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A community health-coaching referral program following discharge from treatment for chronic low back pain – a qualitative study of the patient's perspective

Katharine Roberts[1*], Melissa Baysari[1], Emma Ho[1], Paula Beckenkamp[2], Ye Tian[2], Matthew Jennings[3], Anita Amorim[4], Katherine Maka[5], Rachael Morton[6], Dragana Ceprnja[5], Mark Halliday[7], Manuela Ferreira[8] and Paulo Ferreira[5]

Abstract

Background Global policy and guidelines for low back pain (LBP) management promote physical activity and self-management yet adherence is poor and a decline in outcomes is common following discharge from treatment. Health coaching is effective at improving exercise adherence, self-efficacy, and social support in individuals with chronic conditions, and may be an acceptable, cost-effective way to support people in the community following discharge from treatment for LBP.

Aim This qualitative study aimed to understand which aspects of a community over-the-phone health-coaching program, were liked and disliked by patients as well as their perceived outcomes of the service after being discharged from LBP treatment.

Methods A purposive sampling approach was used to recruit 12 participants with chronic LBP, from a large randomised controlled trial, who were randomly allocated to receive a health coaching program from the Get Healthy Service® in Australia. Semi-structured interviews were conducted, and a general inductive thematic analysis approach was taken.

Results The main themes uncovered regarding the intervention included the positive and negative aspects of the health coaching service and the relationship between the participant and health coach. Specifically, the participants spoke of the importance of the health coach, the value of goal setting, the quality of the advice received, the benefits of feeling supported, the format of the coaching service, and LBP-specific knowledge. They also reported the health coach and the coaching relationship to be the primary factors influencing the program outcomes and the qualities of the coaching relationship they valued most were connection, communication, care, and competence. The sub-themes uncovered regarding the outcomes of the intervention included positive impacts (a greater capacity to cope,

*Correspondence:
Katharine Roberts
katharine.roberts@sydney.edu.au

Full list of author information is available at the end of the article

increased confidence, increased motivation and increased satisfaction) and negative impacts (receiving no personal benefit).

Clinical implications In an environment where self-management and self-care are becoming increasingly important, understanding the patient's experience as part of a coaching program is likely to lead to improved quality of health coaching care, more tailored service delivery and potentially more effective and cost-effective community-based care for individuals with chronic LBP in the community after being discharged from treatment.

Trial Registration The GBTH trial was prospectively registered with the Australian New Zealand Clinical Trials Registry (ACTRN12620000889954) on 10/9/2020. Ethical approval was prospectively granted by the Western Sydney Local Health District Human Research and Ethics Committee (2020/ETH00115). Written informed consent was obtained from all participants. The relevant sponsor has reviewed the study protocol and consent form.

Keywords Low back pain, Health coaching, Qualitative, Community-care, Patient's perspective

Introduction

Low back pain (LBP) is the leading cause of years lived with disability globally [1] and is regarded as a long-lasting condition with high rates of recurrence [1]. LBP is associated with a significant public health burden [2], with direct and indirect health costs exceeding $9 billion annually in Australia [3]. The high cost is in part, associated with a small proportion of people who seek ongoing care for their LBP [4]. It is recommended that LBP should be managed with a multimodal, biopsychosocial approach [5], encompassing exercise and physical activity prescription [6, 7]. However, adherence to advice following treatment for LBP is undeniably poor, with rates reaching as low as 30%, and may be associated with expanding healthcare costs [8] due to re-presentation to care.

Health coaching has been defined as a behavioural approach designed to support a person to be actively involved in the management of their illness or injury [9]. It emphasises self-management and empowerment [10] with a focus on helping the individual take responsibility for achieving and maintaining treatment goals [11, 12]. It is based around sound theoretical work, such as the transtheoretical model of change, self-efficacy theory, social cognitive theory and the health-belief model [13], and is an approach to management that is patient-centred and focussed on wellness and health [13]. Telephone-based health coaching has been found to decrease medical costs and hospitalisations in patients with chronic health conditions [14], to improve self-efficacy [15, 16] and social support [17] in individuals with chronic conditions, and to increase activity levels in individuals with chronic disease [10] and in healthy adults [11]. It has also been found to be acceptable to patients with LBP [18] with increased levels of self-reported activity levels, improved recovery expectation [10] and potentially decreased health care utilisation [18], thereby assisting self-management for those who suffer with chronic LBP.

Policy and guidelines for LBP management globally are increasingly focussed on self-management and self-care. However, a decline in clinical outcomes is commonly reported by patients with chronic LBP following discharge from treatment [19] resulting in low levels of self-management, re-presentation to care [20] and increased health care costs [21]. Health coaching is designed to provide increased social support and increase motivation through collaboration [22]. As such, it may be an efficacious, cost-effective strategy to provide community-based support and improve long-term outcomes in individuals following discharge from treatment for chronic LBP.

Community-based health-coaching programs have been shown to be effective in managing conditions such as diabetes [23] and cardiovascular disease [24] and yet there is a lack of structured community support programs for people following discharge from treatment for LBP. There is also limited evidence available on the experiences of patients with LBP who are receiving health coaching services. For this reason, this study aimed to understand which aspects of the health coaching service, delivered by the Get Healthy Information and Coaching Service® (Get Healthy Service®) – an Australian community-based health coaching program – patients liked and disliked, as well as their perceived outcomes of the program. Understanding the patient's perspective may be particularly important for improving discharge care for LBP through enhancing adherence to an established community health-coaching referral program.

Methods

Study design

This study used a qualitative descriptive design [25] and was part of an ongoing randomised controlled trial – the *Get Back to Healthy (GBTH) Trial* [26]. The GBTH trial aims to evaluate the effectiveness of referring patients directly to a pre-existing, free, community-based health-coaching program, called the Get Healthy Service®, at the point of discharge from treatment for chronic non-specific LBP from a public hospital physiotherapy outpatient department or a private general practitioner,

physiotherapist, or chiropractor. The service provides participants with up to 10 over-the-phone health coaching sessions, over a 6-month period, which are delivered by university-qualified health coaches. The frequency and total number of health coaching calls received are mutually determined by the participant and their health coach. As part of the trial, health coaches received additional training regarding working with people with chronic LBP. The training involved teachings on how to monitor and support participants to achieve improvements in physical activity levels, and diet or weight goals, if selected by the participant, to assist with managing their LBP as well as best current evidence for managing LBP, common psychological factors in this population, and strategies for addressing these factors.

