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RESEARCH ARTICLE

Care Delivery

From educator to facilitator: Healthcare professionals' experiences of, and views about, delivering a type 1 diabetes structured education programme (DAFNE*plus*) informed by behavioural science

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Abstract

Aims: The DAFNE*plus* programme incorporates behaviour change techniques into a modified educational intervention and was developed to help address the glycaemic drift observed amongst graduates of standard DAFNE programmes. As the programme's success will be contingent on staff buy-in, we explored healthcare professionals' experiences of, and views about, delivering DAFNE*plus* during a clinical trial to help inform decision making about rollout post-trial.

Methods: We interviewed $n = 18$ nurses and dieticians who delivered DAFNE*plus* during the trial. Data were analysed thematically.

Results: While many shared initial reservations, all described how their experiences of DAFNE*plus* programme delivery had had a positive, transformative impact upon their perceptions and working practices. This transformation was enabled by initial training and supervision sessions, the confidence gained from using scripts to support novel programme content delivery, and experiences of delivering the programme and observing DAFNE*plus* principles being well received by, and having a positive impact on, attendees. Due to these positive experiences, interviewees described a strongly felt ethical mandate to use some DAFNE*plus* techniques and curriculum content in routine clinical care. While being supportive of a national rollout, they anticipated a variety of attitudinal and logistical (e.g. workload) challenges.

Conclusions: This study provides a vital dimension to the evaluation of the DAFNE*plus* programme. Interviewees found the intervention to be acceptable and expressed high levels of buy-in. As well as offering potential endorsement for a national rollout, our findings offer insights which could help inform development and rollout of future behaviour change interventions to support diabetes self-management.

KEYWORDS
behaviour change, healthcare professional, intervention delivery, qualitative, structured education programme, type 1 diabetes

1 | INTRODUCTION

The DAFNE*plus* programme is an adapted version of the Dose Adjustment for Normal Eating (DAFNE) programme, which is a five-day structured education programme (SEP) designed to support type 1 diabetes self-management.[1] It was developed in response to research showing that many graduates of DAFNE and other SEPs experience a deterioration in their blood glucose management over time.[2,3] Work undertaken to understand this glycaemic drift highlighted multiple challenges to integrating and sustaining DAFNE self-management practices. These included: lacking confidence and/or motivation to undertake independent reviews of glucose and other data and determine appropriate courses of action;[4] challenges establishing and maintaining routines to support self-management;[5] difficulties seeking timely support from others, including healthcare professionals;[6,7] and, demotivation arising from difficulties attaining/sustaining clinically recommended glucose targets.[8,9] In light of this and other research,[10–13] the DAFNE*plus* programme, which is currently being trialled, was revised using clinical and health psychology theories, with behaviour change techniques embedded throughout.[10,11,14,15] Specifically, the DAFNE*plus* programme uses non-judgemental, person-centred and solution-focused communication and updated action planning and individual review sessions to help participants try out new, clinically relevant behaviours within a supportive, non-judgemental environment. Emphasis is placed upon reviewing participants' behaviours/plans (rather than just their blood glucose and other data) and considering what went well rather than focusing upon challenges. To achieve these, novel course components were introduced and existing DAFNE course modules adapted using principles from Cognitive-Behavioural Long-Term Conditions Self-Management programmes, to support participants in overcoming emotional and cognitive barriers to diabetes self-management. As well as comprising an adapted DAFNE course (delivered 1 day a week over 5 weeks) and bespoke technology (Glucollector), the programme includes 1 year of structured individual support (IS) provided by the same individuals who delivered the course, and using similar behaviour change techniques to those used on the DAFNE*plus* course.[1]

The DAFNE*plus* programme seeks to empower attendees by giving them the confidence and skills to identify and implement realistic, achievable and sustainable behavioural changes to support diabetes self-management. To do this, DAFNE*plus* uses updated action planning and individual review sessions that give participants opportunities to try out new self-management practices within a supportive, non-judgemental environment. These sessions focus upon reviewing participants' behaviours/plans and begin by asking them to consider 'what went well', rather than 'what went badly'. To support longer-term behaviour change/maintenance, participants receive training to help them identify emotional states that might interfere with their diabetes self-management and develop and use strategies to address these (e.g. through using positive self-talk 'cheerleading' statements, 'rainy-day' action plans and strategies to seek appropriate social support). Throughout, the programme uses positive, affirmative language to promote confidence and self-efficacy. In recognition that 'language matters' in diabetes care,[16] the name of the individuals delivering the programme was changed from educators to facilitators, as this was thought to better reflect their role in supporting attendees to set their own agendas and goals.

