**The patient acceptability of a remotely delivered pain management programme for people with persistent musculoskeletal pain: a qualitative evaluation.**

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Author contributions

GB, AWG, RZ and AL conceptualised and designed the study. GB, SZ, CM and AL participated in data collection. GB, SZ, CM and AWG analysed the data. GB, RZ, AWG drafted the manuscript. All authors critically revised the manuscript and approved the final version for publication.

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Abstract

Introduction

Remotely delivered pain management programmes have been offered in place of in-person programmes by many chronic pain services since the onset of the COVID-19 pandemic. There is a lack of evidence regarding the acceptability of these programmes. In this evaluation we have explored patients’ acceptability of a remotely delivered pain management programme for patients with persistent musculoskeletal pain.

Methods

Qualitative data were collected using focus groups with participants who had previously attended the remote pain management programme. Data were analysed using abductive analysis.

Results

Three focus groups were conducted with a total of 13 participants. The programmme was either entirely acceptable, had some acceptable components or was not acceptable to patients. Factors leading to the programme being acceptable include learning to manage pain from home, receiving high quality care from home, enhancing the potential of rehabilitation using technology, enabling attendance on a pain management programme from home, overcoming social distancing requirements of COVID-19 using technology, and virtual peer support. Factors leading to the programme not being acceptable include having an inappropriate home environment for virtual therapy, communication challenges with virtual therapy, technological issues and concerns regarding the quality of care.

Conclusions

There is a spectrum of acceptability with respect to the remote programme. These factors are dynamic, individual and situational. Hybrid programmes have the potential to enhance access to pain management programmes and improve patient experience and programme outcomes in the future.

Introduction

Pain management programmes aim to enable people with persistent pain to self-manage their pain, pain-associated disability and emotional distress 1. They consist of methods to promote behaviour change and enhance wellbeing 1 and can be effective at reducing pain intensity 2, 3, pain interference 4, disability 3 and distress 3. Multi-disciplinary pain management services across the United Kingdom were severely disrupted by the COVID-19 pandemic. Pain management programmes, usually delivered in person, were paused as social distancing requirements restricted the volume of patients permitted in healthcare settings and prohibited group-based treatment.

The cessation of treatment has been shown to lead to increased service utilisation and greater complexity of problems 5. Extended waiting times can lead to significant deterioration in health-related quality of life and psychological wellbeing 6. People with persistent pain also suffer greater adverse effects of ‘lockdown’, including self-perceived increases in pain, increases in psychological problems, and reduced physical activity 7. The delivery of pain management programmes via videoconferencing is feasible 8. A number of pain management services across the United Kingdom adapted their programmes to be delivered remotely during the COVID-19 pandemic.

A remotely delivered pain management programme, the virtual pain management programme (vPMP), was developed and successfully implemented during the COVID-19 pandemic at a tertiary musculoskeletal hospital in North London.9 The vPMP is an adaptation of the in-person programme delivered at the same hospital. Both the virtual and in-person pain management programmes are three-week, high intensity multidisciplinary interventions that consist of group sessions and individual therapy sessions delivered by physiotherapists, occupational therapists, therapy technicians, psychologists and nurses. Patients receive an average of three to four hours of contact time on each day (including groups and individual sessions); exceeding British Pain Society guidelines for pain management programmes1. The programmes also include all core components recommended in the British Pain Society guidelines.1 Example timetables for both for vPMP and the in-person pain management programme with descriptions of the sessions can be seen in supplementary material 1.

In a recent review article, Eccleston et al. (2020) have suggested that remote interventions are a promising and viable alternative to in-person pain management programmes.5 Acceptability is an important consideration for new healthcare interventions. Acceptability has been defined as “a multi-faceted construct that reflects the extent to which people delivering or receiving a healthcare intervention consider it to be appropriate, based on anticipated or experienced cognitive and emotional responses to the intervention.”10. The role of remotely delivered pain management programmes beyond the pandemic remains unclear and understanding their acceptability is highly important to this. To our knowledge, no studies have evaluated the acceptability of remote pain management programmes.

We aimed to evaluate the acceptability of the vPMP to patients. The primary objective was to identify factors that lead to the vPMP being acceptable or not acceptable. Secondary objectives were to identify factors that might lead to a patient being more suited to a remotely delivered pain management programme, gather considerations for future programmes and to make recommendations for clinical practice and future research.