Recruitment

A purposive sampling approach was used to recruit participants for this qualitative study. On completion of the 12-month GBTH trial period, a member of the research team (KR) was unblinded to the participant's trial group. Sequential participants who received the health coaching as part of the GBTH trial, were asked in the final phone call whether they were interested in participating in a qualitative sub-study and, if the participant agreed, a subsequent interview was scheduled. All participants provided written consent to participate in the GBTH trial, were reassured that no identifiable information would be collected and were assigned a new study code. This manuscript has been guided by the Standards for Reporting Qualitative Research Checklist [27] and utilises a constructivist paradigm [28].

Data collection

One-on-one semi-structured interviews were carried out by KR via Zoom videoconferencing at a time that was convenient for participants. The Zoom interviews were audio-recorded and subsequently transcribed. On two occasions, participants preferred to be interviewed over the phone, and in these instances, the interview was audio-recorded and transcribed using Microsoft Word online. Individual interview transcriptions were immediately reviewed for completeness and de-identified by the first author (KR).

The interview questions were developed by the research team, which included researchers and clinicians with extensive experience in LBP, chronic pain and health services research and were overseen by a highly experienced qualitative researcher (MB). The questions were designed to ascertain background context regarding the participant's LBP history, their beliefs regarding LBP management, and their confidence to follow their healthcare provider's advice. Participants were subsequently asked questions regarding the health coaching intervention and the health coach they were assigned. Pilot interviews were run to assess the appropriateness of the questions prior to commencing the participant interviews and the interview questions were adjusted accordingly to ensure questions were open-ended, non-leading and easy to understand. The final questions are available as supplementary digital content. All interviews were conducted between May and September 2023 by the first author (KR), who has over 24 years of clinical experience as a physiotherapist working in the area of LBP and chronic pain and is a PhD student.

Data analysis

A general inductive thematic analysis approach was taken [29] and a framework was created from the data [30, 31], which allowed the themes and codes to be developed and modified in an iterative process as the interviews were reviewed. The coding framework grouped themes into three main components – the background context (characteristics of the recipients and their environments), intervention (characteristics of the coaching service that were liked and disliked), and outcomes. In line with inductive thematic analysis, the evaluation followed a step-wise process [29].

(1) The raw data files were prepared and then read closely to gain an understanding of the ideas covered in the text.
(2) Themes and sub-themes were then created from phrases or meanings in the text during multiple reviews of the text.
(3) Continued revision and refinement of the themes occurred with collaboration between the researchers with appropriate quotations selected to convey each theme or subtheme [29] (Table 1).

Two researchers (KR and YT) performed the initial analysis of the first three interviews, then met with the experienced qualitative researcher (MB) to compare the themes and codes, discuss inconsistencies, and refine the categorisation. The remaining interviews were coded by KR, under the supervision of MB, and were reviewed by YT, a recent honours physiotherapy graduate and research assistant. Where possible interviews were transcribed, coded and reviewed immediately after the interview was performed to assist in identifying the point of thematic saturation [32]. Data collection and coding continued until thematic saturation occurred (i.e. no new themes or subthemes were emerging from the interviews), as agreed by the research team. The participant demographic data was obtained from the participants' baseline surveys as part of the GBTH trial, and analysed using Stata SE 16.1 [33]. A manifest analysis approach [34] was utilised with the researchers intending to stay

Table 1 An example of the development of themes and sub-themes

Quote	Code	Sub-theme	Theme
"Because they asked questions and you know, and by asking, how are you feeling? What are you up to? You know, is there something you want to talk about? You know that sort of person-centred [approach]. I felt like I was at the centre of the universe, and I was very engaged in that sense."	Care	Another person who gave specific advice, encouragement, and personal connection	The coaching relationship
"I reflected on it at the time and thought, it's like going to a psychologist who is constantly asking you questions. Well, how do you feel about that? And how does that make you feel? It was just always putting it back on to me. It's like, well, this is not. It's not helping me. It's like she didn't get that."	Connection	A health coach who did not connect, listen, or individually tailor the advice	The coaching relationship

Table 2 Baseline characteristics of participants, at entry into the GBTH trial ($n=12$)

Variable	Mean (SD)	*n*
Age (years)	63 (10.60)	12
Age (min, max)	34–76	
Sex (female)		10
Body mass index (kg/m^2)	26.1 (4.4)	12
Length of LBP (years)	20.0 (18.9)	9
Intensity of LBP today[a]	3.4 (2.0)	12
Intensity of LBP in the past fortnight[a]	4.6 (2.1)	12
Frequency of LBP in past fortnight at baseline (days)	11.1 (5.9)	12
Marital status		
Single		1
Married or in a relationship		10
Divorced		1
Education Level		
TAFE, college or equivalent		5
Bachelor's or Master's degree		7
Employment Status		
Employed casual		1
Employed part time (up to 38 h/week)		1
Employed full time (≥ 40 h per week)		5
Retired		5

LBP: low back pain

[a] Assessed using the Numeric Rating Scale, a 11-point scale scored on a scale of 0 to 10, with 0 representing 'no pain' and 10 representing 'worst possible pain.'

close to the actual words the participants said rather than interpreting the meaning behind the interviews. The data abstraction was performed in a cyclic process with the researchers returning to the interviews multiple times to ensure codes and themes were accurate and trustworthy [35].

Results

18 study participants who received health coaching as part of the ongoing GBTH trial were invited to take part in an interview and 12 participants agreed. Participants' baseline characteristics, at entry into the GBTH trial, are shown in Table 2. Participants were on average 63 years old, 83% were female, and the mean body mass index (BMI) was 26.1 kg/m^2. The majority of participants (83%) were married or in a relationship, and half were employed to some degree at the time of commencing the trial. The intervention and the outcomes were analysed with two main themes (and ten sub-themes) emerging within the intervention analysis (Fig. 1) and four within the outcomes analysis (Fig. 2).