The DAFNE*plus* programme is delivered by DAFNE-qualified dieticians and nurses who are given bespoke training, supervision and support developed specifically for this programme (for further details, see Box 1). To promote intervention fidelity and delivery of novel content,

What's new?

- The DAFNEplus programme incorporates behaviour change principles to promote sustained improvements in diabetes self-management.
- As part of a broader evaluation, and recognising that the programme's success will be contingent on staff buy-in, we explored facilitators' experiences of, and views about, delivering DAFNEplus.
- Despite expressing initial anxiety about delivering novel (e.g. psychological) content, facilitators recounted positive experiences of programme delivery, and perceived DAFNEplus as offering the 'missing link' to supporting long-term behaviour change.
- While endorsing wider rollout, facilitators highlighted logistical and attitudinal barriers, which would need to be addressed to support successful programme delivery in routine clinical care.

these individuals are provided with scripts to use in both course and IS sessions.

A cluster randomised controlled trial is comparing the effects of DAFNE*plus* to standard DAFNE on glycaemic management (HbA1c) and diabetes-specific quality of life.[1] As the programme's long-term viability and success will be contingent upon buy-in from staff (as well as attendees), we explored nurses' and dieticians' experiences of, and views about, delivering DAFNE*plus*. A key purpose of this interview study, which formed part of a broader mixed-methods process evaluation, was to help inform decision making about whether (and how) the DAFNE*plus* programme should be rolled-out in routine clinical care post-trial.

BOX 1 Facilitator training, supervision and support

The design and delivery of the DAFNE*plus* training and supervision was led by a clinical psychologist (NdZ) who specialises in diabetes and has experience of training diabetes professionals in behaviour change skills.

The training programme is delivered over a maximum of 5 days and builds on DAFNE educators' existing skillsets. It incorporates self-directed learning (familiarisation with the curriculum and theory), face-to-face learning (interactive workshops and Q&A sessions), modelling of new sessions (by trainers) and role-play of new sessions (by educators) with feedback. Individuals are trained to use non-judgemental, person-centred and solution-focused communication. As well as acquiring new knowledge and skills to support delivery of this behavioural science-informed intervention, individuals are supported to create a shift in their own mindsets though: (1) a new DAFNE*plus* 'philosophy' that emphasises the importance of quality-of-life/patient autonomy and expands the concept of 'self-management' beyond medical management to include areas such as emotional well-being and social support; and, (2) use of a new set of 'delivery principles' which outline how to enable self-management to be sustained, for example by building on successes, avoiding judgement and supporting realistic expectations.[17]

Sites delivering the DAFNE*plus* intervention are provided with supervision from NdZ and a DAFNE*plus* facilitator involved in developing the intervention materials and delivering the training. Facilitators are offered intensive supervision and support during delivery of their first DAFNE*plus* course (teleconferences before and after each week's session to prepare and debrief) and then weekly e-mail supervision for subsequent courses. They can also access support for any ad hoc queries that arise between sessions.

2 | METHODS

2.1 | Overview

We undertook semi-structured interviews, informed by topic guides, with nurses and dieticians involved in delivering DAFNE*plus* during the trial. Interviews were used as these captured the information needed to address the study objectives, while affording flexibility for interviewees to raise issues they considered salient, including those unforeseen at the study outset (e.g. unanticipated benefits/challenges). Data collection and analysis took place concurrently, allowing issues identified in early interviews to inform topics explored in later ones.

2.2 | Recruitment and data collection

We recruited nurses and dieticians from all ($n = 6$) sites involved in DAFNE*plus* delivery, using an opt-in approach. Due to the relatively small number of individuals involved in programme delivery, all individuals from these sites were invited to take part; we also invited two individuals involved in delivering DAFNE*plus* during the trial's pilot phase. We interviewed participants as soon as possible after their involvement in the DAFNE*plus* programme had ended (e.g. when they left post early or closeout had taken place at their site).

