (Dörfler & Kulnik, 2020; Levack et al., 2016). It is important to find out whether such findings carry over into psychotherapeutic contexts, particularly with those services delivered digitally.

1.2 | Goal setting in digital therapy

The differences between digital and in-person psychotherapeutic methods are especially important when we consider goal setting and progress. In terms of goal topic, CYP frequently set therapeutic goals relating to relationships and communication, coping with problems, and personal growth (Bradley et al., 2013). However, these topics may vary depending on how the therapy is delivered. When comparing digital and in-person settings, CYP tend to set *more* goals online than in person (Hanley et al., 2017), and many articulated goals related to signposting towards other resources or support. Personal growth goals were also more frequently set online, whereas emotional well-being goals were more commonly set in person (Hanley et al., 2017). Within digital therapeutic services, goals relating to getting professional help, challenging own behaviour and emotional exploration were the most likely goals to be met for CYP (Jacob et al., 2020). The Internet is a primary source of information for CYP, suggesting that it may be a "first port of call" for support seeking (Gray et al., 2005). A similar picture is emerging in adults (Pretorius et al., 2019). It is clear, therefore, that the provision of digital mental health services is vital for maximising the help and support that is available. Adults report choosing digital mental health support over in person because of lower social stigma (DeAndrea, 2015). Additionally, digital formats are unrestricted by time or location, unlike in-person sessions with a health professional (Hanley & Wyatt, 2022). Many types of online support are provided either synchronously or asynchronously, and the choice between live and indirect contact appeals to a variety of service-users and their needs (Diefenbeck et al., 2017). Other benefits of online therapy include increased perception of safety for therapists (Bambling et al., 2008), and easier disclosure owing to anonymity and emotional distance for clients (King et al., 2006).

1.3 | Rationale and research aims

In summary, CYP research into therapeutic goals has provided valuable insight into goal-setting patterns, both in person and online. Nevertheless, transferability to adult populations must remain tentative in the absence of more focussed exploration. In this study, we examine the goals set by adults using the GBO within the adult-specific digital therapeutic service QWELL (hereafter referred to as "the service"). Several studies have investigated the use of goal setting in equivalent CYP and student-focussed platforms (Hanley et al., 2017, 2022; Jacob et al., 2020), but any potential benefits for adults have not been reliably established. The GBO is already embedded within Kooth, which is a similar platform for CYP run by the same organisation as QWELL. Investigating the measure's use with adults will allow for consistency across the entire service, and aid its development as a user-friendly measure situated in a virtual therapeutic environment. This study examines the level of goal progress, overall and per topic, before exploring whether service engagement and goal collaboration played a role in any change. Finally, we investigate how goals are engaged with by those with any of four key presenting issues; notably, the influence of anxiety and depression were explored owing to their worldwide prevalence (James et al., 2018), and self-harm and suicidal thoughts owing to the immediate risk associated with these issues. We investigated the following research questions:

1. What broad patterns of usage, by adults, of a digital GBO can be found?
2. In adults who have set goals in the service, is there progress towards achieving their goals when monitored using the GBO?
3. Does goal progress vary depending upon the topic of articulated goals?
4. Does the service-user's level of engagement with the service increase the potential for successfully achieving their therapeutic goals?
5. Does goal progress vary between self-set and collaboratively set goals?
6. Do key presenting issues in service-users influence goal progress?

2 | METHODOLOGY

2.1 | Setting

The data came from an anonymous, text-based digital therapy service for UK-based adults that was established in 2012. The service is informed by the core principles of humanistic psychology (Noble et al., 2021), and works with the ethos that no singular approach of therapy will suit all (Cooper & McLeod, 2012). This idiographic approach emphasises self-understanding above symptom reduction (Gladding, 2008; Noble et al., 2021). Users can access a variety of synchronous or asynchronous support from qualified therapists, and goals can be set personally, or alongside a practitioner within text-based chat sessions.

Although the service does not require referral and is free of charge, it is worth noting that access is currently restricted by contractual instigation. Availability is therefore limited to specific geographical regions, as governed by whole-population contracts with certain NHS trusts, or by commission for a targeted subset of the population. As a result of these contracts, most users hear about the service from their healthcare provider or workplace, with a smaller but notable number discovering it organically through search engines or social media (Noble et al., 2021).

2.2 | Data set

Routinely collected user-level data from the GBO tool were used to reflect upon the way that individuals use the service to set goals and track goal progress. The data set, which covered users who registered for the service between 1 September 2019 and 30 June 2020 (669 days), included service-user demographics (age, gender, ethnicity and presenting issues), service engagement (their length of engagement with the wider service, the number of chats had with a practitioner, journal entries made, times logged in and therapeutic messages received) and GBO outcomes (the number of goals set, whether a goal was self or collaboratively set, the overall goal progress score out of 10 and goal topic). The time range covered by the data set was selected due to this being the largest possible representation of a stable number of users engaging with the measure.

Of all service-users (n = 10,447), 5.3% (n = 557) had engaged with goal setting via the GBO tool. Of these 557, 115 service-users interacted with the service for one day only, during which they created goal(s) and/or recorded progress, yet never returned to the feature. These users were excluded from further analyses, due to the research questions necessitating investigation of how *sustained* engagement with adult digital therapy impacts goal progress, and how goals are interacted with over time. This narrowing meant that 442 service-users remained for the main analyses.