The context: characteristics of recipients and their environments

Low back pain history

All participants reported experiencing chronic LBP before starting the GBTH trial, with some describing their symptoms as constant and grumbly pain, and others describing their pain as episodic. All participants explained that their pain was difficult to control and ongoing.

When questioned about their usual LBP management, the majority of participants reported relying on regular appointments with their healthcare provider in combination with either specific exercises that had been recommended or general exercise, such as walking. Some were compliant with exercises and others noted struggling to follow this advice. Half of the participants reported relying on rest when their LBP flared up and were conscious of limiting their activities such as vacuuming, lifting heavy objects, or walking up hills. Several participants were also aware of the benefits of lifestyle changes for managing their LBP.

All participants noted relying on pain medication for exacerbations or flare-ups, for maintenance, or for sleep. They most commonly spoke of using paracetamol and over-the-counter anti-inflammatory medications. Participants said that the use of medications was prescribed by health care providers in some circumstances and was self-prescribed in others.

Participants varied in their confidence to follow the advice they had been given for managing their LBP with some participants believing the advice they received would be easy to follow and others believing following the advice would be difficult. In the former case, participants described themselves as independent, willing to give anything a go, and committed. They reported personal characteristics, such as being conscientious, proactive, and analytical. In the latter case, participants cited external factors as challenges, such as finding time, finding people to exercise with, exercises being boring, and receiving no benefit from following the advice received.

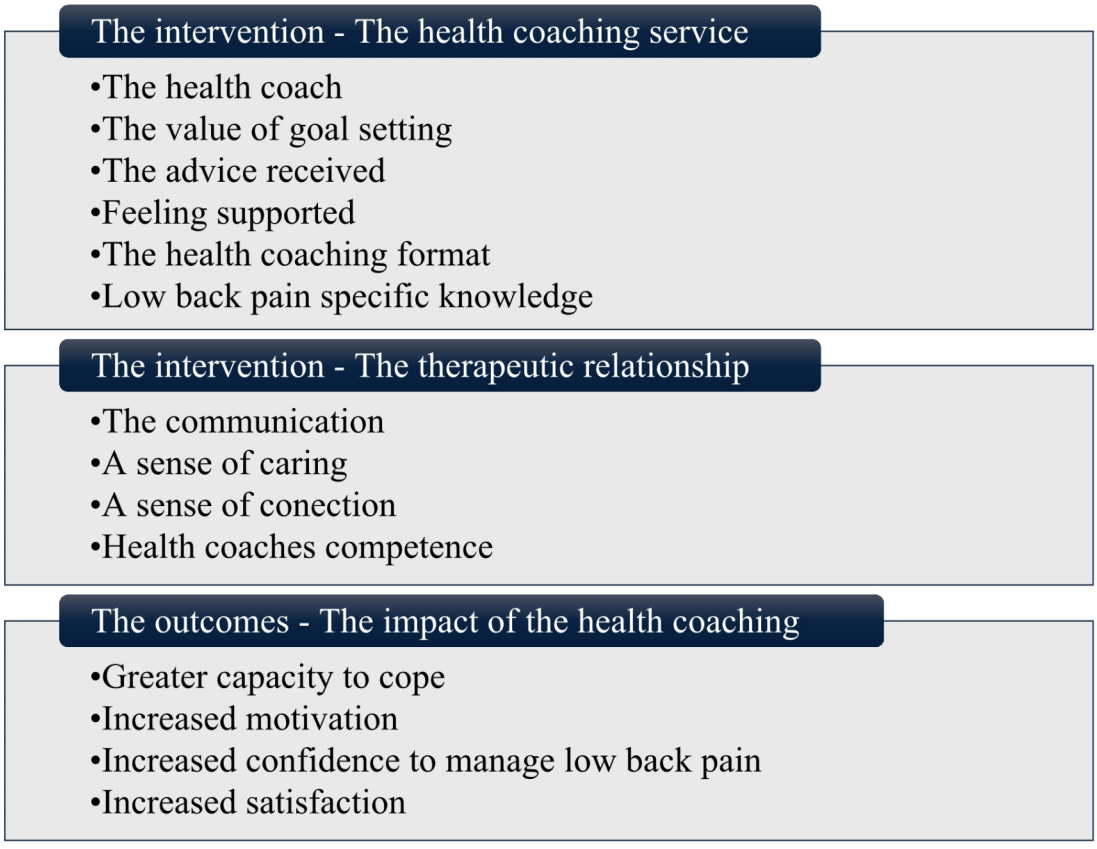

Fig. 1 Themes and subthemes that emerged from the interviews within the intervention analysis and the outcomes analysis

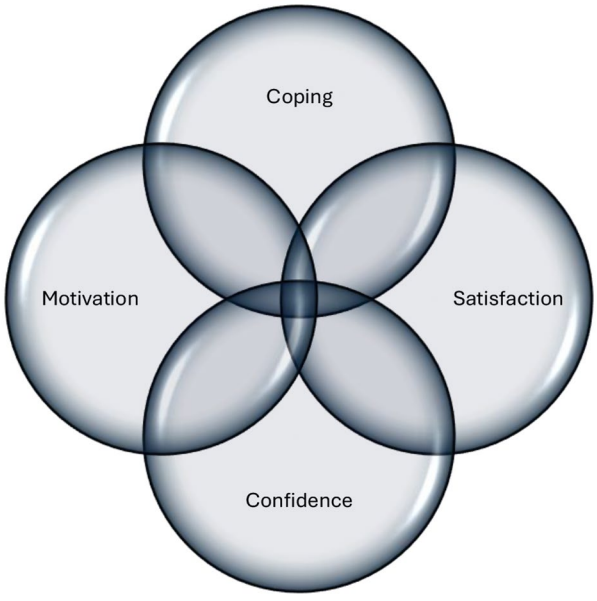

Fig. 2 Subthemes that emerged from the interviews within the outcomes analysis

Another frequently reported barrier was time, with participants explaining that the amount of time required to complete exercises makes it difficult to stay on track with the advice.