Interview topic guides (see Table 1) were informed by literature reviews, work undertaken during the programme's pilot phase, input from individuals involved in developing staff training and insights gained from interviews with DAFNE*plus* programme attendees. Telephone interviews took place between October 2021 and April 2023, averaged 1–2 h, were digitally recorded and transcribed in full. All interviews were undertaken by DR, a very experienced qualitative researcher.

2.3 | Data analysis

Data were analysed by two experienced qualitative researchers (JL and DR), who were involved in earlier evaluations of the DAFNE programme. Following an initial period of data immersion that entailed repeatedly reading through

TABLE 1 Topics (relevant to this analysis) explored in interviews.

Background information: initial impressions and training received to deliver DAFNE*plus*

- Age, role, experience (years) providing diabetes care and experience (years) delivering standard DAFNE courses; number of DAFNE*plus* courses delivered and involvement in providing IS.
- Decisions to become involved in delivering DAFNE*plus*.
- Initial impressions and views about DAFNE*plus* including programme content, tools, techniques, language/terminology, technology (e.g. Glucollector) and IS. Aspects of the intervention that they felt might be of benefit to themselves or participants, or which they had concerns about prior to delivering the intervention.
- Perceptions of whether and how the DAFNE*plus* ethos differed from standard DAFNE
- Views about the training and supervision received to deliver DAFNE*plus*; whether and how they felt that the training required a shift in their role; how other colleagues felt about delivering the intervention.

Delivering the intervention (5-day course, Glucollector and Individual Support)

- Views about delivering the adapted curriculum (course and IS) and novel programme content; (any) stand-out elements (for facilitators and participants); which elements worked well or less well.
- Experiences of delivering the course and IS (over time); any aspects of the intervention where facilitators felt more/less confident and whether this changed over time.
- Views about participants' receipt of and engagement in DAFNE*plus* courses (and receipt of follow-up support [IS]) compared with standard DAFNE.
- Facilitators' experiences of delivering and participants' responses to novel programme content, including:
  - Focus on behaviours (e.g. helping participants identify and implement small, achievable behavioural goals) throughout the course and IS. Probe: building on successes, developing realistic expectations, focus on the positives, creating a supportive environment, identifying/implementing routines; views about focus placed on participants' behaviours rather than glycaemia.
  - Use of action plans to promote/encourage changes in behaviour; how these compared with goal-setting approaches used in standard DAFNE.
  - Psychological content, for example identifying and addressing unhelpful thinking patterns and emotional states (perfectionism, catastrophising, self-critical and procrastination); normalising lapses/relapses; use of strategies/tools to address these (e.g. self-compassion, positive self-talk – 'cheerleading' statements, 'rainy-day' action plans).
  - Supporting participants to identify and seek social support from friends, family and healthcare professionals.
  - Responses to the 'monitoring long-term health' session; how this compared with the 'complications' session delivered in standard DAFNE.
  - Views about use of scripts to deliver the intervention (course and IS).
  - Views about using new tools to deliver programme content, including 'move and motivate' techniques, metaphors/phrases (e.g. 70% of readings in range is good enough); language/terminology used throughout the programme (e.g. focus on the positives).
  - Views about using Glucollector technology to support participants' review of data during the course and IS.
  - Experiences of delivering IS; how IS compared with delivering routine clinical care; providing participants with support between IS sessions; what worked/did not work; any challenges encountered.
  - Any changes in role(s) supporting participants attending DAFNE*plus* over time, or any changes in role providing support to patients in routine clinical care arising from experiences of delivering DAFNE*plus*.
  - Any changes to clinical practice more generally, or to approaches taken when delivering standard DAFNE courses, as a result of the training received, new tools/techniques introduced and experiences of delivering DAFNE*plus* (course and IS).

Barriers and facilitators to rolling-out DAFNE*plus*

- Views about whether DAFNE*plus* should be rolled-out (perceived benefits and drawbacks); whether this would be feasible and sustainable in existing clinics.
- Training, support and resources needed to enable healthcare professionals to deliver DAFNE*plus* in routine clinical care.
- Views about who should provide and how services should be organised/structured to deliver DAFNE*plus* in routine clinical care.
- Perceived impact of rolling-out DAFNE*plus* on healthcare professionals' clinical practice, workloads and wider healthcare resources; challenges likely to be encountered (e.g. amongst existing DAFNE trained staff).

all interview transcripts, a thematic approach utilising the method of constant compassion was used to identify cross-cutting (inductive and deductive) themes.[18] This analysis was led by JL with DR checking and validating themes. As there was strong agreement between the two researchers, there was no need for third-party arbitration. Data were then coded according to these overarching themes (initial perceptions and attitudes; enabling the transformation from educator to facilitator; changing practices in routine clinical care; and barriers and enablers to rollout). Coded datasets were subject to further analyses to allow identification of subthemes and more granular data interpretations. NVivo 20 (QSR international, Doncaster, Australia) software was used to facilitate data coding and retrieval.

