Help2Change

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Executive Summary

Overview

Chronic knee, hip and back pain are extremely prevalent. The National Institute for Health and Care Excellence (NICE) guidelines for the management of Osteoarthritis (OA) and non-specific low back pain show giving people better understanding of their condition, increasing physical activity and advising them to lose weight (where appropriate) are effective ways of reducing pain and its impact, in reality very few people receive this advice.

The Health Innovation Network (HIN) developed an innovative 'Joint Pain Advice' (JPA) model to support people manage chronic hip, knee and back pain, based on NICE guidelines. Within the JPA model, participants are invited to up to four face-to-face consultations over a six-month period. This intervention has been successfully piloted in primary care and community settings to c600 participants who reported improvements in pain, physical function, physical activity and mental wellbeing. It was also shown to reduce follow-up appointments with a GP. Healthy Shropshire decided to test whether upskilling wellbeing advisors, who are non-clinical, to deliver the JPA approach could produce similar results to those seen in a primary care setting.

Results

Four Health Advisors from the Help to Change service were trained as Joint Pain Advisors by the HIN and offered the JPA service across three GP practices in Shropshire. 86 participants accessed the service between September 2017 to April 2019. The majority of participants were female (58%) with a mean age of 71 years old. More people had knee pain (37) as their primary presenting complaint than hip or back pain. However, many participants stated more than one joint was affected. Of the 86 participants, 58 returned for a 2nd appointment, 44 for a 3rd appointment and 41 for a final appointment.

There were objective and subjective improvements in participant's:

- Function – participants were able to complete more sit to stands (a measure of lower body strength)
- Physical activity levels
- Pain and its impact, some participants no longer using analgesia and had more positive attitudes
- Improved mobility and resuming activities of daily living

Participants were satisfied with the service. They had increased their understanding of their joint and back problems and learned ways to self-manage. They were increasingly physically active and able to return to activities they enjoyed doing. They often attributed their success to the advisor and valued the holistic nature of the consultations as well as having time to discuss their problem and set goals.

Advisors and managers described how they had enjoyed delivering the service. The training had increased their knowledge base, in turn this had increased their confidence to talk to clients about their joint and back pain.

Summary

Wellbeing Advisors working in community settings are well placed to deliver Joint Pain Advice to people with chronic hip, knee or back pain. Taking a Motivational Interview (MI) approach they can help participants to set goals, increase physical activity and improve function. Participants reduced their pain and symptoms and saw improvements in their mental wellbeing.

Participants valued the holistic nature of consultations and having time to discuss their condition – in an unrushed and unhurried manner. They received information which helped them understand their condition and how they can self-manage more effectively, reducing fear and anxiety around their condition and helping them to appreciate exercise is safe and beneficial.

By utilising a simple training programme health advisor can be upskilled to deliver Joint Pain Advice and have the potential to reduce the burden of musculoskeletal (MSK) conditions in Primary Care, increasing access to the support and guidance recommended by NICE. However, services require ongoing commissioning arrangements and adequate financial resource to allow them to be embedded into the system and ensure they are sustainable.

Introduction

Background

In the UK osteoarthritis (OA) is the most common musculoskeletal (MSK) condition in older people affecting nearly 10 million people[2]. 90% of people with OA are managed by GPs, accounting for two million GP consultations[2]. OA impacts adversely on all aspects of a person's personal, social and working lives and results in a large burden to the health and social care system. OA can develop in any joint in the body, but when it affects the knee or hip, mobility can be affected leading to disability.

Additionally, over 70% of the population will experience a significant episode of back pain during their lives. It is the most common reason why middle-aged people visit their GP, with one in 12 adults presenting each year with this complaint.

In a series of reviews appearing in The Lancet medical journal, an international team of researchers found that low back pain is usually treated with bad advice, inappropriate tests, risky surgeries and painkillers, often against treatment guidelines. However, despite this, there is consensus among clinicians and patients that more can be done to improve the way back pain is managed, including using self-management techniques to educate and help people care for their conditions.

The core advice in the National Institute for Health and Care Excellence (NICE) evidence-based guidelines for the management of OA[3] and non-specific Low Back Pain (LBP) is to use a patient-centred, holistic approach using education and self-management strategies, with a focus on increasing physical activity and maintaining a healthy body weight.