2.3 | Ethical considerations

This study made use of an existing data set which was provided by QWELL, the data controller, to the research team. Permission had been granted from all service-users for the data related to the GBO to be shared for research purposes in an anonymous fashion. Given this, ethical review was waivered by the university ethics committee of the primary author. Nevertheless, guidelines of good practice for data handling were upheld (British Psychological Society, 2021).

2.4 | Measures

2.4.1 | Goal-based outcome measure (GBO)

The GBO tool (Law & Jacob, 2015) involves establishing a series of goals, and then rating goal progress from 0 ("no progress towards meeting goal") to 10 ("goal achieved"). This scoring system is akin to that used in a similar study involving CYP (Jacob et al., 2020). The GBO normally starts with a baseline of 1, but, in line with the service's guidelines for outcome measurement, 0 was used in this research. When goal setting commences within the service, all progress starts at 0, acting as a convenient baseline against which to research goal progress (Jacob et al., 2020). Both practitioners and service-users can amend progress fluidly, and progress can either be positive (making progress towards the goal) or be negative (moving further away from achieving the goal. Backwards movement is only possible if some progress has already been made, as 0 is the lowest level that can be recorded). Goal topics are assigned by practitioners during collaborative setting at the outset of contact, based on the content of the goal. However, if the goal is solely self-set, topics are allocated by practitioners at a later time, when they review and moderate set goals for suitability and appropriateness. Progress towards meeting goals can be recorded by service-users at any time, with practitioner input available when doing so during contact sessions. The topics used to categorise goals were formulated in previous research that thematically analysed the types of goals set in therapy (Ersahin, 2015). As this research was conducted with young people, this taxonomy is used flexibly to evolve based on the emerging needs of adult service-users.

2.4.2 | Other variables

Service-user demographic information, such as age and gender, is collected at the point of signing up to the service. Engagement data are routinely recorded as the user moves through the service. Presenting issues are recorded during user–practitioner interactions, on occasions where the practitioner deems it appropriate to note a particular issue, that is, for future interactions. Multiple presenting issues can be recorded for one service-user, which can be repeated instances of the same issue, or several unique issues. This means that presenting issues are not mutually exclusive.

2.5 | Data analysis

Descriptive statistics were used to investigate demographics and typical usage of those who engage with goal setting in the service, including age, gender, ethnicity, GBO usage and overall engagement. We also obtained frequencies of goal progress points, and practitioner-assigned goal topics.

Next, a series of Pearson's correlations were calculated, to identify whether goal progress and number of goals set were related to other engagement activities. A Welch's t statistic was obtained to establish whether goals set collaboratively or alone differed in progress, and a series of one-way ANOVA tests, with accompanying post hoc analyses, allowed us to examine whether key presenting issues played any role in goal progress.

3 | RESULTS

3.1 | Research question 1: What broad patterns of usage, by adults, of a digital GBO can be found?

3.1.1 | Service-user demographics

The mean age of the 442 service-users who engaged with goals was 36.9 years (median: 35 years old; range: 18–77 years old). Fifteen per

cent ($n = 66$) of users were aged 25 years or under (under 25s are also eligible to use a similar service for CYP), and the remaining 85% ($n = 376$) were over 25. A total of 76.5% ($n = 338$) of users were female, 22.4% ($n = 99$) male, and 1.1% ($n = 5$) gender nonconforming (1.1%). Ninety-three per cent ($n = 413$) of these users were identified as White, with mixed ($n = 8$), "other" ($n = 8$), Asian ($n = 7$) and Black ($n = 6$) represented at <2% each.

3.1.2 | GBO engagement

One thousand one hundred and three goals were set in total by the 442 returning users (1,242 goals were set by both returning and non-returning users). This equated to an average of 2.5 goals ($SD = 2.35$) per returning user (for all users: $M = 2.23$ goals per user, $SD = 2.18$). The highest number of goals set by one returning user was 14.

3.2 | Research question 2: In adults who have set goals in the service, is there progress towards achieving their goals when monitored using a GBO?

Data from the GBO (rated from 0 to 10 points) showed that goals moved a mean average of 4.35 points ($SD = 3.26$). Seven hundred and sixty-three goals (69.3%) showed at least three points of progress (in CYP, three points of progress signifies a "meaningful change") (Jacob et al., 2020), with 348 goals (31.6%) recorded as fully achieved. Two hundred and sixty goals (23.6%) progressed by one point.

3.3 | Research question 3: Does goal progress vary depending upon the topic of articulated goals?

Thirty-four unique goal topics featured in the sample. These were the original topics assigned by practitioners and were not altered for the purpose of this research, and 15 set goals were uncategorised, owing to not falling into a clear topic during articulation. Table 1 shows the most commonly set goal topic, as recorded by the GBO. These topics represented 77.3% of the 1,103 total goals set in the sample. Table 2 shows the topics with the highest levels of goal progress made. Five goal topics—"getting professional help in service," "getting professional help outside our service," "emotional exploration," "challenging thoughts" and "motivation"—are both most commonly set (Table 1) and also most progressed (Table 2).

3.4 | Research question 4: Does the service-user's level of engagement with the service increase the potential for successfully achieving their therapeutic goals?