2.4 | Ethical considerations

We secured ethics approval as part of the approvals for the wider trial (REC reference 18/SW/0100). Due to

the relatively small numbers of individuals involved in DAFNE*plus* (and, hence, the potential to identify some people), we have not included information about whether participants were nurses or dieticians or whether they were involved in the main trial or its pilot phase in our reporting below.

3 | RESULTS

Of the 21 individuals approached, 18 opted-in (the three remaining individuals had either changed jobs or were on maternity leave). The final sample comprised 10 diabetes specialist nurses and 8 dieticians. For further information, see Table 2.

All participants described how their participation in the DAFNE*plus* programme had led to significant changes in their perceptions and working practices: what we term their transformation from educators to facilitators. Below, we begin by reporting participants' initial perceptions of the DAFNE*plus* programme, including their thoughts and anxieties about becoming involved. We then chart the processes by which participants became wedded to the programme's principles together with the ways in which their transformation had influenced their practices within routine clinical care. We conclude by reporting participants' views about the challenges and potential opportunities arising from roll-out of the DAFNE*plus* intervention post-trial. For additional quotations, see Table 3.

TABLE 2 Sample characteristics.

	N	%
DAFNE*plus* sites ($n=6$)		
Total number of interviewees[a]	18	
Role		
Diabetes specialist nurses	10	55.6
Dietitians	8	44.4
Years of diabetes experience		
10–20 years	11	61.1
>20 years	7	38.9
Years of experience delivering standard DAFNE courses		
5–10	7	38.9
10–20	11	61.1
Number of DAFNE*plus* courses delivered		
1 course	3	
2 courses	7[b]	
3 courses	2	
4 courses	4	
5+ courses	2	

[a]Two facilitators delivered DAFNE*plus* courses during the pilot phase of the trial.

[b]Includes courses delivered by two facilitators during the pilot phase.

3.1 | Initial perceptions and attitudes

3.1.1 | First impressions

Participants described varying degrees of enthusiasm or discomfort when they first considered involvement in the DAFNE*plus* programme. Some, typically those with prior experience of behaviour change and other psychological techniques, described buy-in from the outset (Table 3). Some also noted limitations to the existing DAFNE programme (Table 3) and suggested that, potentially, DAFNE*plus* offered 'the missing link' (005) to enabling long-term behaviour change:

> Most people who do DAFNE absolutely love it. And feel it's a life-changer for them... but then when you see them a year on, quite a few had stopped doing it, or they were doing... [a] weakened version of it, like going back to their old ways with dieting... So it was: how we then help them to change their behaviour so they continue doing it? (009).

Others, especially more long-standing DAFNE educators, expressed initial unease, suggesting that: 'I love DAFNE and I really was a bit, you know, don't muck this up, don't change something that's great' (007). Indeed, these participants often indicated that their initial programme involvement had not been an active or positive choice:

> If I'm perfectly honest, I wasn't keen on doing it... The decision was made by the (names trust) team, and it was given to me as a fait accompli so to speak... I was not amused to say the least and went down to (location where training was done) with a heavy heart. (018).

3.1.2 | Moving out of comfort zones

All participants described some trepidation and anxiety about delivering the programme, with most, especially those with no prior experience of delivering psychologically informed techniques, voicing concerns that they would not have the aptitude needed to deliver the programme's psychological content correctly and competently:

TABLE 3 Participant quotations.