> *"I get fed up when I am expecting it to get better. I am thinking I am doing all this stuff so it should be getting better, but then it doesn't." 011.*
> *"At first it was not as easy [to follow the advice I was given], but then, I did discover that if I didn't do the stretches then my pain was worse. So, then it became easy." 004.*
> *"Most people I see and doctors I see, always reckon I'm a wonderful patient because....I follow instructions [but] it's frustrating because I can't find people to do exercise with me much. They've got diabetes, they've got arthritis, they're really overweight or whatever." 001.*

When asked whether they had certain expectations or specific desires for the health coaching prior to commencing their health coaching sessions, the majority of participants reported being open-minded, interested, and willing to give anything a go. Those who reported having specific expectations cited looking forward to

having someone to talk to, being pleased to let someone else take control, and hoping to find some motivation to exercise.

> *"Because I do so much on my own. I just thought it would be good to have someone to talk to, and report to, and get support from." 001.*

The intervention: characteristics of the Get Healthy Service®

The mean number of health coaching sessions received by the participants interviewed was nine, ranging from three to 13. Two-thirds of participants set physical activity goals and one-third set diet or weight goals. The health coaching service reported that 50% of participants graduated from the program, defined as achieving their goals and the mean length of phone calls was 11.5 min (ranging from 6 min to 23 min). Sub-themes were described in a positive light by some participants, and in a negative light by others, depending on their experience of the service, so each theme in Table 3 is described as both a liked and disliked feature.

Participants were asked to discuss which aspects of the health coaching they found to be the most and least valuable. They indicated that the perceived positives and negatives of the program predominantly relied on whether it met their needs. According to the participants, whether the program met their needs depended on their connection and communication with the health coach, the advice provided and the perceived competence of their health coach, whether the health coach listened or cared, and specific intervention characteristics.

The health coach

For the majority of participants, the health coach was viewed as a positive aspect of the intervention. The health coaches were frequently described as encouraging, positive, active in helping, and non-judgemental. One participant noted that the health coach was 'interested' in them which they thought was important. Listening was also considered to be an important positive quality of the health coach by the majority of participants, and several reported a sense of friendship or caring.

> *"I think it was a constant reinforcement that somebody was interested in the progress that one was making. And I'd say overall that was by far the most relevant aspect of a regular follow-up of the telephone conversation for 15–20 minutes." 009.*

The health coach's willingness to learn was considered to be a positive aspect by almost half of the participants. Participants recounted their health coach as providing relevant and useful information either during health coaching sessions or in the follow-up call if they needed to research the answers. One participant described their health coach as 'a great little researcher'. Interviewees reported having confidence in the health coach's information and valued having someone who could bring expertise and a different perspective.

Table 3 Two themes and ten sub-themes that emerged from interviews regarding the intervention

Theme: The health coaching service		
Sub-themes	**Positive**	**Negative**
The health coach	Encouraging, positive and interested health coaches who were good listeners and who cared.	Aloof, disinterested, businesslike or impatient health coaches
Goal setting	Collaborative and flexible goals	Unrealistic or forgotten goals
The advice received	LBP specific advice Person-centred advice	Vague or general advice that was not LBP specific and was not individualised or novel Inadequate LBP knowledge
Increased sense of support	Another person who gave specific advice, encouragement, and personal connection	A health coach who did not connect, listen, or individually tailor the advice
Coaching format	Flexibility, convenience, and phone calls that met their needs	Being unable to see the health coach
LBP specific knowledge	LBP adequately discussed	LBP ignored or inadequate LBP knowledge
Theme: The coaching relationship		
Communication	Health coaches who listened, were empathetic and were able to individualise the advice they gave	Health coaches who were demotivating or did not understand
Care	Health coaches who were like a friend, reliable and listened	Health coaches who were disinterested, poor listeners and lacked empathy
Connection	Health coaches who were positive, friendly and interested	A disconnect between the participant and their coach or a coach who was disinterested or had their own agenda
Competence	A health coach who was able to provide individualised advice that met the participants needs or had a willingness to research the answers	A lack of new or novel advice, general, non-specific advice or advice that did not meet the participants needs

"I think what I liked the most was her expertise…She was able to give me very good websites to go to for excellent, excellent exercises." 012.
"At the next phone call, she'd have the answers to the questions from the last [call]." 005.

The participants who felt the coach was a negative aspect of the health coaching program discussed issues such as discord between themselves and their coach, their coach appearing to be disinterested, businesslike or impatient. One participant described their coach as 'going through the motions' and another described theirs as 'not connecting with me'.

"Occasionally I thought, oh, maybe she's getting impatient, you know, I don't know, [there was] just a discord." 008.
"They (health coach) didn't seem interested or motivated. I felt like it was going through the motions." 010.

The value of goal setting

A key aspect of health coaching involves setting and working towards specific, achievable health goals. Whilst all participants set goals at the commencement of their program, not all could remember at the time of the interview what their goals had been. Of those who had a clear recollection of their goals, the vast majority reported their goals as being collaborative, flexible, and realistic. However, three participants described their goals as unrealistic. The collaborative and flexible goals were considered to be a positive aspect of the health coaching contributing to increased confidence.

"We set different [goals] as we progressed through. And like for instance, my last call, we spoke about being able to do things on my own and stuff. So that was the goal we set from our last call, and I've done that…. And I'm still sort of thinking about some other things I might do." 001.

The advice received

Almost half of the participants felt the specific advice they received contributed to the sense of support they gained whilst engaging in the health coaching. When the advice conflicted with the participants' needs, it was seen as unsupportive and unhelpful.

"I knew that I had someone who had access to very good resources…. So, absolutely. It was nice to have access to someone who could give websites that were actually developed by health professionals rather than influencers." 012.
"[The health coaching did not make me feel supported] because that was the nature of the interaction I was having with the health coach. So, I ceased it. I didn't feel I was personally getting much out of it if anything. Nothing that I couldn't have got off the Internet anyway." 010.

