


SHORT REPORT OPEN ACCESS

Co-Producing a Package of Novel Online Resources to Support the Mental Health Needs of People With Persistent Pain: BeeFree

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1 | Background

Low back pain and depression are the leading causes of disability in the UK (Steel et al. 2018). Persistent pain (over 3 months) affects between one-in-three and one-in-two people in the UK (Fayaz et al. 2016). Mental health problems (such as distress, anxiety and depression) are reported by one-in-four people in the UK (ONS 2016). Persistent pain and mental ill-health are linked; people with a long-term physical condition are two-three times more likely to experience a mental health problem compared with the general population (Naylor et al. 2012). Those with long-term conditions take up about half of GP appointments and two thirds of all outpatient appointments (DoH 2012).

Healthcare practitioners in primary care and those working outside of mental health settings highlight the uncertainty of managing persistent MSK pain and distress (Shivji et al. 2022). They report a lack of awareness about mental health symptoms and services and a lack of training on supporting people with comorbid mental health problems (Gunasekaran et al. 2022).

Our project aimed to address three issues identified by The Health Foundation (2018).

1. Understanding the links between mental health and persistent pain.
2. Services designed around a single condition, limiting support around *h* mental and physical health problems.
3. Variation in support for people's health and wellbeing in the workplace.

We describe the co-production of resources for people with pain and share key learning.

2 | Methods

Approaches were utilised to encourage the recognition of diverse viewpoints and the inclusion of those who may use the knowledge in their roles or lived experience that is co-production (Knowles et al. 2021). A Community of Practice (CoP) was used and is defined as 'a group of people' who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis (Wenger, McDermott, and Snyder 2002; Swaithes et al. 2023). Our CoP included people with lived experience of musculoskeletal (MSK) pain and/or mental health

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problems, healthcare professionals, commissioners, national charities (Mind), knowledge mobilisers, industry partners and researchers. Participants were identified through existing networks.

We enabled stakeholders to participate and to work in partnership to determine the content and design of resources (Grindell et al. 2022). Our first CoP aimed to understand patients’ and clinicians’ experience of local care-pathways and to share values of working together. Discussion was facilitated to identify potential opportunities for innovation and resource development to assist patients/professionals under the headings.

- 1. Understanding and education.
- 2. Health service design.
- 3. Workplaces.

Subsequent CoPs focused on co-producing and implementing evidence-based innovative resources (February 2019 and March 2021) and were conducted within a large NHS Trust in the West Midlands (UK).

We engaged a digital design company to co-create a strong and coherent brand which would help tie together the resources to produce a high-quality product. Together, we developed an

understanding of creating high quality resources through digital web-based design by developing key characteristics, known as ‘personas’, of our typical stakeholders. This acted as a reference point to test the suitability of content and messaging.

A core group oversaw the project delivery and governance and reflected key stakeholders.

2.1 | Ethical Considerations

According to Health Research Authority guidance, this project was a service evaluation and registered with the Research and Innovation Department at the Trust (Ref: e2020-47). Ethical approval was not required. Measures were taken to ensure informed consent, support autonomy (voluntary participation) and protect confidentiality (only anonymous data was collected). All data were stored in accordance with NHS standards and the Data Protection Policy (2018).

3 | Results

We co-produced three innovative and inter-linked resources to support people with pain at the risk of developing depression. We share this through descriptive accounts, participant feedback and critical reflections.

The first face-to-face CoP (March 2019), had 26 stakeholders. Facilitated discussion focussed on current care pathways (Table 1). Participants were identified through existing clinical and volunteer networks. Attendees shared and mapped their experiences of pathways visually and in text form. They identified key themes of importance: what happened before the appointment, first contact, first impressions and patient information. Barriers, in the context of providing and accessing appropriate mental health support, experienced by healthcare professionals and patients and the public can be seen in Table 2.

In subsequent CoPs, stakeholders were able to apply knowledge, experience and creativity in co-producing three resources identified by attendees that were context specific, relevant and implementable. Each innovation was developed through an iterative prototyping process and is described below.

TABLE 1 | Community of practice attendees.