Themes	Participant quotations
Initial perceptions and attitudes	*First impressions: buy-in from the outset* 'Because I think like as a centre, we're quite in- interested in the psychological aspects. We've had a lot of training from psychologists, so we're quite interested in that as well, as a general approach with our patients, and always try to be aware of that.' (017) 'I've had strong focus on behaviour change, and, psychological approaches since I qualified. And so any opportunity to learn more about those, was great for me.' (013) *First impressions: limitations to the existing DAFNE programme* 'Because I remember thinking, having delivered DAFNE for a long time, some bits were a bit dry and maybe didn't really help people in moving forward in changing what they were doing day-to-day for their diabetes.' (014)
Enabling the transformation from educator to facilitator	*Training, supervision and scripts: supports the transition to facilitator roles* 'I found the supervision during the first course really helpful... lots of reassurance, and being able to go though examples of: oh this happened. This is what we did. This is how we dealt with that.' (018) *Transformation though positive experience: higher levels of engagement* 'I know with standard DAFNE, you are sort of like getting them to do things, and you know: how do you think you'd do this task with your experiences and all that kind of thing. But I think with this [DAFNE*plus*] you're more taking into account how it makes them feel on a day-to-day basis. So I think they listen to you maybe a bit more, because they feel like you're gonna attempt to understand how diabetes affects them every day, and not just saying: right, we're gonna teach you how to do it properly.' (002) *Transformation though positive experience: setting small, achievable goals* 'By building on little bits of kind of success, that makes a difference for some people, that worked quite well in feeling that they were achieving something, cause we were thinking about small- small changes, or something that was a realistic change. Em, so it made them feel like they actually were making progress, whereas previously they might have just felt like they were always failing, or not achieving what they'd been asked to do.' (001) *Transformation though positive experience: exercising compassion* 'It allowed people to be a bit more forgiving of themselves which was really nice to see.' (017)
Changing practices in routine clinical care	*Using key phrases, concepts and terminology in everyday clinical encounters* 'Another thing that I use all the time now as I say, target range rather than saying: oh you've got good control, I would say oh your controls in the target range.' (010) 'That 70% is good enough, I mean I think I've used that, I don't know how many times now, I probably use it on a daily basis working in diabetes.' (011) *Incorporating DAFNEplus sessions into delivery of standard DAFNE* 'this is probably illegal in DAFNE terms but we have used the DAFNE*plus* complications thing [session emphasising that the risk of complications is very low if course teaching is implemented] through all of our courses. Because it is so much better than the standard one. It puts a different perspective on it, and people come out about session feeling so much more positive.' (010)
Barriers and enablers to rollout	*Having adequate resourcing to deliver a more time and labour-intensive programme* 'Because it's the extra follow-ups isn't it. It's the extra individual support. So you're talking about extra appointments that really aren't factored into our numbers, shall we say, and staffing levels at the moment. There's definitely more nurse and dietician input that would be needed, more time for us to do DAFNE*plus* instead of standard DAFNE. It would be all those extra appointments that are not in the job plan... And there's not really the capacity in the clinic... You'd need more hours.' (014)

> The fear when you're a nurse, you're not a trained psychologist, (so) if they open up, like you don't want them to open up too much because you don't have the skills to counsel somebody if something just goes wrong in a big way. (007).

> I don't know if I was entirely confident that I'd be able to do these new things... just worrying thinking: well am I going to be able to do this justice? That's the more scary bit. (014).

By virtue of the programme's emphasis on enabling (rather than directing) patient (led) goals, participants also anticipated that DAFNE*plus* delivery would require fundamental, and potentially quite challenging, shifts in their existing roles and working practices:

> But I think as nurses... we're quite nurturing. So sometimes we may lead more... tell the patient what to do... But I think with DAFNE*plus*, which was a little bit hard I have to admit, to

> sort of sit back a bit more, and allow them to come to the decisions themselves, and why they want to make the change. (003).

3.2 | Enabling the transformation from educator to facilitator

Several issues/experiences appeared to facilitate participants' transformation from educators to facilitators: training and supervision, use of scripts and direct programme delivery experience.

3.3 | Training, supervision and scripts

Many participants, especially those reporting initial cynicism, described their DAFNE*plus* training as a 'light-bulb moment' (
012), during which they had first started to become wedded to DAFNE*plus* principles. This included the focus on behaviour change rather than glucose management, and the opportunities the programme presented to support change within a longer time frame:

> The different language, the different kind of—well psychology that was deep within it, I could genuinely see how that just makes so much more sense... Definitely without a doubt, you know, addressing the behaviour, changing the behaviour first and then the obvious outcome is going to be the blood glucose levels will normalise. (007).

> I really liked the idea that things went on for the whole year, because I think, you know, you can't make a huge change and have that like show in five days or five weeks. You need a lot longer to actually be able to show that it's improved. And I think it allows them to think: yeah, okay, it doesn't matter that this isn't perfect. If I just work on these skills over the next year, I'll get there. (002).