2. Methods

2.1 Setting

This evaluation was conducted within a single specialist musculoskeletal hospital where the vPMP, had been successfully implemented 9.

2.2 Ethics

This project was submitted to the institutions Project Evaluation Panel and recommended to proceed as a service evaluation on 6th May 2021 (registration reference SE21.18).

2.3 Participants and Recruitment

We aimed to recruit 12-15 patients with three to five patients in each focus group. This number of participants was deemed sufficient for a qualitative exploratory study using abductive data analysis 11. All participants in the evaluation were required to have fully completed an established vPMP at the host institution. Participants who took part in the vPMP pilots were not included. Other exclusion criteria included difficulty with telephone communication and inability to participate in a recorded Microsoft Teams based remote focus group.

Potential participants who had completed the vPMP in 2020-2021 were contacted by telephone and given preliminary information about the evaluation. The participants were called by a member of the team that had had no clinical involvement with them during the vPMP to avoid bias in the recruitment process (CM or GB). Effort was made to get representation from patients that attended across a number of vPMP cohorts, so once a patient from one vPMP had agreed in principle to attend, a patient that attended a different vPMP was called next. Once representation from each vPMP had been achieved, patients were called at random until the target recruitment number had been reached. See Figure 1 for the study participant flow diagram.

Once a participant had agreed in principle to attend a focus group, they were sent an email with full information about the project and given the opportunity to ask questions or raise any concerns with one of the researchers. Before the focus group took place, all participants completed a hospital ‘consent to record multimedia’ form (supplementary material 2), which includes consent for recording multimedia with patients.

2.4 Data collection

A focus group topic guide (supplementary material 3) was developed by all authors. The topic guide included six topics to allow exploration of a range of discussion points. The topic guide included questions related to the patient’s experiences of the vPMP, satisfaction with the programme and it’s different components and it’s acceptability beyond the COVID-19 pandemic.

Focus groups were conducted remotely using Microsoft Teams 12. Patients were asked to join in from a quiet, confidential space. The focus groups were conducted with a maximum of five patients and were scheduled to last a maximum of 90 minutes with the option of terminating them earlier if the researchers and participants all agreed that the discussion topics were exhausted. Within each focus group, one researcher (AL or CM) was assigned as the focus group lead and two other researchers (CM, GB or SZ) were present to support patients within the group and to take contemporaneous notes of discussion points. As important insights were identified, the second and third researcher noted the time of these within the recording for later analysis. One of the co-facilitators in the focus groups was assigned the additional role of supporting patients should any issues arise. Focus groups were recorded using the Microsoft Teams recording function to aid data analysis.

2.5 Data analysis

An abductive approach 13 was taken towards data analysis. Following the completion of each focus group, the following steps were taken:

1. Focus group lead (AL or CM) and co-facilitators (CM, GB or SZ) identified relevant discussion points together immediately after each focus group from the notes taken during the focus groups.
2. The two co-facilitators from each focus group independently reviewed the recording to verify their real time notes and made additional notes about key insights. The time of these insights within the recording were noted at this stage to allow for ease of later location.
3. The two co-facilitators then discussed these insights to formulate a list of insights from each focus group.
4. Another study member, who was not present in the focus groups, independently reviewed the recording and identified key insights.
5. All insights were discussed by the co-facilitators and the researchers that reviewed the recordings and then combined to have a final set of insights from each focus group.
6. One researcher (SZ) transcribed the data relating to each insight verbatim to aid coding of the data.

Once all the focus groups and the above steps relating to them were completed two study members (CM or SZ) compiled a taxonomy of insights across the focus groups, and their time within the recording. These two study members then transcribed and coded the data – the label for each code was a precis of the insight. CM and SZ completed the initial coding as they were not involved in developing the vPMP and therefore, had no bias in determining the acceptability of the programme. Two researchers (AG and GB) reviewed the coding to ensure accurate representation. Three researchers (CM, GB and SZ) then characterised the codes and arranged them into themes in relation to the vPMP being acceptable and not acceptable. Considerations for future programmes were also identified during the coding process. All researchers reviewed the themes to ensure agreement amongst all team members.