A lack of appropriate advice provided by the coach was considered to be a significant problem by almost half of the participants. Participants noted a lack of LBP-specific information, a lack of new or novel information, advice that was not tailored to their needs, and advice that was vague or general in nature. These participants used words such as disappointing, curious, irritating, boring, and inadequate when discussing this lack of appropriate information and advice. The mismatch between the health coach's qualification and the participant's goal was also highlighted as a negative aspect with two participants wondering whether they should have chosen a different coach and two participants ceasing the health coaching as they felt the coach was unable to give them any advice they did not already know.

"I would tell her 'So I have done that in the past and explain to her and she would still say 'well let's still try this'. And this can be your goal' and I am thinking 'I just told you that I have tried that in the past and it didn't work'. But that is what she had set for that day so that was what we were going to do." 011.
"And that was why I particularly didn't like the coaching. Mostly because everything they told me I've already read. You know, I've already done it and they just irritated with me." 010.

Feeling supported

Participants reported that having another person there for them, the specific advice they received and the coach's encouragement as contributing to the sense of support they felt whilst engaging in the health coaching. One participant described their health coach as a 'Jiminy Cricket on my shoulder', and another felt the benefit of having a health coach was more about not wanting to let them down. The program being individualised and the health coach understanding their journey were also seen as contributing to the sense of support they felt. In contrast, if the health coach was perceived as pushy and not supportive, their presence was regarded as a barrier.

"Because they asked questions and you know, and by asking, how are you feeling? What are you up to? You know, is there something you want to talk about?

You know that sort of person-centred [approach]. I felt like I was at the centre of the universe, and I was very engaged in that sense." 007.

"I reflected on it at the time and thought, it's like going to a psychologist who is constantly asking you questions. Well, how do you feel about that? And how does that make you feel? It was just always putting it back on to me. It's like, well, this is not. It's not helping me. It's like she didn't get that." 010.

Several participants also felt that having an objective person to support them from outside their personal circle was beneficial.

"And I think the most supportive part about it is that you have to report in, well, okay, did you do that, or what happened when you tried this, or why did it not happen, and what can we do to work around it." 010.

"I've always been kind of the leader for my family, and I support them, so to have someone who specialised in what [the health coaches do]… and that's the area I need to get my back better. It was just wonderful." 007.

Almost half of the participants reported the encouragement of their health coach as a positive contributor to the sense of support they felt. However, almost half also felt that the program was demotivational and sometimes beyond their capacity which was linked by some participants to a lack of understanding.

"Sometimes [the conversation] went a little bit askew. But it still left me feeling really good and really high and really positive and motivated to you know, keep going. For me [the benefit was] to talk freely. And confidentially with someone." 007.

"I didn't feel that my coach was particularly interested or understood the health condition that I had or even was offering any advice. I just got the feeling. She was bored. She was just going through the motions." 010.

Ten of the 12 participants believed that the support of the health coach helped them stay accountable and motivated. Over half of the participants described feeling more responsible and several noted feeling more motivated, in particular, to exercise. One participant noted that knowing they were going to receive a call helped them stay on track with their exercises and goals while another felt that reporting to their health coach gave them direction and incentive. Over half of the participants described experiencing increased motivation. Most of them discussed receiving text messages or email reminders from their health coach after each call, reinforcing their goals and action plan. They felt this kept them on track, reminded them what to do and provided 'checkpoints' along the way.

"I think they just, they kept me motivated. Like, you know, sometimes people just get lazy, so you just need something externally, you know, reminding you…. that's your plan, and then it's good for your health. You need to do it." 003.

The Get Healthy Service® coaching format

Six of the 12 participants felt the over-the-phone format was effective, three were unsure, and three felt it was ineffective. Those who were happy with the format reported the flexibility of the scheduling and convenience of the phone call as key reasons. Over half of the participants felt that the over-the-phone format met their needs. One participant commented that it may have been different if they had wanted the health coach to tell them how to do their exercises. A few participants mentioned a safety aspect of the phone call as a positive although they also noted disadvantages of not seeing the person you are talking to. Almost half of the participants reported preferring to be able to see the person they are speaking with but were unsure if it would have changed their health coaching experience. Ten of the 12 participants would consider another format such as teleconferencing or face-to-face as long as it was still convenient, was not a long distance to travel, and met their needs.

"I liked the fact that it was [over the phone] because I'd always do it when I was going for a walk. So, I always did it walking because I really am absurdly busy. And so, it was convenient." 012.

"I think, to a degree, [the anonymity] was a positive. But you know you can pick up on how people are feeling by looking at them." 008.

Follow-up communications were discussed by almost half of the participants as a positive aspect of the health coaching. They described the text and email follow-ups as regular, great, and worthwhile for increasing their motivation, reminding them of their goals and keeping them on track. For those participants who did not receive follow-up information, this was perceived as a significant negative.

"I prefer to stay on the couch. I often didn't want to get out, but when I saw the messages [I would think] I should get out and do the exercises." 003.

Specific knowledge about LBP

The health coaches received basic training around working with people who have chronic LBP as part of the GBTH Trial [26]. The majority of participants felt their health coach did not address their LBP adequately however, only a few felt this impacted negatively on their experience of the program. Some participants reported specifically discussing their LBP with their coach and building it into their goals and exercises. Others reported their LBP 'never came up' and some felt the fact the health coach was a dietician was the reason for their lack of understanding. One participant did not expect the health coach to be an expert on LBP and only one felt the lack of LBP knowledge was a distinct disadvantage.

> *"The health [coaching] wasn't focused on disease. It wasn't focused on the medical model. No, no. It wasn't on my back. It was more 'How are you feeling today' and 'what have you been up to' and you know, 'is there something you want to talk about'." 007.*
> *"There were times I just thought…. She's not getting this. She's just not getting this. She's not understanding it." 008.*

The coaching relationship

The aspects of the coaching relationship that most participants spoke of valuing were communication, care, connection, and competence. All of the participants who viewed the health coaching positively reported the connection with their health coach as central to the sense of support they felt. These participants also believed the health coaching relationship was vital to positive outcomes.