Profession/representing	Number
Patient with lived experience of muscle and joint/mental health issues	6
Physiotherapists	5
Health foundation facilitators	3
Researchers	3
Hospital volunteers	3
Hospital volunteer manager	1
Knowledge broker	1
Research director	1
Patient empowerment champion	1
Mental health charity	1
University partnership engagement manager	1

TABLE 2 | Barriers experienced by healthcare professionals and PPIE in the context of providing and accessing appropriate mental health support.

Patient and public barriers	Healthcare barriers
Awareness of the link between mental ill-health and MSK pain and impact of symptoms	Awareness of the link between mental ill-health and MSK pain and impact of symptoms
Good quality patient information support for patients presenting to clinical services with mental health and MSK pain	Skills to manage the comorbidities confidence in managing conditions such as mental health difficulties if they lie outside of professional expertise good quality patient information
Time for these problems to be addressed in consultations within current service design.	Time for these problems to be addressed in consultations within current service design
	Support for patients presenting to clinical services with mental health and MSK pain

1. Development of website and evidenced-based animation on the key messages for those with comorbid pain and mental health symptoms

An evidence-based animation, housed on a new website, along with the other resources, was co-produced to share information that could assist those with MSK and mental health problems. The core team reviewed published research to identify interventions that reported positive outcomes for both mental health and persistent pain. These included: physical activity, nutrition, sleep quality, talking therapies, and social participation (e.g., hobbies)—key messages were developed by the core team based upon the evidence. The CoP worked with a design company to first design personas of patients and healthcare professionals who would use the website and view the animation. From there, the style, colour palate and content were co-produced along with the characterisation of living with persistent pain and mental health problems in the form of a bumblebee. The website's name 'BeeFree' was chosen by people with lived experience of pain as it represented a 'support hive for mind and movement.' Evidence-based content was presented in an easy to understand language within themed sections called the Hive Five (five areas described above). See <https://beefree.org.uk/>. For the animation.

2. Developing a repository of local services/self-help resources to assist those with mental health problems and MSK pain

The repository was co-produced by a patient and a NHS Trust Involvement Manager, with feedback from the core group (January 2020–21). Content was identified through a community hospital volunteer network. This was mapped under five key headings to allow information to be easily located. Information in the repository was included for those in crisis, opportunities to access services and information about staying healthy, getting active, getting creative and getting talking. Other information around housing, finances and local and national charity was included. The prototype of this document was tested in the community hospital Patient Information and Education Room. The ambition was to create a 'framework' of meaningful headings to be used locally and nationally for organisations to populate with their own services and opportunities. Please see Table 3 for an outline of the BeeFree repository.

3. Developing training

A face-to-face training session was delivered to mixed learners, including clinicians of varying seniority from the Physiotherapy and Pain and Rheumatology Service (Advanced Physiotherapy Practitioners to rehabilitation physiotherapists) and hospital volunteers ($n = 15$).

The content was designed and delivered by a leading academic GP (CC-G) and informed by evidence and relevant clinical guidelines. The aim was to increase awareness of the relationship between persistent pain and musculoskeletal problems and to give useful hints about starting conversations around mental health problems and Making Every Contact Count (PHE 2018). The value of physical activity and the importance of sleep hygiene were also included.

TABLE 3 | Contents of BeeFree repository.

Overview
Coronavirus—physical distancing and the potential impact on our health and wellbeing
Sleeping well
Eating well
Staying hydrated
Getting active
Gardening and nature
Getting creative
Getting talking
Coping with sadness and loss
Where to get help for self-harm
Money matters
Domestic violence and abuse
Support for those responsible for abuse
Support and help for addiction
Housing and mental health
Arthritis and self-help resources
Musculoskeletal self-management resource
Local support and charities
Staffordshire and stoke wellbeing service
Advice from your local authority
National support organisations
The mental health toolkit
Getting involved

3.1 | Online Training

Feedback from the session was used to inform the design and development of a free online training session that could be used across the NHS and charitable sectors. The CoP agreed that having access to an online training resource would facilitate wider take-up and engagement. The modules are available here <https://beefree.org.uk/training/>

4 | Discussion

Along with patients, the public, charities, researchers and healthcare professionals, we co-produced a set of online resources to support people with persistent musculoskeletal pain to seek help for mental health symptoms and problems. We identified the need for additional resources and information for those based within clinical services and the voluntary sector. Consideration needs to be given to keeping the resources up to date and highlighting them in different communities.

Our work demonstrates that by linking people with lived experience of mental health problems and/or persistent pain alongside those who deliver clinical services in a CoP model, meaningful and impactful solutions can be identified, developed

and implemented. This process reinforces the need for broad stakeholder engagement in designing future services and resources that are fit for servicing people's needs and that recognise multimorbidity rather than focussing on provision for those with one disease (Barnett et al. 2012).

<https://q.health.org.uk/q-improvement-lab/lab-project-2-starting-september-2018/improving-mental-health-awareness-and-signposting-for-patients-and-clinicians-in-an-msk-setting/>.

A public member reflected that

Being involved brought a little ray of sunshine into my days. It was a joy to help to bring together a guide to mental and physical wellbeing and the result was a triumph. It really felt like I was contributing to a very timely and worthwhile project.

The CoP model was chosen for this project as it has been shown to facilitate knowledge exchange among practitioners, researchers, decision-makers, the community and stakeholders including patients (Le May 2009). Its strength lies in involving a broad group, thus allowing all perspectives to be heard and understood to ensure the co-creation of meaningful solutions. During the period of the project, restrictions associated with the COVID-19 pandemic meant all meetings and CoPs had to move to a virtual space (MS Teams), creating the need for additional technological support to engage.

To engage and maintain the involvement of people with lived experience of mental health problems, we reflected on feedback given by participants and restructured the pace of the CoP meetings. We recognised the need for more representation from the mental health clinical services and we continually sought additional representation via clinical networks. This was limited in the initial phases of the work but expanded as our networks increased. This expertise helped us counter the potential for clinicians to underestimate patients with MSK symptoms and attribute these to their mental health (Duffield et al. 2017).

A broader perspective could have been achieved within the CoP if representatives from social care and housing were included. It is recognised that there is a link between multimorbidity and social deprivation (Duffield et al. 2017). We did not specifically target those from deprived areas, although many of the team work in services that support people from deprived communities.

The UK National Health Service vision for the future (The NHS Plan 2019) and the Major Conditions Strategy (Department of Health and Social Care 2023) recognises the significant impact that technology and innovation will have on the way services are planned, delivered and evaluated. BeeFree supports this aspiration, however, as the issues of digital and data poverty are acknowledged. Outputs included: hard copies, shared information on posters, shared on GP and hospital TV screens and printed cards and included on patient clinic letters when appropriate. The website includes a feedback page which is regularly reviewed. Further funding is being sought to share and scale the resources and to co-create additional modules.

Our work supports the principle of providing additional resources to support patient centred approach. Work produced by the national patient voice (2013) suggested six key elements for a person-centred coordinated care. These include goals and outcomes, transitions, decision-making, communication, information, and care planning.

This project fulfils 4 elements of the 6 key themes (goals, information, communication and care planning and decision making) recommended for a person-centred approach (National Voices 2014). Duffield et al. (2017) call for more public information to recognise the growing numbers of these managing multimorbidity. Our animation, training and repository speaks to address this issue.

5 | Conclusions

This work has demonstrated that it is possible to co-produce a package of novel evidence based resources/interventions to support the mental health needs of people with persistent pain using a community of practice approach <https://beefree.org.uk/>. The involvement of all the key stakeholders in the design, development and implementation of these resources has ensured that they are fit for purpose within the context of a healthcare setting. Further work is required to evaluate the impact of these resources to assess if they have an impact on help-seeking attitudes and behaviours and referrals to mental health services.

Author Contributions

Stevenson K. Lead author, overall lead for BeeFree project. Evans N. Contributed to the writing of the article and was part of the core team that oversaw BeeFree. Campbell L. Contributed to writing of article, and was part of the core team that oversaw BeeFree. Callaghan P. Contributed to writing of article and contributed to readability of article and was part of the core team that oversaw BeeFree and had leadership of repository development. Lench J. Contributed to writing of article and contributed to readability of article and was part of core team that oversaw BeeFree and had leadership of repository development. McDonald J. Contributed to writing of article and contributed to development of evidence based messages relevant to mental ill-health population. Chew-Graham C.A. Contributed to writing of article and contributed to development of evidence based messages relevant to mental ill-health training. Kingstone T. Contributed to writing of article and contributed to development of evidence based messages relevant to mental ill-health population and was part of the core team responsible for funding and delivering the BeeFree project.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

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

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