The service was used in a wide and varied way. The number of logins to the platform per user varied greatly ($M = 55.1$, $SD = 283$), with the highest number per user being 5,669. The median number of logins was, however, 14, showing that this highest number, although difficult to discount as a valid data point, is a long way from representing the engagement of a typical service-user. This sentiment was echoed by length of engagement in days ($M = 122$, $SD = 144$), with some users logging in on over 600 separate days, with 62.5 engaged days being the median. We wished to be transparent about the varied ways in which the service was engaged with, which is why we decided not to omit these data points.

Small yet significant positive correlations were seen between **goal progress** and number of goals set, $r(440) = 0.41$, $p < 0.001$; the number of chats, $r(440) = 0.41$, $p < 0.001$; the number of therapeutic messages received, $r(440) = 0.24$, $p < 0.001$; and length of service engagement, $r(440) = 0.17$, $p < 0.001$. No correlations between goal progress and number of journal entries, or number of logins, were found.

TABLE 1 Top 10 topics into which set goals most commonly fell[a]

Goal topic	No. of set goals under each topic	% of total goals set (%)	Mean goal progress points (*SD*)
Self-help/self-care	212	19.2	4.62 (3.44)
Getting professional help in service[b]	159	14.4	7.31 (3.36)
Emotional exploration[b]	104	9.4	6.57 (3.8)
Emotional regulation	94	8.5	5.06 (3.44)
Getting professional help outside our service[b]	73	6.6	6.96 (3.68)
Self-help skills for life	59	5.3	4.93 (3.48)
Challenging thoughts[b]	45	4.1	6.31 (3.8)
Motivation[b]	43	3.9	5.23 (3.4)
Confidence/self-acceptance	33	3	4.7 (3.5)
Career/aspirational	32	2.9	3.28 (3.2)

[a]Mean goal progress for each is listed to allow visual comparison with the goal topic that showed the most progress (Table 2).

[b]These topics feature in the top 10 goal topics, and top 10 most moved topics.

TABLE 2 Top 10 topics within which the highest goal progress was seen[a]

Goal topic	Mean goal progress points (*SD*)	No. of set goals under each topic
Getting professional help in service[b]	7.31 (3.36)	159
Getting professional help outside our service[b]	6.96 (3.68)	73
Emotional exploration[b]	6.57 (3.8)	104
Getting more help from significant others	6.45 (3.83)	20
Challenging thoughts[b]	6.31 (3.8)	45
Keeping safe	6.2 (3.19)	10
Grief	5.9 (3.48)	10
Feeling happier	5.45 (3.58)	31
Motivation[b]	5.23 (3.4)	43
Self-exploration	5.21 (3.86)	24

[a]Please note that topics of goals that were set fewer than 10 times were excluded from this table, to ensure a more meaningful reflection of goal progress.
[b]These topics feature in the top 10 goal topics, and top 10 most moved topics.

TABLE 3 Top 10 presenting issues in the data set

Presenting issue	No. of instances that issue was recorded	No. of service-users with each issue recorded
Anxiety/stress	744	237
Depression	359	149
Self-worth	336	121
Suicidal thoughts	287	96
Mental health	264	93
Family relationships	251	112
Relationship/partner	197	81
Self-harm	143	63
Problems at work	143	70
Loneliness	123	62

Looking at the relationship between the **number of goals set** and other service activities, significant positive correlations were found with number of chats, $r(440) = 0.53$, $p < 0.001$; the number of journal entries, $r(440) = 0.25$, $p < 0.001$; the length of service engagement, $r(440) = 0.30$, $p < 0.001$; log ins, $r(440) = 0.27$, $p < 0.001$; and number of therapeutic messages received, $r(440) = 0.25$, $p < 0.001$.

3.5 | Research question 5: Does goal progress vary between self-set and collaboratively set goals?

Overall, more goals were set in collaboration with a practitioner ($n = 703$) than by a service-user on their own ($n = 400$). Collaborative goals ($M = 6.7$, $SD = 3.49$), compared with self-set goals ($M = 3.67$, $SD = 3.15$), progressed significantly more ($t(902) = 14.8$, $p < 0.001$).

The difference in number of goals set using each method was calculated and split by topic. Twenty-three goal topics were most often set alongside a practitioner than alone, nine were more commonly set alone (including uncategorised goals) and three topics were equally likely to be set in collaboration as alone. When the topics were ordered based upon the *size* of the difference, that is, looking at *how many* more goals were set using each method, per topic, no clear differences were seen in the topics of goals set.

3.6 | Research question 6: Do key presenting issues in service-users influence goal progress?

Sixty-six distinct types of presenting issue were recorded, including mental health conditions, relational problems and situational issues such as financial worries. Table 3 shows the top 10 presenting issues recorded in the sample of service-users. Of note is the fact that these presenting issues are not mutually exclusive: one service-user may have several unique issues, and/or several instances of the same one, recorded. Despite this, we reasoned that the analyses conducted here are still valid, due to the comorbidity

of so many mental health issues and conditions: for example "pure" anxiety or "pure" depression rarely exists (Lamers et al., 2011). Attempting to isolate and measure the impact of these conditions is neither realistic nor useful. For the one-way ANOVAs below, this means that those with anxiety, for example, may also have depression. They are only compared with those with no record of anxiety.

Four one-way ANOVAs (using three levels: "key presenting issue present," "other presenting issue present" and "no presenting issue present") were run to investigate whether common (anxiety and depression) and high-risk (suicidal thoughts and self-harm) presenting issues influenced goal progress. They were each uniquely treated as key presenting issues when inputted into the model.