Changing entrenched behaviours (e.g. inactivity and/or being overweight) takes time to initiate and sustained effort to maintain. Current pressures in primary care prevents successful delivery of the NICE core advice as GPs do not have the time to effect sustained behavioural change and consequently, few people receive advice and support that would help them.

The Health Innovation Network (HIN) developed a new model of care, JPA, delivered by allied health professionals to support people with chronic knee or hip pain. In 2016, a feasibility study[1] of 500 people in the London Borough of Lewisham demonstrated that physiotherapists trained as JPAs can affect behaviour change, resulting in significant pain and weight reduction, significant increases in physical activity and functionality and a reduction in GP consultations for knee and hip pain. A social return on investment evaluation[4] found a 15% increase in mental wellbeing and that the JPA intervention offered a social return on investment of between £2 and £4 for every £1 invested. These results were replicated in a small pilot study in Greenwich. Health Trainers, employed by Public Health, working in GP practices and community settings delivered Joint Pain Advice to 85 Greenwich residents. Participants reduced their pain and symptoms, increased their physical activity levels and physical function as well as improved their mental wellbeing.

The Help to Change Joint Pain Advice Pilot in Shropshire

Help to Change secured funding from Public Health Shropshire to test whether the management of chronic hip, knee and back pain in primary care could be improved by giving simple advice and support about exercise, weight loss and pain management, delivered by Wellbeing Advisors utilising the JPA model.

Help to Change Health Advisors work in GP practices and community settings delivering services to support people to live healthier lives. The Advisors have diverse professional backgrounds including physical activity, nutrition and nursing. All Advisors had had additional training in behaviour change techniques and delivered services such as smoking cessation, weight loss and increasing physical activity prior to commencing JPA.

45% of people living in Shropshire are over the age of 50, this is higher than the rate for England which stands at 36.5%. Furthermore, 70.3% of adults are classified as overweight or obese and research indicated that nearly 80% of all adults in Shropshire did not participate regularly enough in physical activity to gain health benefits – both of which are risk factors for musculoskeletal ill health. The prevalence of hip, knee and back pain in Shropshire is similar to the England average, with 16,930 (11%) living with hip OA, 28,031 (18.2%) living with knee OA and 33,552 (10.9%) living with sever back pain.

Training Health Advisors to deliver Joint Pain Advice was an opportunity to increase support for people in Shropshire living with MSK conditions, increasing access to NICE clinical guidelines and recommendations. As well as reducing the burden of MSK conditions on primary care.

Method

Participants

Eligibility criteria

Participants were eligible to access the service if they were registered with one of three GP practices - Bishops Castle, Albrighton and Church Stretton. The programme in Bishops Castle was also open to community groups.

The service was available for all clients:

- Over 45 years old with a clinical or radiographic diagnosis of osteoarthritis, or
- Symptoms of hip and/or knee joint pain for more than three months
- And/or Low back pain for three months or more

Participants were excluded from using the service if they were less than 45 years old and/or has an acute MSK disorder.

Referral route

Advisors conducted a search of the GP database at each site and participants were invited to attend the service via letter. Additionally, some participants were referred directly by their GP and some saw a poster advertising the service in the GP waiting room and were able to self-refer to the service. Additionally, at Bishops Castle, advisors engaged with community/housing groups and physiotherapists to make people aware of the programme and that they can signpost in.

Joint Pain Advisors

Training

Six advisors attended a one-day training session, delivered by the HIN. The training covered:

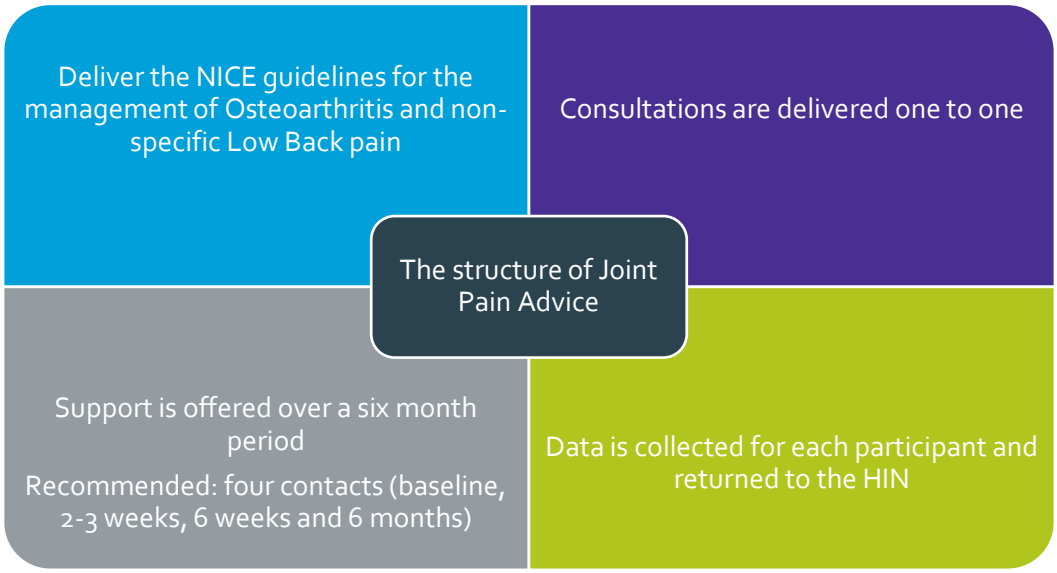
- Joint anatomy
- Information on Osteoarthritis and chronic low back pain
- Risk factors for developing common MSK disorders such as OA and low back pain
- Behaviour change techniques including Motivational Interviewing
- Self-management strategies and myth busting
- The JPA model and referral pathways.

The advisors had a range of different professional backgrounds (health and fitness, nutrition, nursing). However, they all had qualifications in behaviour change techniques and worked in an advisory capacity to support people change behaviours such as stopping smoking and weight management.

The Joint Pain Advice model

The JPA model of care involves a series of face-to-face consultations, Advisors work collaboratively with people with hip and/or knee osteoarthritis and/or low back pain, focusing on supporting self-management.

The Joint Pain Advice model has four core components:



Consultations

Participants were invited to attend up to four face-to-face appointments lasting approximately 30 mins. Advisors worked in collaboration with participants using behavioural change techniques, primarily motivational interviewing, as well as goal setting, action planning and simple self-management strategies to nurture healthier lifestyles. Clinical outcomes data and feedback was collected at each consultation to monitor progress. The underlying principles for delivering JPA are described below:

Table 1: Joint Pain Advisor Pathway	

Initial consultation	• Assessment of physical function, pain and symptoms, physical activity levels and lifestyle.
	
	• Discussion and joint development of an individualised care plan tailored to individual needs based on NICE CG1777: management of Osteoarthritis and NG57: Assessment and Management of Low Back Pain:
	  ○ Increasing physical activity
	  ○ Simple pain management techniques (heat/ice, pacing activity)
	  ○ Weight reduction where appropriate
	  ○ Signposting to activities in local area to support care plan e.g. health eating and physical activity.
	• Goal setting

2-3 week review	• Reinforcement of health messages and advice based on NICE clinical guidelines • Provision of on-going support, reassurance, motivation and encouragement • Performance against baseline measurements (e.g. sit to stands, pain scale, MSK-HQ, days physically active)
6 week review	• Baseline measurements repeated and discussion about progress • Review and progression of goals • Reinforcement of health messages and advice based on NICE clinical guidelines • Provision of on-going support, reassurance, motivation and encouragement • Participants encouraged to take up local signposted opportunities such as physical activity and social clubs
6 month follow up	• Baseline measurements repeated and discussion about progress • Review and progression of goals for the long term • Reinforcement of health messages and advice based on NICE clinical guidelines • Provision of on-going support, reassurance, motivation and encouragement • Participants encouraged to take up local signposted opportunities such as physical activity and social clubs • Referral back to GP if required

Clinical outcome measures

The following clinical outcomes were collected at the above time points (table 2)

Clinical outcome measures	Initial consultation	2-4 week review	6 weeks review	6 month follow up
MSK-HQ	X		X	X
Sit to Stand	X	X	X	X
Physical Activity	X	X	X	X
Pain Assessment Measure	X		X	X
Physical Function Measure	X		X	X
Patient Activation Measure	X			X

Other data

Data pertaining to age, gender and which joint was most affected was collected for each participant at baseline. Failure to attend and attrition rates were documented to understand adherence to the model and acted as a proxy for acceptability of the model to service users. Participants who did not attend their final consultation at 6 months were offered the opportunity to feedback about the service via postal survey.