Results

*3.1 Focus group and participant characteristics*

Thirteen participants attended three focus groups. Focus groups were between 59 and 78 minutes long. Two focus groups consisted of four participants and one had five participants. The 13 participants were from six different vPMP cohorts. The mean age of the participants was 42 years (range 19-72 years) and 10 were female. Four patients had hypermobile Ehlers Danlos syndrome or hypermobile spectrum disorder, two had complex regional pain syndrome, three had persistent axial spine pain, two had persistent widespread pain/fibromyalgia, one had knee pain, and one had persistent neuropathic arm pain.

*3.2 Focus group findings*

The participants fell into three opinion groups with respect to vPMP acceptability: (1) the vPMP is entirely acceptable, (2) the vPMP has some acceptable elements and can be used if the in-person option is not available but an in-person programme is preferred, and (3) the vPMP is not acceptable at all.

3.2.1 Factors leading to the vPMP being acceptable

*Learning to self-manage persistent pain whilst at home*

Participants described being able to immediately implement some of the self-management skills such as an exercise routine, pacing and relaxation in their home environment. Being taught to understand causes of flare-ups and being supported to produce a flare-up plan was also described as beneficial. Use of adaptive occupational therapy ‘gadgets’ and tools to help everyday activities could be better tailored to the home environment in the virtual setting.

*“I would recommend it yes, a hundred per cent, no question… I made changes around the home and I can see it every day and it reminds me every day to actively think about what we were learning on the course… I absolutely recommend it. [Learning to self-manage] has improved my quality of life and given me a bit of hope which is what I didn’t have before I started the course. I didn’t have these methods or a way of dealing with stuff which I now have, and some ideas of what I can try and things that can help that’s valuable”*

*Receiving a high quality of care from home*

Patients felt that they received high quality care during the vPMP. They felt that they were listened to without judgement and that communication and rapport with the clinicians was good. The vPMP covered different physical and emotional aspects of pain management. The programme was paced according to individual patient need and patients were impressed with the multidisciplinary nature.

*“It covered different aspects of pain management from physical to emotional but something that stuck with me is the support network from all therapists but also everybody else in the team”*

*Enhancing the potential of rehabilitation using technology*

The video-conferencing technology was not just a mode of communication for programme delivery but became an additional asset in therapy sessions. Patients were able to show therapists their homes via video and this enabled therapists to make suggestions more specifically adapted to the patient’s home environment. Patients were able to record themselves doing exercises independently. They were also able to offer the physiotherapists multiple angles of them performing the exercises. Therapists providing technological support throughout the programme ensured sessions were not missed when issues arose.

*“PT and OT when you’re in your own home they can use things in your own home to help you in your daily life and activities or suggest thing that might be helpful when are at home”*

*Enabling pain management programme attendance*

Some of the patients described how childcare issues, travel demands and health problems such as migraine, fatigue and anxiety may have prevented them from attending an in-person pain management programme. These patients reported the vPMP enabled them to attend a programme as having children at home and long journeys to the hospital were no longer issues, and their other health problems were more easily managed at home.

*“I actually could not have feasibly done the inpatient course because I have three small children and even though I would have benefitted more I wouldn’t have been able to attend if it wasn’t remote, so there is the place for it for some people… I was able to pick them up from school.”*

*Overcoming social distancing requirements of COVID-19 through technology*

Patients acknowledged that the vPMP was the only option at their time of attending due to COVID-19 social distancing restrictions. They recognised that they may have had to wait for a long time for an in-person programme and this made the vPMP an acceptable option during the pandemic.

*“I mean because of lockdown if that course hadn’t been virtually… I don’t think we would have had our chance up until the end of next year or something knowing what the situation is at the moment in hospital and that there is a back log so it was good in that sense.”*

*Virtual peer support*

Patients felt that their groups bonded and they supported each other well despite only meeting remotely. It was helpful to be able to debrief together at the end of the days during the vPMP. Some patients arranged video calls when they did exercises together. Peer support was facilitated by organised ‘coffee groups’ throughout the programme where patients could meet without healthcare professionals. Patients often stayed in contact with each other after the vPMP finished by setting up WhatsApp groups or having video calls.