Presenting with **anxiety/stress** as a recorded presenting issue played, overall, a significant role in goal progress, $F(2,439) = 41.2$, $p < 0.01$. Post hoc t tests showed that goals set by service-users *with* a record of anxiety within the service progressed to a significantly higher level ($M = 5.41$, $SD = 3.22$) than those *without* anxiety but with another recorded presenting issue ($M = 4.32$, $SD = 3.31$), $t(439) = 2.72$, $p = 0.019$, and also than those with *no* recorded presenting issues ($M = 2.45$, $SD = 2.31$), $t(439) = 9.07$, $p < 0.001$.

Presenting with **depression** as a recorded presenting issue played, overall, a significant role in goal progress, $F(2,439) = 37.3$, $p < 0.01$. Post hoc t tests showed that goals set by service-users *with* a record of depression within the service progressed to a significantly higher level ($M = 5.31$, $SD = 3.16$) than those with *no* recorded presenting issues ($M = 2.45$, $SD = 2.31$), $t(439) = 7.91$, $p < 0.001$. However, goal progress did not vary between those with a record of depression and those *without* depression but with another recorded presenting issue ($M = 5.01$, $SD = 3.37$), $t(439) = 0.887$, $p = 0.649$.

Presenting with **suicidal thoughts** as a recorded presenting issue played, overall, a significant role in goal progress, $F(2,439) = 39.7$, $p < 0.01$. Post hoc t tests showed that goals set by service-users *with* a record of suicidal thoughts within the service progressed to a significantly higher level ($M = 5.63$, $SD = 3.10$) than those with *no* recorded presenting issue ($M = 2.45$, $SD = 2.31$), $t(439) = 8.35$, $p < 0.001$. However, goal progress did not vary between those with a record of suicidal thoughts and those *without* suicidal thoughts but with another recorded presenting issue ($M = 4.86$, $SD = 3.34$), $t(439) = 2.20$, $p = 0.073$.

Presenting with **self-harm** as a recorded presenting issue played, overall, a significant role in goal progress, $F(2,439) = 39.1$, $p < 0.01$. Post hoc t tests showed that goals set by service-users *with* a record of self-harm within the service progressed to a significantly higher level ($M = 5.62$, $SD = 3.14$) than those with *no* recorded presenting issues ($M = 2.45$, $SD = 2.31$), $t(439) = 8.07$, $p < 0.001$. However, goal progress did not vary between those with a record of self-harm and those *without* a record of self-harm but with another recorded presenting issue ($M = 4.91$, $SD = 3.31$), $t(439) = 1.98$, $p = 0.118$.

4 | DISCUSSION

This research provides a broad exploration of adult usage of a text-based, anonymous, digital therapeutic service. It focused on the setting of, and engagement with, goals. The investigation of the use of GBO, explored in the context of digital therapy for adults, provides a novel contribution to the therapeutic outcome literature base.

4.1 | Broad patterns of GBO usage by adults

An overarching finding was that the GBO, and the wider service in which it was situated, were used in a varied way by adult service-users. Whilst one might naturally expect an adult population to show a more steady pattern of engagement with such a service, perhaps by way of attending regular, scheduled therapy or by consistent monitoring of goal progress, usage was not dissimilar to that of CYP (Jacob et al., 2020). This might suggest that inconsistent engagement, rather than being attributable to age, is simply a feature of digital therapy. Fewer geographical or time boundaries exist in digital support than in person, and anonymity might further reduce the inclination to engage consistently (Suler, 2004). As practice-based research, however, this inconsistent engagement pattern is unavoidable. Several studies have previously explored the advantages of digital therapy (Bambling et al., 2008; King et al., 2006), which, taken in combination with the idea that goal setting can help adults feel more involved in their therapy (Thimm et al., 2020; Tryon & Winograd, 2011), further suggests the value of digital therapeutic goal setting. However, more research investigating the phenomenon of sporadic engagement, particularly how it impacts therapeutic goal setting, is certainly warranted, especially if this is unique to the online environment.

Overall, 31.6% of goals were recorded as fully achieved. A total of 69.3% of goals progressed by at least three points. In a similar study with CYP, 55.6% made an identical level of point progress (Jacob et al., 2020). Making at least three points of progress is commonly considered a proxy for "meaningful change" in the GBO with CYP (Jacob et al., 2020) owing to principles of the reliable change index (Jacobson & Truax, 1991). Using this as a frame of reference for the present research, thereby inferring that 69.3% of goals moved meaningfully, it could be tentatively suggested that the service successfully helps *most* goal-setters make positive therapeutic changes. However, as meaningful change has not yet been validated with adults, we must remain careful not to assume that three points of progress definitively indicates meaningful progress in non-CYP populations.

4.2 | Goal topics

The 10 most frequently set goal topics were identified (Table 1). Half of these topics were also amongst those that moved the most

(Table 2). This implies that these goals were frequently set within the service, and good progress was made towards achieving them. This could indicate a relationship between goal topic and attainment made. However, previous research involving adolescent counselling clients found no such relationship (Rupani et al., 2014). We might suggest, therefore, that the identified "cross-over" relates to the types of goals with which people approach digital therapy. For instance, goals relating to signposting, that is, seeking sources of further professional help either within or outside the service, are common primary goals that are more frequently set online than in person (Hanley et al., 2017). It could follow that, owing to their relative ease of resolve compared with more abstract goals, they are also attained quicker and less gradually. If true, this could also explain why either negligible or no correlations were found between goal progress and length of service engagement and number of log ins. A user may log into the service with an "in-the-moment" goal, such as trying to find certain information. This specificity means that the goal is met quickly, and the user is then less inclined to log in again. Further research, perhaps investigating the time taken to reach various goal topics, and distinguishing shorter term from longer term goals, is needed.