As well as gaining familiarity with the programme's (new) content and ethos, participants noted how their training had helped enable their transformation from educators to facilitators through activities such as role-play. As participants suggested, these kinds of rehearsal opportunities had helped give them the confidence and experience needed to come out of existing 'comfort zones' (003) and adopt new delivery styles, such as: 'holding back and allowing the patient to be able to think their own way to the solution' (008).

Participants also noted how regular (weekly) supervision had further supported their transition to facilitator roles by offering opportunities to trouble-shoot issues and seek/receive reassurance they were facilitating the programme correctly (Table 3) and clarify their understandings of new elements of the curriculum and how best to deliver them:

> I found them [supervision sessions] to be really helpful, cause it meant that we could not only chat through our experience of the week before, but again it gave us that opportunity to just: can I just clarify next week's curriculum? Next week I've got this, is- am I reading this correctly? Is this the way we're supposed to present this? What kind of interaction are you expecting? (006).

Additionally, some, especially those who were still familiarising themselves with the programme's new language, terminology and content, highlighted benefits to having scripts to use during course and IS delivery, as these offered reassurance they were enacting their facilitator roles and delivering novel programme content correctly:

> I like a script to be honest. If I've got a script I know what I'm saying is what they expect me to say. I would be more stressed without a script because I would be thinking, well, you know have I missed anything... Have I said this correctly ... Am I doing this in the right way... So that, for me is a comfort. (009).

3.4 | Transformation though positive experience

However, pivotal to participants' transformation was their experiences of 'taking a leap of faith' (016) and delivering the programme's novel content and then observing this content being well received by attendees:

> I guess before my first course I was a little bit unsure how people would react, nervous about folk kind of opening up... But then once the first course was over... I felt quite positive, because we found people were receptive to it, it felt like people were more positive. (017).

Indeed, participants observed how, throughout, attendees had tended to show higher levels of interest and

engagement than on standard DAFNE courses (Table 3). In line with the programme's broader objectives, participants also noted observing diabetes self-management benefits arising from attendees being encouraged and supported to: set small, achievable behavioural goals (Table 3), exercise self-compassion when they encountered difficulties with self-management (Table 3) and focus on positives (what went well) rather than negatives (what went badly) during course and IS sessions:

> One participant had lots of hypos last week. And (said) you know: "I really need to think I need less bolus insulin." And what we were doing was turning this round to a positive to say: that's really useful that you've managed to work that out ... So rather than seeing it as a negative, turning it round to a positive... And you could almost see that kind of smile on their face, and them thinking: "well actually, yes, I have, that shows what I've learnt." (012).

In offering these kinds of reflections, participants further noted how the motivational impacts on attendees had also extended to themselves: 'you feel like you've achieved more if they go out with a positive mind-set' (013).

3.5 | Changing practices in routine clinical care

As well as having become wedded to the programme's practices and principles, participants, even those who had only delivered one course/set of IS sessions, noted various ways in which DAFNE*plus* curriculum content and delivery styles had 'started to drift into my day-to-day interactions with patients...and become ingrained and embedded' (007). Such changes included using key phrases, concepts and terminology in their everyday clinical encounters (Table 3). Additionally, as well as taking certain sessions and incorporating them into their delivery of standard DAFNE courses following closeout at their site (Table 3), many indicated having shifted towards using adapted action-planning and adopting positive, affirmative techniques, in routine consultations:

> Making it about their goal setting, identifying what their action plans are, talking about what went well, instead of concentrating on what didn't go so well is probably now more my norm. (007).

In doing so, as these participants noted, they had reduced their use of directive approaches and, instead, encouraged the person with type 1 diabetes to identify and set small, manageable behavioural goals tailored to their personal circumstances:

> I do feel that I do look differently and behave differently with my patients. You know it isn't all about the glucose, you've got to take into account what is going on in their life as well and then you look at small behaviour change... Using more open questions and asking them what they would like to focus on and working with them to say: how would they achieve that. (003).

Indeed, participants indicated a strongly felt ethical mandate to incorporate these changes because: 'we can't ignore what we've learnt from this' (005); 'when something works, you want to use it, you don't want to not use that thing you think would be helpful to someone.' (002).

