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## Exploring the Lived Experience And Chronic Low Back Pain Beliefs Of White British And English Speaking Punjabi People

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**Title**

Exploring the Lived Experience And Chronic Low Back Pain Beliefs Of White British And English Speaking Punjabi People

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## **Abstract**

**Introduction:** Disabling chronic low back pain (CLBP) is associated with negative beliefs and behaviours, which are influenced by culture, religion and interactions with healthcare practitioners (HCPs). In the United Kingdom (UK) HCPs encounter people from different cultures and ethnic backgrounds, with South Asian Indian's (including Punjabis) forming the largest ethnic minority group. Better understanding of the beliefs and experiences of ethnic minorities with CLBP might inform effective management.

**Objectives:** To explore the CLBP beliefs and experiences of English-speaking Punjabi and White British people living with CLBP, explore how beliefs may influence the lived experience of CLBP and conduct cross-cultural comparisons between the two groups.

**Design:** Qualitative study using semi structured interviews, set within an interpretive description framework and thematic analysis.

**Setting:** An NHS Hospital Physiotherapy department, Leicester, UK.

**Participants:** 10 CLBP participants (5 English-speaking Punjabi and 5 White British) purposively recruited from Physiotherapy waiting lists.

**Results:** Participants from both groups held negative biomedical CLBP beliefs, experienced unfulfilling interactions with HCP's and negative psychosocial dimensions of CLBP. Specific findings to Punjabi participants included (i) disruption to cultural-religious wellbeing, (ii) disruption to the perceived female 'home-maker' role within the home, as well as (iii) a perceived lack of understanding and empathy regarding their CLBP from the Punjabi community. In contrast to their White British counterparts', Punjabi participants reported initially utilising passive coping strategies, however all participants reported a transition towards active coping strategies.

**Conclusion:** CLBP beliefs and experiences, irrespective of ethnicity, were primarily biomedically-orientated. However, cross-cultural differences included cultural-religious wellbeing, the perceived female role, the community response to CLBP experienced by Punjabi

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3 participants, and coping styles. These findings might help inform management of people with  
4  
5 CLBP.  
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### 8 9 **Strengths and limitations of this study**

- 10 • The first study to provide a cross-cultural exploration of CLBP beliefs and  
11 experiences of English-speaking Punjabi and White British people living with CLBP.  
12
- 13 • Using purposive sampling, 1:1 semi-structured interviews were conducted through a  
14 cultural lens to explore beliefs and experiences of Punjabi and White British people  
15 with CLBP.  
16
- 17 • The study findings were data-driven and embedded in the participants' voice.  
18
- 19 • Participants were all English-speaking and were only selected from one geographical  
20 location, which may limit the transferability of the findings.  
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- 22 • Member checking was not conducted to validate interview transcripts.  
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## Introduction

Chronic low back pain (CLBP) is the primary cause of disability and financial burden to healthcare and society in the United Kingdom (UK).<sup>1</sup> Despite increasing resources spent to improve CLBP management, the associated disability continues to rise.<sup>2</sup>

Historically, the impact of CLBP on developing populations was perceived to be minimal, but is now understood to be similar to western populations.<sup>3-8</sup> In the UK a higher incidence of spinal pain has been reported in South Asians,<sup>9</sup> and a higher prevalence of widespread musculoskeletal pain reported in South Asian Indian Punjabis (22%) compared with Europeans (9%).<sup>10</sup>

Biomedical beliefs about CLBP are common within western populations and are emergent within developing populations.<sup>3 11 12</sup> Factors thought to influence these beliefs include ethnicity, religion, family and friends, as well as unhelpful interactions with healthcare practitioners (HCPs).<sup>13 14</sup>

Current CLBP research has largely focused on western societies with little emphasis on minority ethnic populations; a concern given ethnic migration and cultural diversity is increasing within western societies. According to the last UK Census (2011)<sup>15</sup> Leicester hosts the largest Indian (referring to themselves as Asian or British Asian) population (30%) of any local authority in England and Wales.