The top five most frequently set goal topics echoed those set the most frequently by CYP (Jacob et al., 2020) including signposting, "self-help/self-care" and "emotional exploration." That study suggested that CYP may select these goals more readily than adults due to being at a life stage of exploring emotions and navigating feelings: goals that are more pertinent than those relating to functioning. However, our finding that many adults *do* indeed have goals of this nature suggests that this difference is not as stark. Interestingly, though, the most commonly set goal in the present study, "self-help/self-care", did not feature amongst those with the highest progress made, whereas in CYP research, it did (Jacob et al., 2020). Self-care is an effective way of dealing with stressors (Ayala et al., 2018), that can improve quality of life. It is also preferable to other forms of therapy (Gibb et al., 2010). Demanding lifestyles and responsibilities often make self-care strategies difficult to implement, which may explain why self-help/self-care goals are less frequently actualised for adults than for CYP, despite similar importance.

4.3 | Service engagement

Those who set more goals made better progress. Other significant positive relationships were found between goal progress or number of goals, and a range of engagement indicators. These correlations varied in strength: the largest suggested that the number of chats with a practitioner relates to goal setting and goal progress. This may link with the finding that collaboratively set goals progressed significantly better than those set alone. These chat sessions may help steer a service-user towards goal setting and provide structure towards achievement. In addition, working with an experienced therapist may mean that collaborative goals are more realistic and attainable, with support provided for maintaining focus in between sessions (Hanley et al., 2015). Lack of structure, perhaps evidenced by a lower number of chat sessions, could explain why less progress is made towards self-set goals. Indeed, making explicit, collaborative goals, and discussing these regularly, is associated with lower levels of negative mental health symptoms in therapy (Geurtzen et al., 2020). Much work may be needed to ensure that digital therapeutic platforms promote structure around self-set, as well as collaboratively set, goals. Goal setting is, first and foremost, a user-driven process, with no consistent follow-up system implemented. Whilst this flexibility may be appealing to service-users, it is easy to see how a lack of boundaries influences engagement with goals and goal-focused therapy.

4.4 | Presenting issues

Anxiety and depression were the most common presenting issues of service-users who engaged with goal setting, together accounting for 25% of presenting issues in the sample. This is unsurprising given that these two mental health and well-being difficulties are the most prevalent worldwide (James et al., 2018). Service-users with a record of anxiety showed better goal progress than those with any other presenting issue, and those with no recorded issue. Although those with depression made significantly better goal progress than those with no recorded presenting issue at all, no difference in progress was found between those with depression, and those with another key presenting issue. Previous literature suggests that depression can lead to reduced goal coherence. This, along with greater distress when goals conflict, leads, overall, to poorer goal facilitation (Dickson & Moberly, 2010). However, we did not find direct support for this. Depression did not differ from other presenting issues in terms of goal progress; however, those with *any* presenting issue, including depression, consistently made better progress than those with no presenting issue at all. This might suggest that those without presenting issues are less engaged with the service and with goal setting. They do not have a clear issue, which might have otherwise been assigned had they engaged in a chat session, to overcome. Comparing anxiety and depression, although difficult owing to their common comorbidity (Lamers et al., 2011), could yield interesting findings, especially by looking at the direction of goals set. A different pattern of "approach" (moving towards a desired state) and "avoidance" (moving away from an undesired state) goals was found between adolescents with anxiety, depression, or both (Dickson & MacLeod, 2004). Those with high anxiety generated more avoidance goals. This could partially explain why those with anxiety in our sample made the most goal progress of any presenting issue; however, we could only investigate this fully by examining the topics of their goals. A causal relationship between anxiety and goal topic (or direction) would, however, be difficult to establish, since presenting issues recorded within the service are not mutually exclusive. Looking at which presenting issue is

the most pertinent at the time of goal setting could be one way of exploring this link. Of note is that anxiety was the only examined presenting issue that resulted in higher goal progress when compared with the presence of any other issue. Whilst, again, insight into the specific nature of goals set may prove illuminating here, it may be that goal setting is, in its essence, better suited to tackling goals related to anxiety. Further investigations in this area would no doubt prove interesting.

Suicidal thoughts and self-harm were also selected as key presenting issues, because of their link with immediate risk. Although these issues featured amongst the most reported (Table 3), most set goals did not relate directly to suicide or self-harm when examining the topic. It is plausible that users at this risk level simply choose to set goals around other issues. But this finding still raises the question of whether the GBO is suitable, or indeed safe, for recording progress made towards goals that relate to immediate personal safety. Several goals that could be viewed as avoidance-type goals in the service are positively framed, such as "keeping safe" or "challenging own behaviour." Consequently, it may be the case that high distress levels are "lost" when topics are selected by practitioners. It has recently become acknowledged that speaking openly about suicide or self-harm, rather than exacerbating tendencies, has the opposite effect, sometimes even leading to improved mental health (Blades et al., 2018). Therefore, making sure that goal topics can accurately capture the avoidance element of goals, despite a seemingly negative framing, may allow a more accurate portrayal of set goals, in addition to making those with such difficulties feel understood and represented. Ensuring that the practitioner's own agenda does not influence the course of progress has been raised as a vital consideration for goal-based therapy (Lloyd & Antonino, 2021). Collaborative goal categorisation may assist with this, emphasising accurate topic recording from the perspective of the service-user. Previous research (Danchin et al., 2010) found that self-harm patients set fewer goals than controls, were more doubtful that they would achieve them, yet were more likely to relate their future well-being to goal achievement. The latter two points suggest that these users may remain attached to goals, regarding them as important yet unobtainable. Whilst, as stated earlier, it is difficult to truly separate disorders to compare them, further investigations into the value placed on goals, and how they are appraised psychologically, may add to our understanding of goal progress, especially when considering the influence of presenting issues.