*“We made good use of coffee at 5 o’clock there were regularly at least 2 or 3 of us that would sit a mull over what happened during the day and share bits and pieces we found we found that helped along what others had suggested. We really got on well the fact that we had that time put in so we could do that.”*

3.2.2 Factors leading to the vPMP not being acceptable

*Inappropriate home environment for virtual therapy*

Distractions at home led to difficulties concentrating on the programme. Noise at home was particularly distracting during relaxation sessions. Childcare and day-to-day management of the home were also distractions. Confidentiality at home was an issue, particularly during psychology and occupational therapy sessions, and patients felt they did not open up as much about certain issues as a result of not wanting others at home to hear the conversations. Some felt that a lack of space at home to exercise was a problem.

*“The only thing that I found most hardest was the psychology sessions because I don’t want people to hear me that are in the house especially if it’s personal. I share some things with my mum and partner but sometimes there are things that I don’t want to tell anyone and then because I am quite a loud speaker they can hear me… I think it’s better for me if it was more in an enclosed space like in a hospital where no one can hear you.”*

*Communication challenges with virtually delivered care*

Not having the ability to have quick ad hoc conversations with clinicians was frustrating. For example, when time ran out in a group session and a patient was not able to ask their question, it was frustrating that they could not ask their question quickly once the group had finished. In other instances, this was frustrating for patients when they did not feel comfortable asking a question in front of the group and would have liked to have asked the clinicians afterwards. Others found communicating remotely challenging overall.

*“There were questions I wanted to ask but just because you just didn’t get time or you felt like you couldn’t ask in front of other people. Whereas if you’re in hospital we know we can speak to you whenever we want or say could I just have a quick word, where I am doing it virtually here and I felt like we couldn’t do that.”*

*Technological issues*

Internet issues, either with speed or maintaining connection were problematic. Login issues with Zoom was another challenge which led to sessions being delayed or patients arriving late.

*“My internet was such a pain throughout. I felt like I missed parts of the sessions because I had to keep logging back in and I found that practical element really challenging and obviously no one can really do anything about it.”*

*Concerns about the quality of remotely delivered care*

Some participants had thought about how the vPMP compares with an in-person programme and whether they missed out on any aspects of the programme by attending a remote programme. Specific concerns were missing out on hydrotherapy when land-based exercise was too demanding and the perception that physiotherapy sessions would have been more effective in-person. Some patients had been offered and had accepted additional in-person physiotherapy sessions once the vPMP had finished. More support once the programme had finished was seen as important and patients felt abandoned once the programme had finished.

*“For me I found it difficult with the physio not being face-to-face. The sessions were really helpful, but I just felt like I needed it more in person, especially because since I have seen my physio in person and I have been referred for a few other things because my joints were really bad but from home you couldn’t really tell that and when we should be doing something differently.”*

*3.3 Considerations for future programmes*

Some patients were completely satisfied with vPMP and would recommend it in the future.

*“I would definitely recommend as there is lots of positives. Its about trying to give me that that toolset and those skills to help manage the pain.”*

However, given the choice again, the majority inferred that they would not choose a virtual programme over an in-person programme.

*“This is a good course… but for me personally doing it at home didn’t really work for me. I would have preferred to go in and do it”*

Focus group participants also provided considerations for future programmes that were based on their experiences of the vPMP. Although this evaluation focused on the vPMP, these findings also relate to the in-person programmes.

*Group patients with similar conditions together to enable peer support*

Patients find it easier to relate and provide support to other patients when they have the same condition, and it was disappointing when they did not have someone else with the same condition in their cohort. Despite everyone attending the vPMP having persistent neuro-musculoskeletal pain, some patients felt that there were topics discussed in groups that were not relevant to them. For example, patients with hypermobile Ehlers-Danlos syndrome discussing management of their joint dislocations was not relevant to patients with other conditions. Suggestions included having at least two people with same condition in a group or grouping cohorts by specific conditions.

*“I did feel like to begin with like I shouldn’t have been there I was the only one with my condition and the others were all the same so when they were all talk about what problems they have I felt like they could all support each other but I couldn’t because I don’t understand what they are going through. Not sure you could do this but having half and half or at least two people with the same condition to support each other or give hints and tips or when I feel like this I do that”*

*Provide appropriate paper-based supportive resources*

Having additional written resources that coincide accurately with the group session presentation content is helpful. Some patients would have preferred material to be printed and sent to them by post, however, they acknowledged the cost associated with this. Exercise handouts are also valued by patients.