Data management and analysis

Quantitative and qualitative data was collected electronically using an excel database. Data from each site was then exported and sent via secure email to the HIN for analysis. Statistical analysis was carried out by the HIN data and informatics team. Analyses were conducted in RStudio (Version 1.1.383, RStudio Inc.) Effect sizes (Cohen's D) were calculated and used to calculate power. A paired two sample T test was used to compare the means at baseline and follow up.

Evaluation data: focus groups and feedback forms

As part of the evaluation, participants from across the three sites were invited to attend a focus group. Participation was voluntary and a £15 gift voucher was offered in recognition of the participants contribution. Two HIN members of staff facilitated the focus group which was digitally recorded and subsequently transcribed. A semi-structured interview guide was used to guide the conversation. Advisors were invited to attend a focus group, however, only one advisor was available. A short interview was conducted, and notes taken by the HIN team.

Results

Demographics

86 participants accessed the service between September 2017 to April 2019. The majority of participants were female (58%) with a mean age of 71 years old.

Primary reason for attendance

More people had knee pain (37) as their primary presenting complaint than hip or back pain. However, many participants stated more than one joint was affected.

Joint affected	Number of Participants
Knee	37
Hip	13
Back	7
Back,hip and knee	6
Hip and knee	5
Back and hip	3
Knee and back	1
Unspecified	12

Attrition rates

Of the 86 participants, 58 (67%) returned for a 2nd appointment, 44 (51%) for a 3rd appointment and 41 (48%) for a final appointment.

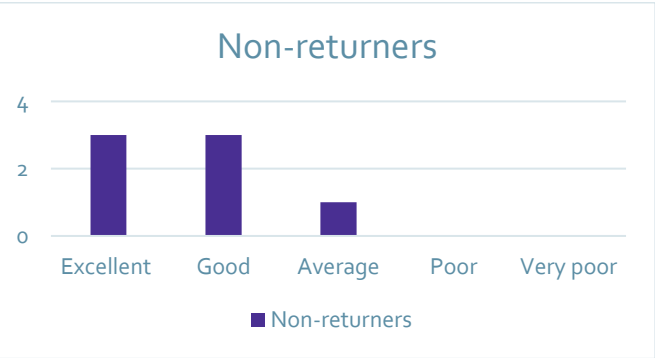
Service user satisfaction

All participants were invited to return a service user satisfaction survey, of which, 27 participants responded. 19 had accessed the service at Albrighton and six at Church Stretton, two had not specified which site they had accessed. 100% of respondents said they were satisfied with the service and 89% of participants said they would recommend the service to family and friends. Furthermore, 96% of respondents said they found the advice and support they received helpful.

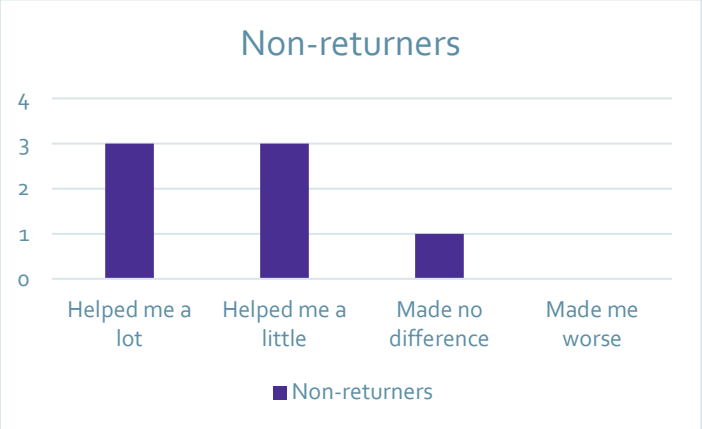
Non-returners survey

Over half of the participants who accessed the survey did not return for a six month follow up appointment. All non-returners were invited to feedback on the service and were sent a short questionnaire by post. Seven participants returned the survey.