5 | CONCLUSION

To summarise, the present study offered insight into the use of therapeutic goals within a digital mental health support service for adults within the UK. Overall, the findings provided useful insights into how the GBO was used to monitor goal progress in a digital context, with an adult population. Goals relating to signposting were frequently set, and progress was made towards achieving them. Goals set in collaboration with a practitioner were also successfully achieved more often than those set independently, and service-users with a practitioner-recorded presenting issue tended to make more progress than those without. We emphasise that care should be taken to ensure that goal topics are accurately assigned and suggest that this process should be collaborative. This is especially important when users present with immediate mental health risk. Such users should not be discouraged from setting goals relating to this risk.

AUTHOR CONTRIBUTIONS

EB and TH constructed the first draft of the paper. This was then reviewed and edited by LS and NFC. The data were analysed by LS, and written up by EB. All authors approved the final version before submission. All authors were involved in planning and designing the research.

ACKNOWLEDGEMENTS

The authors wish to thank Aaron Sefi and Kooth who supported the project. Also, thanks to Tom Kayll for his support in the data extraction and database from the service.

FUNDING INFORMATION

The time spent on this study by EB, LS and NFC was funded by Kooth Digital Health.

CONFLICT OF INTEREST

Two authors (LS and NFC) are employed by Kooth Digital Health where the data for this study were collected. EB was externally commissioned and funded by Kooth to work on the project but is not an employee of the company. TH has no conflicting interests.

DATA AVAILABILITY STATEMENT

Data are available on request due to privacy/ethical restrictions. The data that support the findings of this study are available on request from the corresponding author. These data are not publicly available due to privacy or ethical restrictions.

PATIENT CONSENT STATEMENT

This study made use of an existing data set provided by QWELL, the data controller, to the research team. Permission had been granted from all service-users for the data related to the GBOs to be shared for research purposes in an anonymous fashion. Given this, ethical review was waivered by the university ethics committee of the primary author. Nevertheless, guidelines of good practice for data handling were upheld (British Psychological Society, 2021).

ORCID

Emily Banwell https://orcid.org/0000-0002-0922-4727
Louisa Salhi https://orcid.org/0000-0001-6458-1391
Terry Hanley https://orcid.org/0000-0001-5861-9170
Nicole Facey-Campbell https://orcid.org/0000-0001-9421-4461

REFERENCES

Austin, J. T., & Vancouver, J. B. (1996). Goal constructs in psychology: Structure, process, and content. *Psychological Bulletin*, *120*(3), 338–375. https://doi.org/10.1037/0033-2909.120.3.338

Ayala, E. E., Winseman, J. S., Johnsen, R. D., & Mason, H. R. C. (2018). U.S. medical students who engage in self-care report less stress and higher quality of life. *BMC Medical Education*, *18*(1), 189. https://doi.org/10.1186/s12909-018-1296-x

Bambling, M., King, R., Reid, W., & Wegner, K. (2008). Online counselling: The experience of counsellors providing synchronous single-session counselling to young people. *Counselling and Psychotherapy Research*, *8*(2), 110–116. https://doi.org/10.1080/14733140802055011

Blades, C. A., Stritzke, W. G. K., Page, A. C., & Brown, J. D. (2018). The benefits and risks of asking research participants about suicide: A meta-analysis of the impact of exposure to suicide-related content. *Clinical Psychology Review*, *64*, 1–12. https://doi.org/10.1016/j.cpr.2018.07.001

Bradley, J., Murphy, S., Fugard, A., Nolas, S., & Law, D. (2013). What kind of goals do children and young people set for themselves in therapy? Developing a goals framework using CORC data. *Clinical Child and Family Psychology Review*, *1*, 8–18.

British Psychological Society. (2021). *BPS code of human research ethics*. https://www.bps.org.uk/news-and-policy/bps-code-human-research-ethics

Cooper, M., & McLeod, J. (2012). From either/or to both/and: Developing a pluralistic approach to counselling and psychotherapy. *European Journal of Psychotherapy & Counselling*, *14*(1), 5–17. https://doi.org/10.1080/13642537.2012.652389

Danchin, C. L., MacLeod, A. K., & Tata, P. (2010). Painful engagement in deliberate self-harm: The role of conditional goal setting. *Behaviour Research and Therapy*, *48*(9), 915–920. https://doi.org/10.1016/j.brat.2010.05.022

DeAndrea, D. C. (2015). Testing the proclaimed affordances of online support groups in a nationally representative sample of adults seeking mental health assistance. *Journal of Health Communication*, *20*(2), 147–156. https://doi.org/10.1080/10810730.2014.914606