3.6 | Barriers and enablers to rollout

While participants expressed enthusiasm for rollout post-trial as a result of their own positive experiences, many anticipated logistical and attitudinal challenges. The former cohered around having adequate resourcing to deliver a more time and labour-intensive programme than standard DAFNE (Table 3). As well as needing sufficient staff (nurses and dieticians) and ring-fenced time to support staff training and programme delivery in routine clinical care, some underscored the importance of upskilling the wider healthcare team, including doctors, to ensure DAFNE*plus* participants received appropriate and consistent follow-up support:

> It would be the training for the doctors, really getting them signed up to it, and using the right language. So it's going back to the language matters stuff, shedding the old terminology and phrases that still slip in. (005).

In line with their initial reactions to programme involvement, participants also predicted variable receptiveness to rollout, with some raising concerns about motivating and upskilling some colleagues, especially those who had entrenched ways of working or who expressed discomfort using psychological techniques:

> Loads of DAFNE facilitators have said off the bat: absolutely no way, they were calling it a certain way which was disparaging towards it ... So there was a lot of negativity and there still is. (015).

Where participants felt colleagues would be supportive of rollout, they also anticipated the healthcare team being more willing and open to developing workarounds to make DAFNE*plus* delivery possible using existing resources, for example, by reorganising clinics and re-prioritising workloads:

> I think if we all had to ration care and decide what's a good use of time and what's not I think that it's a better use of time [supporting DAFNE*plus*] than sometimes you know, a quick five minute, 10 minute titration of advice or continually going over the same things time and time again. (007).

Indeed, some conveyed optimism that, while rolling-out DAFNE*plus* would require initial workload increases, this would be offset by DAFNE*plus* graduates needing less appointments and support in the longer-term.

> I think we would have to restructure our clinics in order to make capacity for a different approach, there would be a transition period where it would seem like it was more work and additional contact. But I think ultimately the payoff would be our clinics would be less busy and we would be able to follow-up people less frequently. (013).

4 | DISCUSSION

Facilitators who delivered the DAFNE*plus* intervention reported positive experiences and high levels of 'buy-in' once initial anxieties and concerns about being involved a programme with a heavy psychological/behaviour change content had been addressed. Such concerns, as our findings suggest, were alleviated through bespoke training and supervision, use of scripts which promoted familiarity with, and confidence delivering, novel programme content; and facilitators' experiences of observing positive impacts on course attendees' engagement, motivation and diabetes self-management practices. As well as observing benefits that aligned with the programme's wider objectives,[1,17] facilitators indicated having undergone a positive transformation themselves. Indeed, despite not knowing the trial results (forthcoming) when interviewed, this transformation from educator to facilitator was so powerfully felt that participants reported a strong ethical mandate to introduce DAFNE*plus* practices and principles into their everyday clinical practice in order to fulfil a wider duty of care to people with type 1 diabetes.

In their study of DAFNE educators' views about implementing goal-setting techniques, Fredrix et al.[19] found that educators experienced discomfort delivering elements of the curriculum which they perceived to be 'psychological' and, hence, outside of their existing skillsets and competencies. Echoing findings in similar studies,[20] the authors also observed consequent, low fidelity to the goal-setting elements of the DAFNE curriculum. This led them to recommend better training be given to educators or, alternatively, psychologists or behaviour change experts be used to implement DAFNE and other diabetes self-management programmes.[19] Encouragingly, we found that when diabetes specialist nurses and dieticians are given bespoke training and support, it is possible to overcome their anxieties and concerns about delivering behaviour change and other (novel) psychological techniques. Similar observations have been made by others who have also highlighted the benefits of providing training (including use of role-play techniques) and supervision (including personal feedback) to diabetes healthcare professionals to promote confidence and competence delivering (novel) psychological techniques (e.g. goal-setting, motivational interviewing, person-centred practice).[21–26] It is essential, therefore, that this kind of training and support be retained if DAFNE*plus* is rolled-out post-trial, especially as the kinds of anxieties and concerns reported by participants in our study might be even more keenly felt by health professionals in routine clinical (i.e. those who did not chose to take part in a trial of an intervention making extensive use of behaviour change/psychological techniques). Indeed, as others have argued, staff training and supervision should be considered key elements of any behaviour change intervention as, potentially, they can help enhance treatment fidelity and lessen risk of decay in provider/facilitator skills.[27,28]