Question 1: overall, I would rate the service as:



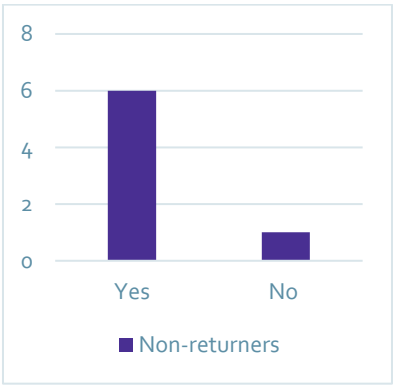
Question 2: The information and advice I was given at the clinic by the advisor was helpful?



Question 3: I didn't come back for a follow-up appointment because:

Category	Number of responses
I received all the information I needed and didn't feel I needed to come back	2
I didn't find the service useful	1
I wasn't told I needed to come back	
I didn't receive a letter inviting me to attend	
I had to cancel my appointment and forgot to re-book	
Other reason	• The service came to an end • Change of advisor, unable to find the information needed to re-book • Saw advisor several times and was told no need to come back unless any problems.

Question 4: I would use the service again if my condition got worse?



Question 5: what did you like or dislike about the service, and how could we improve it?

- I liked the personal, one to one help given by a friendly and concerned expert. The only way to improve the service is to ensure that it remains in place
- No improvement even after referral to exercise and using pain relief, arthritis is still painful.
- Ensure the staff at the surgery know about any changes e.g. advisor leaving
- Found it a good help with exercises for hip. I have improved my movement.

Clinical outcomes

The table below shows improvements against baseline measurements at 2-3 weeks, 6 weeks and 6 months.

Outcome data at baseline and follow up appointments											
Measure	Baseline		2-3 weeks			6 weeks			6 months		
	No.	Mean (SD)	No.	Mean SD)	Diff	No.	Mean (SD)	Diff	No.	Mean (SD)	Diff
BMI	84	29.1 (5.2)				31	29.1 (4. 7)	0.1	38	28.8 (4.9)	0.33*
MSK-HQ	80	35.7 (9.5)				13	45.5 (7.3)	10.1	39	44.2 (7.6)	7.85**
Pain scale	81	6.1 (2.3)	21	5.0 (2.1)	0.9	39	4.8 (2.2)	1.3	40	4.6 (1.9)	1.55**
Sit-to-stand	73	9.2 (4.6)	23	10.3 (5.5)	1.5	34	10.4 (5.3)	2.2	37	11.8 (5.4)	3.05**
Physical Activity	79	3.5 (2.6)	22	3.0 (2.5)	0.05	32	3.6 (2.35)	0.7	32	4.0 (2.3)	0.34

* p<0.01;
**p<0.0001

For those who stayed on the intervention for 6 months there were significant improvements in BMI, MSK-HQ score of overall musculoskeletal health and wellbeing, pain and functional ability (number of sit-to-stands performed in one minute). The number of days people were more active for 30 minutes or more also increased but this was not significant.

Qualitative data: participant focus group

Eight participants were recruited for a focus group. Two participants did not attend, and no reason was given for non-attendance. Data gathered during the focus group was analysed and four main themes were identified: reasons for attending the service, experience of the service, advice and support and beneficial outcomes.

Reasons for attending JPA.

Participants were primarily motivated to attend the service because they had experience of long-term hip, knee or back pain which was affecting their quality of life and ability to participate in activities they had previously enjoyed. Despite attending the service for their hip, knee or back pain, many participants noted they had chronic joint pain in other joints, and several had had joint replacement surgery.

"Main problem was bending from the hips down. I have had two total hip replacements, one 28 years ago and the other 18 years ago. However, problem is the back."

"My back pain, basically it was, I've got quite severe arthritis"

The majority of participants had previous sought treatment for their joint or back pain from their GP. However, they felt that the GP did not have adequate time to explore their personal challenges and goals or to give them tailored advice and support. Often consultations with the GP resulted in being prescribed pain medication, with little or no advice on how to self-manage their symptoms.

"just go to the doctor and have a brief chat and then medication or something"

"I went to the doctor's surgery with these back pains and I was basically told 'well what can you expect at your age' - Which is very disheartening."

Additionally, two participants had been referred to physiotherapy and had received a series of exercises to do in the post prior to a face to face appointment. They felt that the consultations centred around exercise prescription and were not individually tailored to meet their needs.

"they [the exercises] weren't appropriate for me"

"I had those as well and no body catches up, nobody bothers with you after."