Dickson, J. M., & MacLeod, A. K. (2004). Approach and avoidance goals and plans: Their relationship to anxiety and depression. *Cognitive Therapy and Research*, *28*(3), 415–432. https://doi.org/10.1023/b:cotr.0000031809.20488.ee

Dickson, J. M., & Moberly, N. J. (2010). Depression, anxiety, and reduced facilitation in adolescents' personal goal systems. *Cognitive Therapy and Research*, *34*(6), 576–581. https://doi.org/10.1007/s10608-010-9307-1

Diefenbeck, C. A., Klemm, P. R., & Hayes, E. R. (2017). "Anonymous meltdown": Content themes emerging in a nonfacilitated, peer-only, unstructured, asynchronous online support group for family caregivers. *CIN: Computers, Informatics, Nursing*, *35*(12), 630–638. https://doi.org/10.1097/CIN.0000000000000376

Dörfler, E., & Kulnik, S. T. (2020). Despite communication and cognitive impairment – Person-centred goal-setting after stroke: A qualitative study. *Disability and Rehabilitation*, *42*(25), 3628–3637. https://doi.org/10.1080/09638288.2019.1604821

Ersahin, Z. (2015). *Therapeutic goals in online youth therapy: What goals do young people identify and how do counsellors work with them?* University of Manchester.

Geurtzen, N., Keijsers, G. P. J., Karremans, J. C., Tiemens, B. G., & Hutschemaekers, G. J. M. (2020). Patients' perceived lack of goal clarity in psychological treatments: Scale development and negative correlates. *Clinical Psychology & Psychotherapy*, *27*(6), 915–924. https://doi.org/10.1002/cpp.2479

Gibb, J., Cameron, I. M., Hamilton, R., Murphy, E., & Naji, S. (2010). Mental health nurses' and allied health professionals' perceptions of the role of the occupational health service in the management of work-related stress: How do they self-care? *Journal of Psychiatric and Mental Health Nursing*, *17*(9), 838–845. https://doi.org/10.1111/j.1365-2850.2010.01599.x

Gladding, S. T. (2008). *Counseling: A comprehensive profession*. Merrill Prentice Hall.

Gray, N. J., Klein, J. D., Noyce, P. R., Sesselberg, T. S., & Cantrill, J. A. (2005). Health information-seeking behaviour in adolescence: The place of the internet. *Social Science & Medicine*, *60*(7), 1467–1478. https://doi.org/10.1016/j.socscimed.2004.08.010

Grosse, M., & Grawe, K. (2002). Bern inventory of treatment goals: Part 1 development and first application of a taxonomy of treatment goal themes. *Psychotherapy Research*, *12*(1), 79–99. https://doi.org/10.1080/713869618

Hanley, T., Ersahin, Z., Sefi, A., & Hebron, J. (2017). Comparing online and face-to-face student counselling: What therapeutic goals are identified and what are the implications for educational providers? *Journal of Psychologists and Counsellors in Schools*, *27*(1), 37–54. https://doi.org/10.1017/jgc.2016.20

Hanley, T., Prescott, J., & Sefi, A. (2022). The therapeutic goals set by university students in an anonymous web-based therapy and support setting. *Frontiers in Psychology*, *13*, 745537. https://doi.org/10.3389/fpsyg.2022.745537

Hanley, T., Sefi, A., & Ersahin, Z. (2015). From goals to tasks and methods. In M. Cooper & W. Dryden (Eds.), *The handbook of pluralistic counselling and psychotherapy* (pp. 28–41). Sage.

Hanley, T., & Wyatt, C. (2022). What do peple look for from digital support. In H. Wilson (Ed.), *Digital delivery of mental health therapies: A guide to the benefits and challenges, and making it work* (pp. 76–88). Jessica Kingsley Publishers.

Jacob, J., Costa da Silva, L., Sefi, A., & Edbrooke-Childs, J. (2020). Online counselling and goal achievement: Exploring meaningful change and the types of goals progressed by young people. *Counselling and Psychotherapy Research*, *21*(3), 502–513. https://doi.org/10.1002/capr.12363

Jacob, J., Edbrooke-Childs, J., Holley, S., Law, D., & Wolpert, M. (2016). Horses for courses? A qualitative exploration of goals formulated in mental health settings by young people, parents, and clinicians. *Clinical Child Psychology and Psychiatry*, *21*(2), 208–223. https://doi.org/10.1177/1359104515577487

Jacobson, P., & Truax, N. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, *59*(1), 12–19. https://doi.org/10.1037/10109-042

James, S. L., Abate, D., Abate, K. H., Abay, S. M., Abbafati, C., Abbasi, N., Abbastabar, H., Abd-Allah, F., Abdela, J., Abdelalim, A., Abdollahpour, I., Abdulkader, R. S., Abebe, Z., Abera, S. F., Abil, O. Z., Abraha, H. N., Abu-Raddad, L. J., Abu-Rmeileh, N. M. E., Accrombessi, M. M. K., … Murray, C. J. L. (2018). Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: A systematic analysis for the global burden of disease study 2017. *The Lancet*, *392*(10159), 1789–1858. https://doi.org/10.1016/S0140-6736(18)32279-7

King, R., Bambling, M., Lloyd, C., Gomurra, R., Smith, S., Reid, W., & Wegner, K. (2006). Online counselling: The motives and experiences of young people who choose the internet instead of face to face or telephone counselling. *Counselling and Psychotherapy Research*, *6*(3), 169–174. https://doi.org/10.1080/14733140600848179