*“I found it weird because we were emailed a whole load of booklet and slides and stuff like that, it was really difficult to work out what I needed to print… and what I needed with me , I think going forward to continue virtually, I know it’s a cost but it should be printed out by yourself together bound together in an order and sent to the patient, because when its loose these papers are everywhere when you have to print these off I didn’t have access to a colour printer so it was all in black and white”*

*Provide Post-programme care and support*

The patients described a sense of abandonment at the end of the vPMP. It was challenging and scary for patients to have an intense programme with a lot of support and then to be left on their own to deal with their condition. Some patients felt that ongoing support was required and a suggestion was to provide voluntary drop-in sessions with clinicians after the programme. For some, limited physical progress could be made during the vPMP and they felt that longer-term physiotherapy sessions were required to progress with exercises.

*“It felt very much like you’re done… to go away now we will see you in three months so it felt very much like we’d been abandoned. For three weeks we build up relationships and trust with the clinicians, but without having those contacts and relationships I felt myself slipping into bad habits and a sense of abandonment after the course”*

*Ensure Programme is spread out evenly across the week*

There were mixed views on the intensity of the programme; some felt it was balanced well and others found it challenging. The challenges included length of screen time and early starts (09:00). Improvement suggestions included spreading the programme out over a longer period and later start times. Another suggestion was to ensure that sessions were split evenly across the days of the week as some found the busier days more tiring.

*“Monday Tuesday were very full on and when we got to Friday it was only group sessions so having it spread out a lot more then I think it would be less tiring. I think having it too full on the Monday and Tuesday and then you’re tired by the rest of the week.”*

Discussion

*4.1 Summary of results*

This evaluation explored the acceptability of a remotely delivered pain management programme that was designed and implemented due to the COVID-19 pandemic 9. Overall, this evaluation found that there is a spectrum of acceptability regarding the vPMP. Although the objective of this study was not to determine the number of patients that would prefer a remote or an in-person programme, some patients indicated that they were completely satisfied with the vPMP, whereas most patients inferred that they would not choose a vPMP over an in-person programme.

We have identified factors that contribute to the acceptability of the vPMP. Our analysis shows that the vPMP is more acceptable to patients when they believe the quality of care is good, they have the required technology and can use it, and they have access to peer support. These factors become more prominent when accessing the in-person programme is challenging or in-person programmes are unavailable. The vPMP is less acceptable to patients if they have an unsuitable home environment, they perceive difficulties with communication, they have technological issues or if they have concerns regarding the quality of care. In addition, participants in this evaluation have highlighted considerations for future programmes which are relevant to in-person programmes too. These include keeping patients with similar conditions together to improve peer support, providing patients with relevant resources to support their learning and providing post-programme support.

*4.2 Findings on acceptability*

The Theoretical Framework of Acceptability (TFA) 10 consists of seven constructs: affective attitude, burden, ethicality, intervention coherence, opportunity costs, perceived effectiveness, and self-efficacy. Definitions of these constructs can be seen in Table 1. The TFA provides a theoretical framework for assessing the acceptability of the vPMP. We constructed a map of TFA constructs in relation to the empirical data identified within this evaluation (Figure 2). Only the data relevant to the virtual nature of the programme has been included in this mapping. The patients indicated satisfaction and dissatisfaction with acceptability across all TFA domains.

Table 1: Definitions of constructs in theoretical framework of acceptability

|  |  |
| --- | --- |
| Construct | Definition |
| Affective attitude | How an individual feels about the intervention |
| Burden | The perceived amount of effort that is required to participate in the intervention |
| Ethicality | The extent to which the intervention has good fit with an individual’s value system |
| Intervention coherence | The extent to which the participant understands the intervention and how it works |
| Opportunity costs | The extent to which benefits, profits or values must be given up to engage in the intervention |
| Perceived effectiveness | The extent to which the intervention is perceived as likely to achieve its purpose |
| Self-efficacy | The participant’s confidence that they can perform the behaviour(s) required to participate in the intervention |

Empowering patients to self-manage their condition is an enabler for participation in telehealth interventions 14. Our participants highlighted the usefulness of learning exercises and self-management strategies that could be immediately implemented at home. Consistent with our findings, tailoring telehealth interventions to a patient’s individual need enables engagement from people with persistent pain 14. Several patients were concerned that they would have gained more from an in-person programme. However, they were appreciative of receiving a remote intervention whilst the in-person programme was unavailable. The acceptability of the vPMP may change depending on the availability of in-person programme.