Alongside bespoke training and supervision, participants discussed how use of scripts had increased their confidence and perceived ability to deliver novel programme content. Hence, these findings not only highlight the importance of scripts being retained in the event of wider rollout but also their potential value in supporting delivery of other complex interventions using psychologically informed techniques to support diabetes self-management, especially when staff perceive intervention delivery as requiring significant adjustments to their existing roles and identities.[21]

While participants expressed enthusiasm for a national rollout and suggested that initial increases in workloads might be offset by DAFNE*plus* graduates needing less input and support over time, final decisions will be contingent upon main trial results and the health economic evaluation. If there is appetite for rollout, consultation work, akin to that done to support rollout of other diabetes

interventions post-trial,[29] would be needed to generate recommendations which are feasible, implementable and which take account of the attitudinal and logistical barriers identified in the current study. Alongside facilitators' concerns about resource constraints (e.g. lack of funding and staff availability), their worries about a potential lack of enthusiasm from colleagues may be well-founded, given that the DAWN2 study found training in psychological management to be low amongst diabetes healthcare professionals in the UK and elsewhere, with many reporting feeling ill-equipped to deliver psychological and emotional aspects of diabetes care.[30] Encouragingly, however, we have seen how staff engagement and confidence can be improved through training and direct programme delivery experience. As well as offering bespoke training and support to staff, consideration should be given to interviewees' suggestion about training a larger-pool of healthcare professionals, to help ensure DAFNE*plus* benefits are retained once attendees complete the 1-year programme. This might include development of condensed training modules to allow understanding of DAFNE*plus* approaches and techniques to be cascaded to the wider diabetes healthcare team. However, in the event of this recommendation being taken forward, further evaluation work would be needed.

If a national rollout does not happen, careful thought should be given to whether (and how), elements of the DAFNE*plus* programme which staff considered helpful and efficacious could be integrated into routine clinical care, including redesign of standard DAFNE courses. Indeed, as a result of the process evaluation findings, the programme team is currently exploring mechanisms for sharing novel/adapted action-planning content with standard DAFNE educators. However, in the event that DAFNE*plus* techniques and curriculum content are incorporated into routine clinical care, further evaluation work would be needed to establish their efficacy and acceptability when delivered separately from the wider programme and, potentially, in the absence of staff receiving bespoke training and support.

4.1 | Strengths and limitations

While there was very good opt-in to the study, we mostly interviewed individuals with extensive DAFNE and diabetes experience. Potentially, this might have resulted in them expressing greater anxiety about taking on new (i.e. facilitator) roles than colleagues at an earlier stage in their careers amongst whom certain ways of working might be less entrenched. As the programme was delivered and evaluated within the context of a clinical trial, this may also have influenced staff experiences and accounts. As trial delivery took place in the early stages of the SARS-CoV-2 pandemic, this resulted in staff leaving post and/or trial sites closing-out earlier than anticipated. Consequently, some interviewees had only limited DAFNE*plus* delivery experience. However, these individuals did recount conversion experiences akin to those who had more extensive delivery experience.

5 | CONCLUSION

Our study adds a vital dimension to the evaluation of the DAFNE*plus* programme, as the programme's viability and success will be contingent upon buy-in from staff as well as attendees. Facilitators found the intervention to be acceptable and reported high levels of buy-in. As well as offering potential endorsement for a national rollout (albeit this will be contingent upon trial results), study findings offer important insights which could be used to support design and delivery of future behaviour change interventions to support diabetes self-management.

AUTHOR CONTRIBUTIONS

J.L. conceived and designed the interview study. D.R. collected the data, which was then analysed by J.L. and D.R. J.L. conceived the concept for this article and drafted it with input from N.d.Z. and D.R. All authors reviewed, edited and approved the final version of the manuscript.

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CONFLICT OF INTEREST STATEMENT

SRH has served on Advisory Boards and Consulted with Eli Lilly, Zealand Pharma, Zucara Pharma and served on speaker panels for NovoNordisk. JL, DR, ES, FL and NdZ have no conflicts of interest to declare.

DATA AVAILABILITY STATEMENT

The datasets generated and analysed in the course of this study are not publicly available due to risks to individual privacy. However, they are available, via the corresponding author, on reasonable request.

CONSENT TO PARTICIPATE AND FOR PUBLICATION

All research participants provided written informed consent including for anonymised information to be published in this article.

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