> *"She was very, very attentive to helping [me]. She listened to me, and she gave me information. She encouraged me…. and she built my confidence" 002.*

Over half of the participants reported the connection with their health coach as important, describing decreased loneliness, the ability to talk freely and confidentially and positivity as important contributors. Those who reported a lack of connection described poor communication as the key negative contributor.

> *"I think, loneliness in that exercise and social sense, has been something I've identified [through the health coaching process]" 001.*
> *"I just didn't overly connect with her to be perfectly honest. There was a bit of a disconnect…. And I said [I was] going really well when I probably wasn't." 008.*

Participants valued the support of someone who cared and reported that the personal connection with their coach contributed to this sense of caring. Several participants described their health coach as being like a call with a friend, someone who called when they said they would, another person who cared, or someone who listened to them. One participant described their coach as 'businesslike' and 'aloof' which negatively impacted their experience.

> *"Our calls became, like a friend just checking in, seeing how you're going." 004.*
> *"Someone like me who does a lot of caring for others. It was nice to think that there were others who were caring about me." 007.*

Five of the participants valued the competence of their health coach. Most described their health coach as being able to provide individualised, person-centred advice that met their needs. Some participants, however, felt their coach was not able to tell them anything new or useful.

> *"It was really nice to be able to feel confidence in who was guiding, who was leading, who was giving the advice, what was going on, and helping me." 007.*
> *"Every time she called me she told me something new, but it was all stuff that I already knew" 011.*

Outcomes: participants' perceptions of the impact of the service

Of the 12 participants interviewed, four described their LBP as improving throughout the 6-month health coaching program and the 6-month follow-up period, four described theirs as worsening, two reported no change and two reported their LBP as having resolved. Those who reported their pain as improving or resolved attributed the improvement to their increased participation in exercise, increased awareness of their body and improved control over their pain. Of the four who reported their pain as worsening, two noted they had been improving until they experienced a flare up and one felt their increase in pain was due to cutting back on their medication.

> *"[My pain is] the same as always. Really. Not much difference. Okay. I couldn't say that it was significantly different." 010.*

Most participants interviewed described positive outcomes of the health coaching program as an increased capacity to cope, increased motivation, and increased confidence to manage their LBP (Table 4). The increased capacity to cope was described as 'knowing I can stick to

Table 4 Four themes that emerged from interviews regarding the coaching outcomes

Themes		
	Positive	Negative
Increased capacity to cope	Outcomes such as learning, acceptance, control and resilience	
Increased motivation	Collaboration focussing on achievements and regular reminders	Goals that were too difficult or the coach not understanding their needs was demotivational
Increased confidence to manage their LBP	Outcomes such as self-awareness, planning and accountability	No change in confidence to manage their LBP
Increased satisfaction	Increased knowledge or the experience met their expectations and hopes	No novel information learnt, or the coach did not understand their needs

LBP = low back pain

my plan' or 'the process of accepting something and then moving with it'. Participants used words such as learning curve, acceptance, in control, and resilience to describe their improved capacity to cope.

> *"So, it was more of a learning journey… and it actually taught me a lot." 005.*

Increased motivation was noted as a core positive outcome of the program with participants suggesting this was achieved through consistent reminders, reporting back to someone regularly, and having someone to work with to set up goals. Participants also reported improved motivation through achieving small goals and focussing on results such as improved pain, decreased weight, and staying on target.

> *"Yeah, I think the [health coaching] just, kept me motivated……so you just need something externally …. keep reminding you that you need to do something, you know, that's your plan." 003.*
> *"And it worked. So being very deliberate and trying to be more active and along with losing the weight, it did help. Well, it was sort of truth by results because that pain just went." 012.*

A small number of participants strongly felt they did not feel more supported or motivated while receiving the health coaching program.

> *"Not really. No. [It did not make me feel supported] And look! I think I was, I thought it was a good idea to do it. And I like to help, if it's going to help other people but I don't think it was something that helped me." 011.*

The majority of participants believed the health coaching improved their confidence to manage their LBP. They described learning about themselves, creating solutions to specific problems, increased accountability and decreased pain levels as contributing to this increase in confidence. Participants noted the benefit of having a plan to follow and an increased sense of control and accountability contributing to their increased confidence to manage their LBP. For those participants who noted a decrease in their LBP, they noticed this decrease in pain to not only improve motivation, but to also contribute to their increased confidence.

> *"Just starting off with the exercise. It was the kick start. I really believe it was… And realising now that physio is finished. And having a health coach. It actually made me feel so proud to be able to say to people 'No I can't do that - my health coach has told me I'm not to do that." 007.*
> *"It's sort of part of my general way of behaving now, so part of that was because it was [increased my confidence] and part of that was because it was long term." 012.*

Participants expressed having increased confidence to make bigger lifestyle changes as a result of the health coaching and three described the health coaching as a learning journey and self-exploration. Two participants spoke specifically about increased confidence through accepting their LBP and moving on.

> *"Having the health coach there gave [me] the confidence to look wider and go 'I need to make a bigger change." 007.*
> *"I think I'm very confident [now]. Yeah, this going to be, you know, part of my life in the future." 003.*
> *"It's really nice to take this moment to self-reflect. And look back on where I was and where I am now and I think, you know, I'll just take a deep breath and realize it's getting better." 007.*

Some participants did not believe the health coaching program increased their confidence in managing their LBP. All four described withdrawing from the health coaching program because the health coach could not teach them anything new or because they thought their health coach was not interested in them.

"I called [the health coaching] a little bit early because it was annoying me. Just the fact that there wasn't anything. No, there wasn't anything that I didn't already know, and I didn't feel that I got anything out of it to be able to [help] me manage." 011.

Three of the participants felt the health coaching did not meet their needs and was not individualised.

"But the knowledge [the health coach] had, I already knew that". 013.
"The thing when you're doing exercises without any ongoing guidance is that you might be cheating. …. but obviously [that requires] lots and lots and lots more resources". 009.

Patient recommendations

Almost half of the participants provided recommendations on how the health coaching program could be improved. Suggestions included potential improvements relating to the participant, the health coach, and the program itself. Some participants noted that health coaching 'takes two people' and participants should be primed to work on changing their behaviours for the program to be more successful. Several participants felt that choosing their health coach would potentially improve rapport and connection as well as ensure the coach had the appropriate qualifications to help them. One participant reported the age of the health coach was an important factor and that older individuals should be matched with older coaches who would understand their life experiences. One participant also believed the program would be better if a single coaching session was provided by a physiotherapist to ensure their LBP was being adequately addressed. This participant described the program as 'unidimensional' and strongly recommended a more multidimensional program.

"It takes two to work on change. So the person who's the recipient needs to be able, and needs to want to change their own physical behaviours…. So, you can get all the good advice in the world…. But [I was] in the right place at the right time." 012.

One participant reported feeling gratitude for having received the coaching and another reported the program should be compulsory for people with severe pain. Two participants suggested the health coaching should be offered more extensively such as through maternity services and Aboriginal community health and two participants spoke of the financial benefit of connecting the free health coaching to existing physiotherapy services.

Discussion

This qualitative study explored patients' experiences of health coaching that was provided as part of an existing community health coaching program following discharge from treatment for LBP. When discussing the intervention, participants described their perceptions of the health coaching service itself and the rapport they had with their health coach. Regarding the health coaching outcome, many participants reported positive impacts such as an increased capacity to cope, increased motivation, and increased confidence to manage their LBP at the end of their program while others felt they received no benefit. Some participants also made recommendations for improving their health coaching experience.

One of the key results that emerged from this study is the pivotal role of the relationship between the health coach and the participant, highlighting the importance of the health coach's interpersonal skills that build communication, and connection. This relationship is likely to be similar to the working relationship or therapeutic alliance which encompasses warmth, partnership, and support between a client and therapist [36]. The study participants spoke of the positive and negative aspects of this relationship and its impact on the outcomes of the health coaching program which is in line with previous research which has found a positive therapeutic alliance to be associated with better outcomes in chronic disease care [37], and LBP [36]. Importantly, psychologically informed training for health coaches working with chronic conditions [38] could potentially strengthen the coaching relationship and enhance both the coaching experience and outcomes.

The qualities of the health coach the study participants felt were beneficial were communication, connection, care, and competence. These qualities mirror those that have been reported in previous research regarding the relationship between a patient with LBP and their healthcare provider. Participants spoke of opposing ends of these themes as contributing positively or negatively to their experience. For example, a health coach who communicated well, listened, and empathised was seen as helpful and beneficial, whereas a health coach who was perceived to not listen and was unable to individualise advice was seen as unhelpful and ineffective. This is supported by previous research which has found that LBP patients value healthcare providers who display empathetic and person-centred care that focuses on them as a human being and not just their pain [39], friendliness, genuine interest, clarity of information and listening [40] as well as good communication skills, encouragement and personalised care [41].

One of the primary aims of a health-coaching program such as the Get Healthy Service® is to provide social support in an effort to improve health behaviours and health

outcomes [42, 43]. Participants described the advice they received, having another person there, the connection they felt, being valued, and understood and the program being person-centred as contributing to an increased sense of support they felt. For these participants, it is likely the health coaching provided a degree of emotional, informational, companionate and esteem support which are important contributors to an overall sense of support [44]. For those participants who reported an increased sense of support, this resulted in increased coping, improved motivation, and increased confidence to manage their LBP which is congruent with previous research [15, 16].

Another important aspect of LBP care to consider in the health coaching setting is the value LBP patients place on receiving appropriate, individualised information from their therapists [45]. The participants in this study reported the advice received as being both a positive and a negative aspect of their coaching experience. Several participants spoke about the quality of the information they received as being useful and they appreciated their health coach taking the time to research answers for them. While a few participants found a lack of LBP specific information to be a barrier to participation in the program, several reported this to not be important. It is possible the information received, the research, and the answers provided by the health coach, actually represent the positive aspects of communication such as listening and respect rather than informational support in this context of health coaching which may differ to the context of medical care for LBP.

Whilst the health coach and the coaching relationship were reported to be of primary importance by the participants, some also spoke about factors specific to the health coaching program. Most reported that the over-the-phone format met their needs, and they valued the convenience, regularity, and flexibility of the calls. Several participants reported a willingness to trial another format of health coaching such as via videoconferencing, as long as it was still convenient and met their needs, but none were certain it would change their experience or their outcomes. As telephone coaching has been shown to be an effective and cost-effective method of supporting people to change behaviour and self-manage chronic conditions [46–48], programs such as the Get Healthy Service® may provide an important opportunity to continue to support individuals with chronic LBP following discharge from treatment.

A review of 18 articles found nine key skills that are important for health coaches to master, noting communication as a primary competency [49]. This review also found the ability to deliver patient-centred care and the capacity to demonstrate relevant, evidence-based knowledge, with a willingness to learn, as fundamental to effective health coaching. The findings of our study support this review, with interviewed participants reporting similar key mechanisms through which their health coaching may or may not have helped them.

Considering the Stages of Change Theory [50] on which health coaching is partially based, participants who volunteered to be involved in the GBTH trial were presumably in the contemplation or preparation stage of behaviour change. Readiness to change was reported by participants to be important in the health coaching process, not only as a willingness to work towards goals but also to take on bigger lifestyle changes that may assist them with managing their LBP. Interestingly, as part of the health coaching, goal setting and problem solving are usually reserved for those individuals who are ready to change [51] and it is possible that participants who reported their goals as being demotivational or unrealistic were not yet ready to change, reflecting personal dimensions rather than health coach or relationship elements as an issue.

The most common barriers to change are lack of information, lack of support, and previous negative experiences [51]. The results of this study replicate these barriers with unsatisfied participants reporting their health coach as unable to provide them with new or useful information, not having the right skillset to give them advice or not helping them feel supported. These participants tended to withdraw from the health coaching and therefore attend fewer sessions. With health coaching more likely to be successful with more sessions [52] it is possible the participants may have been able to overcome these barriers had they attended further sessions with their health coach.