The in-person pain management programme at this institution requires a three-week inpatient stay. The vPMP provided some patients with an opportunity to attend a pain management programme with similar intensity when it would have otherwise been difficult. The virtual nature of the programme improved ease of access to treatment for several participants in our evaluation. Ease of access has been reported to be an enabler for engagement with telehealth interventions for people with persistent pain.14, 15 Consistent with our findings, a study of a telehealth vocational rehabilitation intervention also found that remote delivery reduced the burden for patients as they felt more comfortable receiving therapy at home and did not need to travel to access the programme 16. Reduced travel demands and childcare requirements also contribute to the acceptability of virtual consultations in an orthopaedic setting 17. In contrast, other participants in our study reported that childcare responsibilities were a distraction which could reduce the programme’s effectiveness. Our evaluation identified that excess screen time and daily life distractions were burdensome. The use of remote provisions changes the demands on patients and may require more effort 18, thereby changing the burden of treatment 19. Clearly, the experienced burden of the vPMP is individualised, depending on a patient’s personal situation. Other barriers causing inequity in access to remote programmes included sensory issues and limited devices, internet access and skills using the technology.5

Peer support was a positive experience during the vPMP. Interacting with other participants facilitates engagement with telehealth interventions 14. Within our evaluation, the provision of virtual coffee meetings and peer support initiatives enhanced the programme’s acceptability.

Patients were concerned about not being able to speak freely when they were at risk of being overheard by other people in their home. This impacted on open communication and patients’ perceived effectiveness of their treatment. Lack of confidentiality related to the patients environment during virtual consultations is also a concern of clinicians 20. Limited opportunities to ask questions in group sessions also affected the perceived effectiveness of virtual sessions and therefore, the acceptability of the vPMP. It is arguably more challenging for clinicians to identify and manage harm and risk in remote interventions.5

Patients are more likely to prefer remote consultations as a result of the COVID-19 pandemic 21. Within our evaluation, patients saw the vPMP aligning with government restrictions at the height of the pandemic 22. Several patients opted for the vPMP as it was the only available option at the time.

Technology was often an asset in supporting therapy but it also created additional problems. Interactions differ virtually compared to in-person as latency (time delay due to connection issues) disrupts conversation flow 23. This can potentially impact on the quality and outcome of therapy sessions and has been reported as a barrier to telehealth interventions 14. The acceptability of the vPMP may be dependent on geographical location which can affect internet speeds. This is an important consideration for tertiary care as patients access the hospital from all over the country.

*4.3 Strengths and limitations*

The nature of the vPMP as a high intensity live interactive programme delivered by a multidisciplinary team who are highly experienced in delivering face to face pain management programmes is likely to have optimised acceptability in the participants of this study and enhances the validity of our findings.

We deviated from the standard method of transcribing the entire focus group discussions verbatim. We recognise that this could introduce bias and there is also a chance that key insights could have been missed. This was mitigated by multiple authors listening to the recordings and noting down key insights, which were then amalgamated in one document before coding. This use of a pragmatic qualitative approach greatly reduced the resource burden of this work for the researchers.

This evaluation only included patients who had completed the vPMP. Patients on the waiting list for the pain management programme had been given the option of attending the vPMP or waiting for the in-person programme to become available. Therefore, the vPMP participants, and by extension participants in this study, are a self-selected group with particular characteristics which would include confidence in using videoconferencing technology. This may have biased our findings towards the vPMP being acceptable. This evaluation involves participants that completed a remotely delivered pain management programme at a single site using abductive qualitative methodology. As such, we acknowledge that it is not designed to explore the acceptability of remote programmes exhaustively. A further consideration is that tele-rehabilitation can be delivered in a variety of ways and this is likely to affect programme acceptability. In this evaluation, all the sessions in the programme had been delivered in real time, using video-conferencing technology, by a highly experienced team. Nonetheless, to our knowledge, this is the first evaluation of the acceptability of a remote pain management programme and the interpretation of these results in the light of an established framework for acceptability, provides insights which are useful in other telerehabilitation settings.