Kwasnicka, D., Dombrowski, S. U., White, M., & Sniehotta, F. (2016). Theoretical explanations for maintenance of behaviour change: A systematic review of behaviour theories. *Health Psychology Review*, *10*(3), 277–296. https://doi.org/10.1080/17437199.2016.1151372

Lamers, F., van Oppen, P., Comijs, H. C., Smit, J. H., Spinhoven, P., van Balkom, A. J. L. M., Nolen, W. A., Zitman, F. G., Beekman, A. T. F., & Penninx, B. W. J. H. (2011). Comorbidity patterns of anxiety and depressive disorders in a large cohort study: The Netherlands

study of depression and anxiety (NESDA). *The Journal of Clinical Psychiatry*, *72*(3), 341–348. https://doi.org/10.4088/JCP.10m06176blu

Law, D., & Jacob, J. (2015). *Goals and goals based outcomes (GBOs): Some useful information. Version 3.0*. CAMHS Press.

Levack, W. M., Weatherall, M., Hay-Smith, J. C., Dean, S. G., McPherson, K., & Siegert, R. J. (2016). Goal setting and strategies to enhance goal pursuit in adult rehabilitation: Summary of a Cochrane systematic review and meta-analysis. *European Journal of Physical and Rehabilitation Medicine*, *52*(3), 400–416.

Lloyd, C. E. M., & Antonino, R. (2021). "A gentle balance of pushing, pulling and sitting with": An interpretative phenomenological analysis of psychological therapists' experiences of working with goals in adult pluralistic private practice. *Counselling Psychology Quarterly*, *35*, 190–214. https://doi.org/10.1080/09515070.2021.1954881

Noble, J., de Ossorno Garcia, S., Gadd, L., & Gillman, A. (2021). *Theory of change Kooth for adults*. https://doi.org/10.13140/RG.2.2.23036.05764

Pretorius, C., Chambers, D., Cowan, B., & Coyle, D. (2019). Young people seeking help online for mental health: Cross-sectional survey study. *JMIR Mental Health*, *6*(8), e13524. https://doi.org/10.2196/13524

Rupani, P., Cooper, M., McArthur, K., Pybis, J., Cromarty, K., Hill, A., Levesley, R., Murdoch, J., & Turner, N. (2014). The goals of young people in school-based counselling and their achievement of these goals. *Counselling and Psychotherapy Research*, *14*(4), 306–314. https://doi.org/10.1080/14733145.2013.816758

Suler, J. (2004). The online disinhibition effect. *Cyberpsychology & Behavior*, *7*(3), 321–326. https://doi.org/10.1089/1094931041291295

Thimm, J. C., Antonsen, L., & Malmedal, W. (2020). Patients' perception of user involvement in psychiatric outpatient treatment: Associations with patient characteristics and satisfaction. *Health Expectations*, *23*(6), 1477–1484. https://doi.org/10.1111/hex.13132

Tryon, G. S., Birch, S. E., & Verkuilen, J. (2018). Meta-analyses of the relation of goal consensus and collaboration to psychotherapy outcome. *Psychotherapy*, *55*(4), 372–383. https://doi.org/10.1037/pst0000170

Tryon, G. S., & Winograd, G. (2011). Goal consensus and collaboration. *Psychotherapy*, *48*(4), 50–57. https://doi.org/10.1037/a0022061

Webb, T. L., Sniehotta, F. F., & Michie, S. (2010). Using theories of behaviour change to inform interventions for addictive behaviours. *Addiction*, *105*(11), 1879–1892. https://doi.org/10.1111/j.1360-0443.2010.03028.x

Wolpert, M., Ford, T., Trustam, E., Law, D., Deighton, J., Flannery, H., & Fugard, R. J. B. (2012). Patient-reported outcomes in child and adolescent mental health services (CAMHS): Use of idiographic and standardized measures. *Journal of Mental Health*, *21*(2), 165–173. https://doi.org/10.3109/09638237.2012.664304

AUTHOR BIOGRAPHIES

Emily Banwell is a PhD Researcher in the Manchester Institute of Education at the University of Manchester. Her doctoral thesis focuses on child and adolescent mental health service provision within the UK's National Health Service. She is interested in how such provision can be expanded beyond traditional means.

Louisa Salhi's research background is in the field of cognitive neuropsychology, with a focus on memory, reward dysfunction and clinical factors that affect these processes. Louisa has an interest and is currently researching, more specifically, the areas of clinical psychology and digital technologies, in particular improving access to services.

Terry Hanley is a Professor in counselling psychology in the Manchester Institute of Education at the University of Manchester. He is a co-author of the textbook *Introducing Counselling and Psychotherapy Research* and a co-editor of *Adolescent Counselling Psychology* and *The SAGE Handbook of Counselling and Psychotherapy*.

Nicole Facey-Campbell is a full-time undergraduate student in psychology, who is just beginning her career in psychology as a research consultant. Nicole is very interested in clinical and child psychology: in particular, she is very passionate about fighting against discrimination in mental health services and is keen to work to improve access and effectiveness of mental health services.

How to cite this article: Banwell, E., Salhi, L., Hanley, T., & Facey-Campbell, N. (2023). The use of goal-based outcome measures in digital therapy with adults: What goals are set, and are they achieved? *Counselling and Psychotherapy Research*, *23*, 770–780. https://doi.org/10.1002/capr.12584