To ensure services such as the Get Healthy Service® are an effective and viable discharge support option for individuals with LBP, it may be beneficial to consider training the coaches in psychologically informed practices to strengthen the coaching relationship and to consider the recommendations made by participants. One participant recommended a multimodal approach with one coaching session provided by a physiotherapist. This is supported in the literature where strong communication between the health coach and primary care provider is recommended [48, 49]. Ensuring a strong connection between the participant and the health coach was also recommended by several participants either through allowing them to choose their health coach or purposefully matching based on age, skillset, or patient goals.

Strengths and limitations

There are some limitations to this study. While 18 participants of the GBTH trial were invited to participate in the interviews only 12 agreed which may introduce some bias as individuals with strong views (both positive and

negative) about the service may have been more likely to agree to participate. Further to this, the interviews were performed when the participants completed their 12 months in the GBTH trial. As the health coaching program ran for the first six months of the trial, and participants may have completed or withdrawn from their health coaching program prior to this time point, this may have introduced recall bias. Further, we have not linked the participant experiences with the trial outcomes and are therefore unable to determine whether a positive experience and a strong health coaching relationship led to greater improvements in outcomes related to LBP (e.g., use of health services for LBP, pain intensity, disability). The high education level of the sample could be seen as a lack of diversity in the sample however, this could also be seen as a strength representing a potential increased depth of insight and articulation of experience provided by the participants. Importantly, the majority of participants felt their health coach did not address their LBP adequately but only a few felt this impacted negatively on their experience of the program. This study also has some strengths. In particular, the in-depth data resulting from the semi-structured, open-ended interview questions provides rich information regarding patient's perceptions of the use of a community health-coaching program to assist LBP discharge support in a real world, care setting. Ensuring trustworthiness in qualitative research is central to the decisions and processes involved in preparing and organising the research, as well as reporting the research [32]. The data collection method utilised, the piloting and adjusting of the interview questions, the sampling strategy chosen and selecting the sample size based on thematic saturation all contribute to the trustworthiness of the preparation phase [32] of this research. The credibility (validity) and dependability (reliability) of this research were ensured through the collaboration of the researchers, the purposive sample selection and the choice of suitable meaning units [35]. The transferability (generalisability) and confirmability (data accuracy) of this research are ensured through the attention to detail and the meticulous presentation of the results [32, 34, 35]. Finally, the extensive clinical experience of the primary researcher could be seen as a limitation as they may have had preconceived ideas and biases when interviewing and reviewing the transcripts. This researcher was careful not to ask leading questions in the interviews and the collaborative process involved when generating themes and sub-themes from the interviews minimises this risk. This study has also been conducted following the EQUATOR Standards for Reporting Qualitative Research Checklist.

Clinical application

A 2021 Lancet editorial on chronic pain called for chronic pain care to be 'grounded in the community' supported by well-trained, multidisciplinary healthcare workers [53]. An ageing population, rising healthcare costs and ongoing negative health behaviours [54] are cementing the importance of supporting self-management and self-care [55] leading to an increased need to understand the patient experience and patient perspectives of healthcare services. Health coaching such as that provided by the Get Healthy Service® may be an important pathway for providing community-based, high-quality, cost-effective discharge care for supporting LBP patients to self-manage their condition. Therefore, understanding the patient's experiences may lead to greater knowledge, thereby improving the quality of health coaching and long-term outcomes for those with chronic LBP. While this study does not assess the Get Healthy Service® program structure and the LBP training the health coaches received was specifically for this study, it provides important information regarding patient's experiences. In particular, their perceptions of the program outcomes as well as what they perceive to be both beneficial and unhelpful aspects of their health coaching experiences. Embracing these participant opinions may lead to improved discharge support services for individuals with chronic LBP in the future.

Conclusion

Examining health coaching after discharge from treatment for chronic LBP from the patient's viewpoint offers valuable insights that could enhance post-discharge care for numerous individuals coping with LBP. Participants valued the role of the health coach, goal setting, high quality, person-centred advice and the sense of being supported. Participants valued the service if it met their personal needs and while several participants felt the LBP-specific information was inadequate, this did not necessarily impact negatively on their experience of the health coaching. Participants also spoke of the importance of the rapport they felt with their health coach citing communication, connection, care, and competence to be important factors in their relationship. Despite significant variations in the reported progression of their LBP, the participants in this study found both positive and negative outcomes of the health coaching. However, the positive outcomes of a greater capacity to cope as well as increased motivation and increased confidence to manage their LBP are important insights for potentially improving the post-discharge care of people coping with chronic LBP.

Supplementary Information

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Supplementary Material 1

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Author contributions

KR, MB, YT and EH participated in the design of the study. KR, MB, and YT participated in the analysis of the study. KR led the writing of the manuscript. All authors made contributions to the drafted manuscript. All authors read, edited, and approved the final version of the manuscript.

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Data availability

The data used and/or analysed are available on reasonable request however are not publicly available due to participants' consent to their data being shared by the University of Sydney.

Declarations

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

Ethics approval and consent to participate

The GBTH trial was prospectively registered with the Australian New Zealand Clinical Trials Registry (ACTRN12620000889954). Ethical approval was prospectively granted by the Western Sydney Local Health District Human Research and Ethics Committee (2020/ETH00115). Written informed consent was obtained from all participants. The relevant sponsor has reviewed the study protocol and consent form.

Author details

[1]Faculty of Medicine and Health, The University of Sydney, Sydney, Australia
[2]Faculty of Medicine and Health, School of Health Sciences, The University of Sydney, Sydney, Australia
[3]South Western Sydney Local Health District, Sydney, NSW, Australia
[4]Physiotherapy Department, Westmead Hospital, Sydney, NSW, Australia
[5]NHMRC Clinical Trials Centre, Faculty of Medicine and Health, The University of Sydney, Camperdown, NSW, Australia
[6]Concord Repatriation General Hospital, Sydney, NSW, Australia
[7]The George Institute for Global Health, The University of New South Wales, Sydney, Australia
[8]Faculty of Medicine and Health, School of Health Sciences, Charles Perkins Centre, The University of Sydney, Sydney, Australia

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