A further strength of this evaluation is the involvement of multiple researchers in the analysis. All the identified factors contributing to acceptability were reviewed and agreed following a process of triangulation.

*4.4 Clinical implications*

Our evaluation suggests a spectrum of acceptability for the vPMP that varies across individuals. We have identified several factors that affect acceptability.

For most patients, a vPMP cannot completely replace an in-person programme. However virtual sessions could continue to be an option alongside in-person sessions for those with access challenges. Hybrid programmes with both remote and in-person elements could be designed for future practice. This would enable the benefits of remote and in-person delivery to be combined to maximise patient experience, outcomes and access to services. A collaborative design process with patient partners would ensure that the right elements are delivered remotely and in-person, and the structure is suitable for both patients and healthcare providers.

The insights we gained in this evaluation are in keeping with our previously published research, finding that virtual care is more viable for patients when they have competing demands 24 (such as requiring childcare) and preferred by patients when they have high travel costs, experience difficulty with travel 21, have adequate access to technology 25 and do not require ‘hands-on’ care 21. Clinicians could consider these factors, along with the patient’s skills using technology and potential risk of harm, when assessing patients for remotely delivered programmes and when discussing treatment options with patients to ensure patient-centred care. The recommendations for practice, based on the empirical data from this evaluation, have been organised in relation to the TFA and are presented in Table 2.

Table 2: recommendations for care

|  |  |
| --- | --- |
| **Construct** | **Recommendation for care** |
| Affective attitude | * Ensure that care delivery of care is individualised to the patient. * Facilitate peer support for patients. * Allow patients to ask therapists ad hoc questions. |
| Burden | * Consider the demands on patients and provide support for patients to overcome these demands. * Structure the programme in a way that allows patients ample opportunity to rest between sessions. |
| Ethicality | * Ensure that the programme aligns with patient’s values before prior to enrolment. |
| Intervention coherence | * Provide clear guidance on the scope of a remote programme. * Provide guidance on and manage expectations around the suitability of the patient’s home environment. |
| Opportunity costs | * Provide opportunities for patients to be able to have confidential discussions with clinicians. * Consider providing technology resources for patients who do not have access. * Provide clear guidance on the scope and contents of a remote programme |
| Perceived effectiveness | * Support patients to implement self-management skills in their own environment during the programme. * Provide opportunity for peer support. * Ensure patients have a confidential space to communicate with therapists. |
| Self-efficacy | * Provide a comprehensive range of resources to support patients to engage with the programme. * Provide technological support prior to starting and throughout the programme. * Support patients to communicate openly in group and individual sessions. |

*4.5 Implications for future research*

Future research should assess the acceptability of remote programmes from the clinician’s perspective, compare the acceptability of in-person and remote pain management programmes, evaluate the reasons for patients not opting for a remote programme in a wider patient group and investigate the effectiveness of in-person, virtual and hybrid pain management programmes.

Conclusion

There is a spectrum of acceptability regarding the vPMP among patients. This is dynamic and is subject to modifiable factors that are individualised and situational. Opportunities to improve the patient acceptability of virtual interventions combined with creating hybrid programmes should be explored to improve pain management programme accessibility and patient experience. Our results have been interpreted in light of the TFA, an established framework for assessing acceptability, which provides an interpretation which may be transportable to other settings.

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Table legend:

1. Definitions of constructs in theoretical framework of acceptability
2. Recommendations for practice

Figure legend:

1. Participant flow diagram
2. Mapping of results to theoretical framework of acceptability constructs

Figure 1:

Figure 1: Patient flow diagram

**Patients opt-in and are assessed for the vPMP**

**Patients that did not answer/respond**

N = 11

**Patients declined participation in evaluation and reasons**

N=4

Did not want to (unspecified reason) = 1

Uncomfortable in group discussions = 1

Unavailable on focus group dates = 2

**Patients that completed the vPMP**

N = 36

**Patients called regarding the evaluation**

N = 30

**Patients that did not attend after accepting and reasons**

N = 2

Reason unknown, lost contact with patient = 1

Unable to access the meeting = 1

**Patients that participated in focus groups**

N = 13

**Patients that accepted invitation to participate**

N = 15

Figure 2:

