

Influences of decisions to attend a national diabetes prevention programme from people living in a socioeconomically deprived area

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Abstract

Aims: To explore key influences of decisions in participants from a socioeconomically deprived area to attend the Healthier You: NHS Diabetes Prevention Programme (NHSDPP). The NHSDPP is a lifestyle behaviour change programme for adults with prediabetes living in England.

Methods: Semi-structured interviews were conducted with 35 participants who had attended the initial assessment, but not yet started the NHSDPP; 23 were classified as “attenders,” 12 as “non-attenders” after they were interviewed based on whether they had attended the first NHSDPP session or not. Transcribed interviews were analysed using inductive thematic analysis.

Results: Seven themes were derived from the data. The results demonstrate how understanding type 2 diabetes, making lifestyle changes, comparing themselves with others, having support and certain self-perceptions can all affect individuals’ motivation to attend a diabetes prevention programme. Accessibility and practicalities also influenced both motivation and attendance.

Conclusions: This study identified a range of different influences on decisions to attend a diabetes prevention programme, which programme organisers and healthcare professionals should consider to maximise attendance. Initial communication from general practitioners (GPs) and initial assessments are key points where people’s beliefs and understanding could be explored.

KEYWORDS

diabetes mellitus, type 2, health education, no-show patients, prediabetic state, preventive health services, qualitative research

1 | INTRODUCTION

Type 2 Diabetes Mellitus (T2DM) prevention is a worldwide health care priority,¹ with global levels of prediabetes (i.e., those at high risk of T2DM) predicted to rise from

374 million to 548 million between 2019 and 2040.² In England, levels of obesity and physical inactivity are escalating, leading to more adults being overweight or obese, and T2DM diagnosis increasing, costing the National Health Service (NHS) approximately £8.8 billion each

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year (direct costs of T2DM).³ It is predicted that by 2034, 1 in 3 adults will be obese and 1 in 10 diagnosed with T2DM, highlighting the need for more preventative measures.⁴ Following other countries like Finland that have successfully implemented diabetes prevention programmes (DPPs),⁵ England has developed the Healthier You: NHS Diabetes Prevention Programme (NHSDPP) to delay or prevent the onset of T2DM.⁶ This involves offering those with prediabetes a behaviour change programme with lifestyle modification.⁶ The programme consists of at least 13 group sessions over a 9-month period, with a minimum total of 16 h contact time and sessions generally lasting between 1 and 2 h.⁶ Completion is defined as those who attend at least 75% of sessions.⁷ Individuals are eligible for the programme if they are identified as having prediabetes after undergoing an NHS Health Check, through routine clinical practice or obtaining qualifying blood test results through GP records.⁸ Currently, an eligible blood glucose reading is no longer required, and from July 2020, individuals have been able to self-refer onto the NHSDPP after completing an online Diabetes UK risk score assessment.⁹

For any DPPs, it is important that they are clinically effective and financially viable, especially when delivered at scale.¹⁰ Programme viability involves maximising attendance.¹¹ It is recommended that to develop future DPPs, an in-depth understanding of the reasons why participants choose not to attend is required.¹ Individual factors associated with non-attendance, include smoking, taking blood pressure medication and consuming less fruit and vegetables.¹² Attenders of DPPs on the other hand are more likely to be older, leaner, non-smokers, and male than non-attenders.¹ Findings regarding ethnicity and deprivation are mixed: some research has found those individuals from Asian, Afro-Caribbean, mixed and other ethnic groups were more likely to attend an initial assessment (IA; a brief appointment before programme commencement), than those in white European groups⁷ however, other studies have found no difference in ethnicity for attendance at the first session. Regarding deprivation, again, findings are mixed with some studies showing engagers to be from *less* socioeconomically deprived areas,¹ but others showing higher attendance at the IA for *more* deprived areas but only for Asian, Afro-Caribbean, mixed and other ethnic groups.⁷ Barriers to attendance associated with the programmes themselves include inconvenient timing of sessions, location or lack of interest.¹³

The IA is a short 15–20-min appointment, which patients are required to attend before programme commencement. For the programme described in this paper, it involved (i) having a blood glucose test if the referral blood glucose reading is more than 3 months old, (ii) taking height, weight and BMI measurements, and (iii) completing questionnaires including the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS) and the Brief Illness Perception questionnaire

What is already known?

- The viability of diabetes prevention programmes (DPPs) is important.
- There is lack of qualitative evidence exploring reasons for both attendance and non-attendance.
- Illness perceptions have influenced attendance at other health programmes.

What this study has found?

- Motivation to attend a DPP is influenced by understanding of type 2 diabetes mellitus (T2DM), previous experience and beliefs.
- Accessibility and practicalities influence motivation and attendance.

What are the implications of the study?

- Influences on decisions to attend a DPP including understanding of T2DM and risk should be discussed to maximise attendance.
- Initial communication from general practitioners and initial assessments are key points where people's beliefs and understanding could be explored.

(Brief-IPQ). This appointment is carried out by trained staff. Following the IA, patients receive a phone call to book their first session. The NHSDPP (2016–2018) found that 63% of individuals who attended the IA, attended at least one intervention session (i.e., started) and 37% did not attend any sessions.¹⁴ Qualitative literature exploring service users' experiences of the NHSDPP¹⁵ highlighted that service users' confusion about their prediabetes diagnosis and the programme, could negatively affect attendance. They stated how the expected programme benefits such as making lifestyle improvements and reducing T2DM risk encouraged attendance; they did not interview non-attenders. Overall, there is lack of qualitative evidence exploring reasons for both attendance and non-attendance.

Individual factors that have affected attendance at other preventive health programmes include illness perceptions (IPs). IPs are beliefs or cognitive perceptions held by individuals regarding their illness.¹⁶ These IPs include beliefs about illness: identity, causes, timeline, consequences, and cure/control.¹⁷ It is well established that IPs are important determinants of behaviour and various outcomes in individuals with different conditions such as T2DM.¹⁶ Research exploring predictors of attendance at other health preventative programmes have shown IPs to predict uptake.¹⁸ For example, beliefs about the causes of

illness were associated with attendance at lifestyle change programmes,¹⁸ and those who believed their condition was controllable were more likely to attend cardiac rehabilitation programmes.¹⁹ However, whether IPs reflect attendance at the NHSDPP is yet to be explored, and as a result were used as a theoretical framework on which some of the interview questions were based.

This present research is based on an 18-session NHSDPP (six weekly, six fortnightly and six monthly) which was delivered over nine months in an area of South London, England where 46% of the population belong to Black, Asian and Minority Ethnic (BAME) groups,²⁰ known to be at a considerably higher risk for T2DM than White groups.²¹ This area of South London is more socio-economically deprived than the national average,²² which is also linked with an increased T2DM risk.²³ The higher risk of type 2 diabetes in these groups is a challenge for health services, and exploring facilitators and barriers to attendance, especially with this under-researched at-risk population, could better inform programme recruitment and delivery. This study aimed to explore key influences of participants' decisions to attend the NHSDPP.

2 | MATERIAL AND METHODS

2.1 | Interview schedule

A semi-structured interview schedule was used for the study, and included questions which explored participants' perceptions of T2DM (these questions were based around illness perceptions),¹⁶ T2DM risk, the NHSDPP and experience of the referral process. The interview schedule was piloted with 11 participants (five men) after attending their IA. Minor changes included adding prompts and simplifying wording for non-native English speakers ([supplementary information](#)).

2.2 | Sampling and recruitment

Once ethical approval was gained from Staffordshire University, the local provider (LP) sent out invitation letters to those scheduled to attend the Initial Assessment (IA). The researcher recruited participants from the IA venue using opportunistic sampling, and aimed to recruit 25–30 attenders and 10–20 non-attenders as recommended for thematic analysis.²⁴ All participants who were registered with the local provider and had attended the IA were eligible to take part in the study. All the participants were adults and classified as having non-diabetic hyperglycaemia (also known as prediabetes). All participants were required to understand and speak English to a level

enabling them to take part in an interview. The researcher attended the IA venue on 11 days, spoke to 84 individuals in total and interviewed 43 participants (following both written and verbal informed consent). All interviews took place on the day of the IA, although participants were given the option to arrange it for another time. After attending the IA, participants who did not start the programme were classified as “non-attenders” and those who attended at least one session, were classified as “attenders” ([supplementary information: Figure S1](#)).

2.3 | Data collection and analysis

Individual semi-structured interviews were conducted face-to-face after the IA (before the first NHSDPP session) (April–November 2017); interviews took place in a private room at the IA venue, and participants were later classified as attenders/non-attenders depending upon whether or not they started the programme. Participants were interviewed and a brief questionnaire was completed to record self-defined demographic information, including gender, age, ethnicity and postcode. Regular updates were provided by the LP regarding whether the interviewed participants had started the programme. Twenty-three were classified as “attenders” and 12 as “non-attenders” ([Table 1](#)). Attenders and non-attenders were then followed up with a short telephone call discussing reasons for their attendance or non-attendance ([supplementary information: Table S1](#)). Eight participants were excluded from analysis (two developed T2DM and ineligible to start; four were not identified on the LP database; and two non-attenders were unavailable for a follow-up call). After the interviews, participants were provided with a debrief letter and offered a shopping voucher to thank them for their time.

All interviews (both baseline and follow-up calls) were audio recorded, transcribed verbatim and analysed using inductive thematic analysis with an essentialist epistemological approach.²⁵ Interview transcripts were anonymised, and participants were given pseudonyms for reporting. Analysis was undertaken using NVivo. The six phases of thematic analysis developed by Braun and Clarke (2006) were followed, starting with data familiarisation, initial coding, and development of possible sub-themes and themes, which were then discussed to refine and finalise the final themes.²⁵ Data coding and initial theme development were undertaken by the first author (S.B.) and reviewed and discussed together with the 2nd author (R.P.). Regarding reflexivity, the two researchers acknowledge how their beliefs, interests in health psychology and their past experiences could have influenced the interpretation of the data. This was considered during analysis so both authors engaged in this process in a reflexive way.

TABLE 1 Sample characteristics

	Attenders (n = 23) (%)	Non-attenders (n = 12) (%)
Gender		
Women	13 (56.5)	7 (58.3)
Men	10 (43.5)	5 (41.7)
Age		
20–29	0	1 (8.3)
30–39	1 (4.3)	0
40–49	7 (30.4)	6 (50.0)
50–59	12 (52.2)	3 (25.0)
60–69	3 (13.0)	2 (16.7)
Ethnicity		
White British	6 (26.1)	5 (41.7)
Black/Black British	11 (47.8)	3 (25.0)
Asian/Asian British	2 (8.7)	2 (16.7)
Mixed	1 (4.3)	1 (8.3)
Other	3 (13.0)	1 (8.3)
Deprivation quintile (1–5) ^a		
Quintile 1 (most deprived)	10 (43.5)	7 (58.3)
Quintile 2	8 (34.8)	1 (8.3)
Quintile 3	0	2 (16.7)
Quintile 4	1 (4.3)	1 (8.3)
Quintile 5 (least deprived)	0	0
Unable to calculate	4 (17.4)	1 (8.3)

^aThe index of multiple deprivation was derived from participant home postcodes where possible.^{19,30}

3 | RESULTS

Twenty-three attenders (mean age 51.8 years, range 34–64) and twelve non-attenders (mean age 49.3 years, range 25–69) were recruited (Table 1). Across both groups, slightly more women than men were recruited, and the majority were from the most deprived areas (based on national rankings). The most common ethnicity was black/black British amongst attenders and white British amongst non-attenders, with majority of non-attenders being younger when compared to attenders.

There are seven themes derived from the data (Figure 1). To conserve words, sub-themes are detailed within each theme without being explicitly mentioned (supplementary information: Table S2). Illustrative quotations are labelled with participant number and attendance status (A-attender; NA-non-attender) (supplementary information: Table S3).

Some researchers have argued the inclusion of numerical information is useful for verifying findings and

conclusions, and it can help make certain statements more precise.²⁶ Therefore, due to having attendance data, some numerical information is presented (where appropriate), to indicate the proportion of participants that discussed a certain concept before starting the programme, and whether they went on to attend or not.

3.1 | Understanding of T2DM

This theme details current participants' T2DM knowledge and some of the difficulties they experienced with understanding. This can affect motivation to attend.

Both attenders and non-attenders discussed aspects related to knowledge of T2DM. For example, they stated bodily parts and organs are affected, including that T2DM can “lead to blindness”^{30A} or “amputation”^{1A}. They expressed how “you’ve got it [T2DM] for life”^{20NA}, “it can last forever”^{31A}. Alternatively, some said “you can get rid of it [T2DM]...if you [are] willing to”^{15A}, “prevention is better than cure.”^{14A}

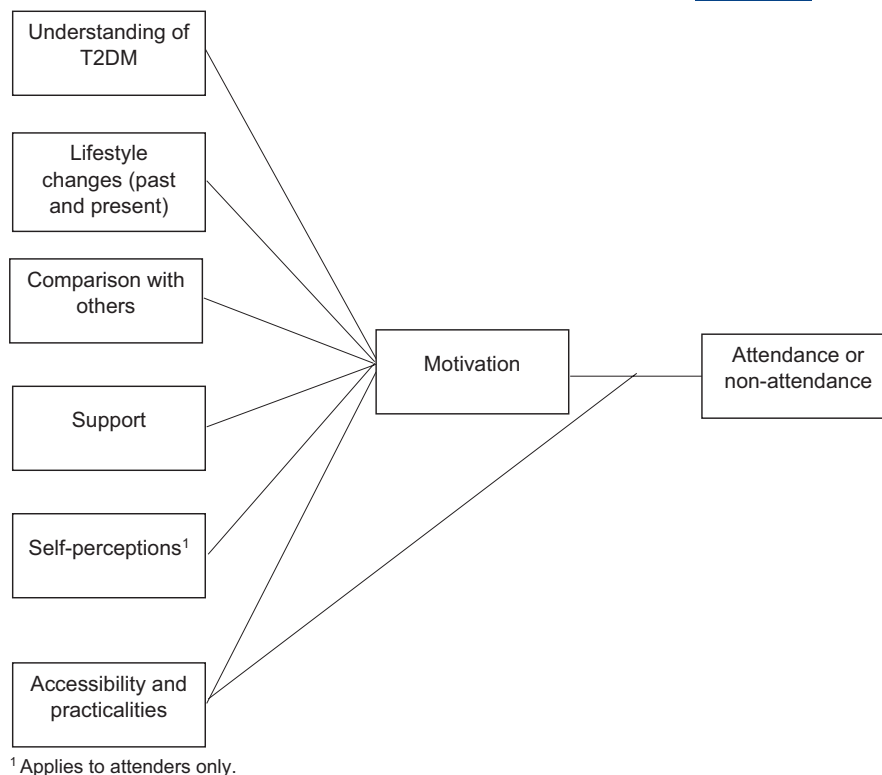
Attenders expressed how their “HbA_{1c} levels were slightly high”^{4A} which encouraged them to start the programme, as they would “rather prevent it than manage it”^{12A} or felt they “don’t wanna get type two [diabetes].”^{27A} Non-attenders on the other hand, felt they already knew how to reduce their risk, or did not understand why they still had prediabetes if they had made the required lifestyle changes: “I know what sort of foods I can and...can’t eat,”^{20NA} “how can I be on the borders [prediabetes] again?”^{8NA} Non-attenders also felt that they no longer had prediabetes, or that their prediabetes was under “control”^{32NA} or “blood sugars down.”^{18NA} This had resulted in them believing “I think I’m fine now,”^{19NA} and not feeling the need to attend: “if I was still on the prediabetic range I would consider [attending] but now that I’m below it [I won’t attend].”^{18NA}

Some attenders and non-attenders expressed difficulties in understanding their T2DM risk or GP communication. Participants explained, “[I] don’t really understand [my] risk very well”^{25A} or felt their GPs did not explain about their prediabetes diagnosis: “the doctor is not telling you all [he/she] is supposed to tell you.”^{24A} Overall, the proportion of participants who expressed difficulties in understanding their T2DM risk or GP communication at pre-programme was higher in attenders than non-attenders (attenders $n = 11$ [48% of attenders] vs. non-attenders $n = 1$ [8% of non-attenders]).

3.2 | Lifestyle changes (past and present)

Attenders and non-attenders discussed lifestyle changes they had already made or were trying to make with difficulties experienced since first hearing about their

FIGURE 1 Model overview of key influences affecting attendance. ¹Applies to attenders only



prediabetes diagnosis. This can affect their motivation to attend.

Both attenders and non-attenders discussed lifestyle changes associated with diet and exercise. For example, they “stopped taking sugar,”^{21A} or were “trying to do exercises.”^{3A} Overall, the proportion of participants who had already made lifestyle changes before the programme (and after their IA), was higher in attenders than non-attenders (attenders $n = 13$ [57% of attenders] vs. non-attenders $n = 5$ [42% of non-attenders]).

Both attenders and non-attenders expressed difficulties with making lifestyle improvements associated with diet, for example “trying to look after my diet but it’s not easy.”^{3A} Others expressed difficulties with exercise, for example, “I don’t exercise that much,”^{15A} or not being “too good with physical stuff like going to the gym.”^{22A}

3.3 | Comparison with others

This theme involves participants making comparisons with their family, friends or other people with T2DM. This may feed into motivation and affect attendance. Both attenders and non-attenders made comparisons with family stating, for example, “my father...was diabetic,”^{23A} with some mentioning how their family members have “passed away”^{8NA} from the effects of T2DM. Some attenders were “motivated to do something because...it’s in the family ...I didn’t want that to happen to me.”^{5A} Other participants

had a better understanding of T2DM due to knowing people with it such as family and friends: “a lot of it has been communicated...from the people who I see like friends and family I know whose got it.”^{8NA} Comparisons with others therefore had a mixed effect on attendance. For some, comparisons with others motivated them to attend due to knowing others with T2DM and they wanted to avoid developing the condition; for others they did not see the need to attend as they already had sufficient knowledge and understanding about T2DM from their family and friends.

3.4 | Support

This theme involves support from family, friends, group members or those involved in programme delivery, which may affect motivation to attend. Both attenders and non-attenders discussed how family and friends provide positive support, including encouragement “my family tend to give me a kick up the backside!”^{28A}. In contrast, others discussed how family and friends did not provide sufficient support such as “life we [are] living...is not that easy especially with family,”^{15A} or they gave incorrect dietary advice, for example, if you have T2DM then “you should keep [a] sweet in your pocket [for] when you are hungry... [that’s] not the way I understand [it now].”^{7NA}

Some attenders and non-attenders felt they would get support from other people on the programme “it’s good to

meet new people”^{3A} as “you learn from each other”^{8NA} and by talking to others, you get “to see what they do.”^{4A} This can help with “motivating each other”^{10NA} leading to “better understanding.”^{7NA} Participants felt “reassured,”^{28A} “appreciate...there are others concerned about us,”^{8NA} it will be “good to have other people around supporting me”^{18NA} so are “looking forward to...getting help.”^{8NA}

3.5 | Self-perceptions

This theme only applied to participants that became attenders. They commented how “you think you are healthy [before prediabetes diagnosis], then your [diagnosis] proves you’re not healthy.”^{24A} They felt like “[their current] lifestyle what you’re doing at the moment is right [although it is] wrong [as proven by their diagnosis].”^{15A}

Participants also discussed their body image in relation to perceptions about their weight, from others or their own perceptions. Some expressed how they “used to be very slim”^{3A} and have “now put on weight”^{3A} or how they perceived themselves as being “overweight.”^{13A} Others expressed cultural expectations of weight before and after marriage: “this is [a] culture when you’re young and single you like to have that body because you’re gonna find a nice girl get married...you need someone to look at you [being] in...good shape [but] now I’m happy I got wife...kids I can’t be bothered [about weight].”^{15A}

3.6 | Accessibility and practicalities

This theme gives insight into participants’ experiences of programme access. Some described difficulties when booking their IA: “they wouldn’t pick up for weeks, I kept ringing”^{2A} or “it was going straight to voicemail”^{3A} with some “never [getting a] reply.”^{3A} Some experienced problems with leaving messages being told “it’s full.”^{4A} This left participants feeling “concerned it was taking too long,”^{5A} “it was very hard to get a place,”^{2A} “it wasn’t a positive start.”^{6A} Two participants described problems with their IA: “they [IA instructors] didn’t show up”^{11NA} which led them needing to rearrange and take “a whole day off work to come,”^{34NA} making them feel “pissed off,”^{11NA} although they attended another IA later, but then became non-attenders of the programme.

After the IA, the negative experience of booking continued with some attenders and non-attenders: “you gotta keep leaving them a message”^{8NA} “no-one answers.”^{12A} This resulted in participants feeling “stressed,”^{7NA} “fed up,”^{9NA} “it drives me mad”^{8NA} or feeling that it was “badly organised”^{9NA} and best to “give up”^{7NA} and did not attempt again to book their first session. One non-attender felt “if

I managed to get in contact with them, I would definitely like to go on the programme.”^{10NA} It seems like attenders kept “persevering”^{6A} and managed to start.

A few participants were “very flexible”^{14A} with session times, but for some it “depended on...[work] schedule.”^{15A} Some non-attenders were not able to attend session times due to “work.”^{16NA} Others could not start as “they didn’t have the times I wanted.”^{17NA} Some felt they were given at “short notice”^{19NA} and “they expect you to go the next day...life does not work like that.”^{9NA}

Some participants stated it would be better to have sessions “closer to home.”^{4A} A few who expressed before the programme they need “to make time to come”^{21A} became attenders as they prioritised time which is in contrast to non-attenders who discussed they have “a lot less time.”^{18NA} The proportion of participants who stated they accessed the programme through “GP referral”^{22A} or “GP [recommendation]”^{26A} was higher in attenders than non-attenders (attenders $n = 9$ [39% of attenders] vs. non-attenders $n = 1$ [8% of non-attenders]). Some attenders also said “the letter from the GP”^{27A} made them think “I must do it”^{2A} motivating them to start. Overall, non-attenders commonly discussed organisational issues and inconvenience as reasons for their non-attendance when attempts were made to book onto the NHSDPP (supplementary information: Table S1).

3.7 | Motivation

This theme links to all other themes and involves participants expressing their desire to self-care, how family play a role in motivation, and how committed they are to start. Many participants discussed the importance of self-care: “it’s my health I’m here to look after myself.”^{29A} Many discussed their desire to make positive lifestyle changes and improve health. For example, they wanted “good health”^{4A} as “[they] don’t wanna be diabetic”^{34NA} or engaged in self-talk: “you have to tell yourself ‘no this is not good for my health’”^{21A} when faced with unhealthy choices. The proportion of participants who expressed desire to improve their health was higher in attenders than non-attenders (attenders $n = 12$ [52% of attenders] vs. non-attenders $n = 4$ [33% of non-attenders]).

Generally, participants expressed their desire to “learn new [knowledge]”^{3A} including “what to do to reduce [blood sugar]”^{14A} or “find out what have I been eating wrong.”^{8NA} Attenders explained the idea of having: “mind over matter”^{28A} and thinking positively in order to make relevant lifestyle changes. Also, attenders discussed how their family was a motivator to attend: “I have to be fit for my children,”^{35A} or “my family...[are] having a hard time with it [T2DM].”^{5A} Neither of these were discussed by non-attenders.

Participants discussed their level of commitment to start which “depends on...programme [content like] learning things...to improve lifestyle...which is motivating me to come,”^{3A} and some said “it depends how useful”^{4A} the programme is. Participants expressed how they were motivated to start: “absolutely committed to this...want to come.”^{22A} Attenders also expressed wanting “to get rid of [being] pre-diabetic”^{3A} or “desperate to get off that red zone.”^{22A} Some participants said they wanted to “start soon”^{5A} as they were “curious to start”^{33A}, and some “attended out of curiosity.”^{25A}

4 | DISCUSSION

Exploring the views and experiences of participants deciding whether to attend the NHSDPP is important to improve uptake and programme viability,^{1,11} especially in those from more deprived areas as they are at increased risk of developing T2DM.²³ We report key influences of participants’ decisions to start the NHSDPP. The results demonstrate how understanding T2DM, making lifestyle changes, comparing themselves with others, having support and certain self-perceptions can all affect motivation, influencing NHSDPP attendance. Accessibility and practicalities were also important in influencing both motivation and attendance.

How individuals understand their illness plays an important role in motivation and behaviour.²⁷ Participants discussed their T2DM knowledge, such as what bodily parts are affected or whether T2DM is irreversible. Individuals’ knowledge and understanding of their illness like T2DM prior to starting a health prevention programme can influence decisions to attend.¹⁹ For example, those who believe T2DM is preventable, may be more likely to attend. Illness perceptions could be easily assessed at the IA to gain a deeper understanding about participants’ perceptions of prediabetes and T2DM, and specifically tailored information could be provided to ensure participants have a correct understanding about these conditions, which could affect motivation to attend.

Some participants discussed difficulties they experienced with understanding their T2DM risk or GP communication. Interestingly, a higher proportion of those who expressed more difficulties in their understanding before the programme went on to attend the NHSDPP. It is possible that they were more motivated to start in order to improve their understanding, as research has shown that providing health advice and individualised information can increase participation to a lifestyle intervention.²⁸ However, this finding also highlights that understanding and good communication, particularly amongst a population where English may not be the first language, is fundamental to improving attendance.

Some choosing not to attend the NHSDPP felt that they were no longer at risk or were able to control their risk independently. This suggests that some participants did not see the need to attend as they felt able to control their prediabetes, (which relates to the illness perception that prediabetes would be controllable).^{15,16} This contradicts other research that found those who believed their condition was controllable, were *more* likely to attend cardiac rehabilitation programmes.¹⁹ It highlights the need for clinicians and programme organisers to ensure effective communication and understanding of prediabetes, so participants fully understand their diagnosis and risk before making an informed decision regarding attendance.

Participants discussed lifestyle changes they had already made or were attempting to make since first hearing about their prediabetes diagnosis. Those who had already made lifestyle changes prior to starting the programme were more likely to attend. Having already made lifestyle changes can sometimes act as a deterrent and discourage people from starting health promotion programmes.²⁹ However, in this study, those who had already made changes seemed to have increased motivation to attend, possibly through wanting to find out more on how to make changes, or perhaps because they found it difficult to make lifestyle changes without support.

Having family members with T2DM can reduce confidence in preventing T2DM.³⁰ Many participants discussed family, with some regarding family as a motivator and providing support. Others discussed their family as unsupportive and some made comparisons with their family members with T2DM. Previous research has shown individuals with prediabetes who have family history of T2DM, are more motivated to attend a DPP.¹² At the IA, it would be helpful to ask questions regarding family commitments and family context so that these can be considered when allocating suitable session times and venues, as well as signposting to appropriate support if necessary.

Only attenders discussed self-perceptions, specifically their body image in terms of their own perceptions of their weight, or from others. Perhaps these negative self-perceptions and body image dissatisfaction provided motivation to start the programme to improve their body image and lose weight in line with NHSDPP core goals.⁶

Issues with accessibility influenced motivation and attendance. These left participants feeling frustrated and led some to not attend, even when they were motivated (i.e., of those classified as attenders [$n = 23$], 65% became non-completers [$n = 15$]). Location of the session was also identified as a barrier for both attenders and non-attenders, this may be particularly important for those living in socioeconomically deprived areas, due to access to and cost of transport. Other qualitative studies exploring factors that influence attendance to Type 2 diabetes programmes also

found participants expressed issues such as how practicalities of when and where sessions took place were a barrier to attendance.^{31,32} Offering a flexible range of times and local venues, giving participants more opportunity to attend should increase accessibility. Accessibility issues could be explained partly due to the unexpectedly large number of referrals received for the NHSDPP. In 2016–2018 referrals were 16% higher nationally than expected and consequently there was a higher than expected uptake.^{8,14} Recently as part of England government's COVID-19 response, attempts have been made to increase uptake to the NHSDPP by enabling self-referral to the programme,⁹ which could also lead to increased levels of uptake. To prevent the service being overwhelmed, the LP must ensure that they have the capacity to book participants onto the programme efficiently, with good communication to participants. It is noteworthy that this study only interviewed participants and not staff. It would be helpful to interview staff to hear about their experiences in order to find out what challenges were faced from the healthcare professional perspective.

The referring healthcare professionals and how participants access the programme can affect motivation to attend.¹⁴ Those who stated that they had received GP recommendations were more likely to attend. This demonstrates the crucial role of GPs who are often those who first inform individuals of their prediabetes, and the importance of clear communication at the point of referral.¹⁴ Collaborative working between community and clinical services is needed to ensure programmes like the NHSDPP are effectively implemented.^{11,14} The key role that GPs and other frontline professionals play has also been identified in other research on attendance at Type 2 diabetes education programmes.³¹⁻³⁴

One of the strengths of this study is collection of data from a high number of non-attenders, who are usually difficult to recruit.^{1,15} We also recruited a sample including individuals from a socioeconomically deprived area, which is a known risk factor for T2DM.²³ Consequently, limitations in English speaking were a drawback in some cases. However, the researcher piloted the interview schedule beforehand with a sub-group of participants, to ensure that questions were easily understood. It is likely that those people whose first language is not English may be less likely to be registered with a GP or have engaged with the health services; we acknowledge that those who were recruited for this study may not represent the part of the population who is under-served (or indeed under-researched), and in some cases those who need the services most. It is important that future research seeks ways in which to engage with this hard-to-reach population and that further qualitative studies are conducted to explore barriers and facilitators for groups who have not engaged with the health services in greater depth.

Overall, this study provides an important insight into the views and experiences of NHSDPP attenders and non-attenders from a socio-economically deprived area. Motivation, and accessibility and practicalities influenced participants' decisions to attend, and motivation was influenced by a range of different factors. Programme organisers and healthcare professionals should consider these factors when recruiting participants onto diabetes prevention programmes in order to ensure attendance at these programmes are maximised, and strategies implemented to minimise non-attendance, so that diabetes prevention programmes are both clinically effective and financially viable. Further in-depth exploration of the reasons why participants go on to complete or not complete the NHSDPP would be beneficial. This study also highlights the important role of the GP initial communication, as well as the IA, where healthcare staff are able to communicate diabetes risk and programme content to participants *before* they enrol on the programme.

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CONFLICT OF INTEREST

None.

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

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