"I didn't get the other advice like pacing with the physio"

All the participants had received a letter, informing them about the service and inviting them to book an appointment. Participants were self-motivated and felt it was important to take up the opportunity because they wanted to maintain independence. However, they felt that many of their peers would not have the self-motivation to take up the service, despite having joint or back pain.

"I'm quite young with arthritis and I don't want it to get any worse. I certainly don't want to end up in a wheelchair."

"....you have to push yourself"

"I think one of the big problems in that about 80-90% of the people like us just don't go for any care. They just sit and accept what they've got and that worries me"

Experience of the service

Overall, satisfaction with the service was extremely high. Participants reported there were no other similar services for helping them to manage their joint pain that they were aware of. As a result, the service surpassed their expectations and fulfilled a gap in service provision. Participants reported getting an appointment was easy and follow-up appointments were often booked whilst they were with the advisor. Therefore, appointments were made at a time that was convenient to them. Participants valued having appointments locally, in the GP practice – an environment they were familiar and comfortable with.

"it was more than I expected, frankly, I thought it would be just a chat and off you go"

"I was sceptical when I began....within a week I was totally converted, I was doing the exercises every day, without fail."

Advice and support

Participants valued the relationship and rapport they had developed with the advisor, which they described as comfortable. Additionally, participants felt that consultations were unrushed and that advisors had time to explore their individual challenges and goals with them. They valued being able to see the same advisor each time and felt this allowed time for them to develop and build relationships.

"I felt very comfortable....I never felt under any specific pressure"

"I think the interesting part was there was time available"

"very relaxed, comfortable, she was approachable."

"I mean you know when you went in there it was going to be nice, friendly and a lovely experience"

"I think the other thing was the fact, you knew you were always going to see XX each time. Whereas, if you go to the doctors, I find it rare that you see the same doctor twice."

Participants felt that advice centred around their individual challenges and goals and therefore was more relevant to their needs than advice and support they had previously received. Participants were encouraged to think about what they were hoping to achieve and which activities they wanted to return to. In particular they valued the guidance about pacing and simple exercises which they could do at home to improve their mobility and function, as well as, tips about how they could incorporate more physical activity into their lives such as walking more and gardening. Following JPA participants felt more able to self-manage and hard learnt simple 'tricks' to help them

embed healthier behaviours into their daily routines, they attributed this change in their attitude to the advisors.

"it was more of a question of what's the problem? Where do you find the worse part of it is?"

"it's the little things that help, instead of parking next to the supermarket I park as far away as possible, get a bit more mileage in, which wouldn't have happened 12 months ago."

Beneficial outcomes

Participants reported a wide range of benefits, including a better understanding of their condition and how physical activity and simple self-management strategies such as pacing could alleviate symptoms and help them manage their condition more effectively. Participants reported improvements in pain, function, physical activity levels and their ability to pace activities.

"I found with some of the knee pain, if I lie flat and do the exercises….that will get rid of it [the pain]"

"I find if I don't swim it's not just psychological, my body starts to seize up"

"I cut my walking time down actually. I used to think I needed to walk for hours and then I would be out for the rest of the day and after talking to X I cut my walking time down. I have been much better for it."

They had been able to return to activities which they enjoyed such as dog shows and gardening. Additionally, they reported feeling more positive about their lives and their condition. They attributed the change in their attitudes to the support and guidance of the advisor.

"I took up gardening again"

"positive I think, as far as I'm concerned…being positive"

Despite this, some of the participants still had concerns that their condition would continue to deteriorate and they were worried about increasing levels of disability.

"I certainly don't want to end up in a wheelchair"

Interview with a Joint Pain Advisor

What was the purpose of Joint Pain Advice?

The purpose of JPA was to enable people to improve their pain and become more active. As well as improve the other health issues people suffer with, such as weight and diabetes control. JPA helps individuals to make links between their lifestyle, behaviours and the impact this has on their joint pain.

What do you think the 'key ingredient(s)' to Joint Pain Advice is?

I think for a lot of the participants it was the one to one, they knew they were coming to see me and it's that rapport that you develop. It's that bond.

How closely did the role of JPA fit with your existing role?

I have a fitness background and specialise in physical activity for specialist populations. I used to work on Exercise on Referral, working with cardiac and cancer patients. The JPA was a good fit for me, and much more interesting to me personally than some of the other programmes I have worked on, such as 'help to slim'. I have experience of using Motivational Interviewing which aligned closely to the ethos of JPA. I focused strongly on physical activity with participants.

What is the sustainability of JPA?

Unfortunately, JPA will not be offered as part of Help to Change because of organisational changes. There is no financial resource available to continue to deliver JPA. I will continue to use my knowledge and expertise I have gained from JPA in the other programmes I am involved in.

How does Joint Pain Advice fit with existing services?

It fits better when it is integrated with the GP practice and you have the freedom and autonomy to make appointments and send out communications. Participants valued having JPA as part of their GP practice.

Did anything change for you?

My knowledge of arthritis improved. I feel that my ability to deliver the consultations improved over time too.

Conclusion

Participants using the JPA service saw improvements in their pain, function and ability to carry out activities of daily living. Additionally, they reported feeling more positive about their lives and their condition. They had learnt self-management strategies such as being more physically active and pacing which helped alleviate their pain and symptoms. Participants highly valued the service, in particular the holistic and patient-centred nature of consultations. The participants valued the relationship and rapport they were able to develop with the advisor and felt seeing the same advisor routinely was an important component of the service delivery.

Participants who dropped out from the service were asked about the reasons for not returning using a postal survey. The majority said they had received the information they needed and would recommend the service to their friends and family. However, a handful of people said that their condition had not improved or had got worse.

The health advisors had a range of professional backgrounds. However, they were all specialists in supporting people to change health behaviours and had previous experience of using motivational interviewing. This coupled with the training they received as part of the project meant they were well placed to deliver joint pain advice to people with hip, knee or back pain. Upskilling health advisors helped to address a gap in service provision, particularly as the prevalence of hip, knee and back pain is high amongst people living in Shropshire.

Many participants had received advice from their GP prior to accessing the JPA service. However, they felt that GPs did not have the time to address their individual challenges or explore personal goals. As a result, they did not receive effective advice or support outside of the prescription of pain medication.

Despite, being well liked by participants and addressing a previously unmet gap in service provision, Help2Change were unable to secure further funding and therefore were unable to continue to provide JPA appointments. Health advisors felt the knowledge and skills they had acquired as a result of delivering joint pain advice were easily transferable and they would continue to use them in their existing and future roles.

Limitations of this study

The study sample is relatively small. This coupled with the high attrition rate, only 41 people returned for a six month follow up, make it difficult to draw strong conclusion from the quantitative data. However, of those who responded to the non-returners survey 6 out of 7 rated the service as good or excellent, with the majority of responders saying the advice and support they received helped them with their joint pain. They noted that administrative difficulties such as contacting the advisor and booking an appointment prevented them from returning at six months. Introducing telephone consultations and improving booking processes may improve attrition rates in the future.

Referrals to the service were primarily made by self-referral after participants received an invite letter. Very few participants were referred by their GP or other practice staff. Participants felt uptake of the service would have been improved by displaying posters and messages in the waiting room and ensuring GP practice staff had a greater awareness of the service.

Several of the health advisors had a change in job role during the pilot which resulted in them no longer delivering JPA. Participants highly valued the relationship and rapport they had developed with the advisor and this could have negatively impacted their experience of accessing the service. No additional training was provided by the HIN during the pilot, which may have resulted in untrained advisors delivering the service.

Summary

Health advisors trained as JPAs are highly valued by people with chronic hip, knee or back pain. They were able to positively influence and support people in self-managing their condition, using simple strategies such as increasing physical activity and pacing. Despite the small sample size, the improvements in clinical outcomes and participant satisfaction replicate those observed in previous pilots (Lewisham and Greenwich), adding strength to the evidence-base for JPA.

Upskilling health advisors to deliver simple advice in the management of MSK conditions is cost effective and has the potential to reduce the burden of MSK conditions on primary care, as well as increases access to MSK support. However, for support services such as JPA to be sustained they need to be fulling integrated into existing services and fully commissioned. People valued having services in setting which are familiar and local to them, reducing their need to travel to physiotherapy appointments at the hospital. JPA follows a 'making every contact count' model, improving individuals overall health by reducing known co-morbidities such as obesity, diabetes and depression. Therefore, improving the health of the local population.