Understanding cultural variations in pain perception, beliefs, expectations, and behaviours is important to accurately identify patients' needs and behaviours relative to one's own potentially divergent culture.<sup>16</sup> This may help avoid health inequalities and suboptimal outcomes.<sup>17 18</sup> To tailor management, HCPs might benefit from understanding an individual's beliefs and experiences of CLBP within the cultural context in which they occur.<sup>7 19</sup> Therefore, research is required to understand the management of CLBP within different populations within the UK. Cross-cultural comparative studies utilising qualitative

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3 methodologies may provide in-depth understanding of individual and culture specific beliefs  
4 and experiences of CLBP. However, the authors are not aware that any such comparisons  
5 have been made between English speaking Punjabi and White British CLBP populations.  
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10 Therefore, this study aimed to investigate the beliefs and experiences of people living with  
11 CLBP in English speaking Punjabi and White British populations. The objectives were to  
12 explore how these beliefs influence, and impact on, the experience of living with CLBP and  
13 identify similarities and differences between the two ethnic groups.  
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## Methodology

Using semi structured interviews this study followed the COnsolidated criteria for REporting Qualitative studies (COREQ) (Supplementary File 1).<sup>20</sup> Interpretative description (ID) was chosen as this qualitative approach has been specifically developed for healthcare enquiries of a clinical phenomenon, using subjective accounts, for the purpose of informing clinical understanding.<sup>21</sup> Prior theoretical and clinical knowledge is valued as a starting point for research in ID, although this can be challenged and developed as the research progresses.<sup>22</sup>

### *Sample*

Purposive sampling<sup>23</sup> was employed to recruit White British and Punjabi participants sufficient to enable relevant data to be obtained and analysed.<sup>24</sup> The study setting was Leicester (UK), which hosts a large White British and Punjabi population.

Eligible participants were White British and English speaking Punjabi people aged 18-65 years with CLBP of  $\geq 6$ -month duration.<sup>25</sup> Individuals with a previous history of surgery for CLBP, diagnosed with a specific or a serious underlying cause of their CLBP (i.e. fracture, infection, inflammatory spondyloarthropathy, cancer, or nerve root compression)<sup>26 27</sup> or who had previous physiotherapy treatment from the authors (GS, CN) were excluded.

### *Recruitment*

Potential participants were identified by GS following a GP or Consultant referral to an NHS Physiotherapy department for CLBP between April 2014 and April 2015. Study information was posted to eligible individuals with their physiotherapy appointment letter. Following this, an interview was arranged via telephone, prior to physiotherapy commencing. GS obtained written informed consent pre-interview. Recruitment continued until saturation was



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3 achieved.<sup>28</sup> All participants were eligible and included. The sample comprised of five White  
4 British (2 males: 3 females) and five English speaking Punjabi (3 males: 2 females) people,  
5 with a mean age of 40 years (Table 1).  
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### 10 *Data collection*

11  
12 In-depth semi-structured interviews were conducted by GS (British Punjabi male) or CN  
13 (White British male), with 11 and 13 years musculoskeletal physiotherapy experience  
14 respectively, with a special interest and *a-priori* knowledge of CLBP. Both authors undertook  
15 three hours of National Institute of Health Research training on semi-structured  
16 interviewing.<sup>29</sup> No prior relationship was established with participants. Interviews took place  
17 in a quiet room in the physiotherapy department and lasted between 60-70 minutes.  
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26 A topic guide was informed by contemporary CLBP literature,<sup>7 13</sup> and research team  
27 expertise. Further refinements were made following two pilot interviews with CLBP  
28 patients.<sup>30</sup> The topic guide included open-ended questions related to the individual's 'story of  
29 their CLBP', their beliefs about causation, management and the future) as well as the lived  
30 experience of CLBP (related to interaction with HCPs, coping with CLBP and its personal,  
31 psychological, social and cultural impact) (Supplementary File 2).  
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40 Participants provided demographic data and completed validated questionnaires for pain  
41 severity (Numerical Pain Rating Scale was a sub-item score from the Short Form Orebro  
42 Musculoskeletal Questionnaire (SFOQ)),<sup>31</sup> functional disability (Oswestry Disability Index)<sup>32</sup>  
43 and psychosocial risk profile (including sleep, anxiety, depression, catastrophising, fear-  
44 activity and fear-work were sub-item scores from the SFOQ)<sup>31</sup> (Tables 1 and 2).  
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### 52 **Data analysis**

53 Interviews were audio-recorded and transcribed verbatim by GS who analysed the data  
54 using thematic analysis.<sup>33</sup> Each transcript was analysed line-by-line using an iterative model  
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3 immediately after the first interview. This involved: data sampling, collection and analysis  
4 occurring in tandem as an on-going constant comparative process<sup>34</sup> to facilitate the capture  
5 of emergent themes during data collection.<sup>33</sup> This process allowed active engagement and  
6 familiarisation with the data and some of the terms for beliefs and coping were identified  
7 from previous literature.<sup>7 13</sup> From this, initial themes were generated and data-driven coding  
8 facilitated the development of a thematic table, which was modified as data analysis and  
9 interpretation evolved (Table 3). Crucially this involved critique by the co-authors (CN, KOS,  
10 AS and NH)<sup>35</sup> to enhance rigour and trustworthiness of study findings.<sup>23</sup> GS, CN and AS  
11 independently assessed the accuracy and completeness of all the transcripts, ensuring  
12 these related to the thematic development and emerging themes; this process was collated  
13 as an audit trail (Supplementary File 3). Data collection and analysis was transparent and  
14 detailed.  
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## Results

Five main themes emerged from the interviews: i) biomedical back pain beliefs, ii) coping with CLBP, iii) the psychological and emotional dimensions of living with CLBP, iv) the social and cultural-religious impact of CLBP and v) reflecting on HCP interactions, management experience and expectations of future management. These themes are presented in a compare/contrast style between the ethnic groups. Due to the commonalities between the two groups, the findings presented apply to both groups unless otherwise stated (Supplementary File 4).

**Table 1: Participant Characteristics**

Participant code	CLBP duration (years)	Age (years)	Sex	Ethnicity
S1	25	40	Male	Punjabi
S2	2	51	Male	White British
S3	18	35	Female	White British
S4	20	42	Female	White British
S5	2	23	Female	Punjabi
S6	7	37	Male	Punjabi
S7	4	40	Male	Punjabi
S8	1	53	Male	White British
S9	2	49	Female	White British
S10	14	38	Female	Punjabi

**Table 2: Participant pain, disability and psychosocial risk profile data**

Participant code	NPRS	ODI (%)	SFOQ	Sleep	Anxiety	Depression	Catastrophising	Fear-Activity	Fear-Work	Employment Status
S1	7	(Moderate) 28	(Moderate) 48	4	5	4	7	7	3	Working
S2	8	(Moderate) 38	(High) 59	1	6	5	10	5	5	Working
S3	5	(Moderate) 24	(Moderate) 46	6	0	0	5	10	5	Working
S4	8	(Moderate) 30	(Moderate) 48	5	7	2	10	2	2	Retired
S5	3	(High) 51	(High) 50	7	6	7	5	0	1	Off work
S6	2	(Low) 14	(Low) 22	2	0	0	3	4	3	Working
S7	5	(Moderate) 24	(Moderate) 41	6	3	2	8	7	1	Working
S8	2	(Low) 14	(Low) 29	2	3	1	3	8	3	Working
S9	4	(Moderate) 40	(High) 73	7	8	9	8	9	3	Working
S10	8	(High) 50	(High) 77	7	1	6	10	10	7	Working

**ODI = Oswestry Disability Index, SFOQ = Short Form Orebro musculoskeletal pain questionnaire, NPRS = Numeric Pain Rating Scale**

**Table 3: The thematic development illustrating key stages**

	Thematic development stage 1		Thematic development stage 2	Thematic development stage 3	Final theme stage 4
<b>Theme 1</b>	Back pain beliefs	Revised Topic guide	Back pain beliefs	Biomedical Back pain beliefs	Biomedical Back pain beliefs
<b>Theme 2</b>	Coping with CLBP		Coping with CLBP	Coping with CLBP	Coping with CLBP
<b>Theme 3</b>	Psychosocial, dimensions of pain		Impact of CLBP	Psychological, emotional and social dimensions of CLBP	The psychological and emotional dimensions of living with CLBP
<b>Theme 4</b>	Cultural impact of CLBP		Cultural impact of CLBP	Cultural impact of CLBP	The social and cultural-religious impact of CLBP
<b>Theme 5</b>	HCP interactions		HCP interactions, management experience and future expectations	HCP interactions, management experience and future expectations	Reflecting on HCP interactions, management experience and expectations of future management
<b>CLBP = Chronic low back pain</b> <b>HCP = Health care practitioner</b>					

## Theme 1: Biomedical back pain beliefs

### Cause of CLBP attributed to physical and structural/anatomical factors

All participants held similar biomedical CLBP beliefs. Common causal beliefs attributed CLBP to physical and structural/anatomical factors. These mainly included bending and lifting strains, for example:

*“I basically bent down to pick up a pen or something and it clicked and I couldn’t straighten myself up” [S6]*

Consistent with these beliefs, in cases where a physical causal mechanism could not be recalled, participants self-diagnosed a structural/anatomical cause for their CLBP. The most frequently expressed labels included: ‘slipped disc’ (n=5), ‘wear and tear’ (n=3) and ‘trapped nerve’ (n=3).

### Recalling HCPs biomedical diagnosis and the biomedical beliefs adopted

Most participants recalled a diagnostic label derived from HCPs embedded within the biomedical model, consistent with their own beliefs. Nonetheless, some interpreted this information negatively. Following a consultation with a chiropractor, one participant perceived his back “...was out of place” [S7]

Biomedical CLBP beliefs were influenced by manual-handling training and by participants’ occupation. A nurse believed the repetitive nature of manual handling in ward settings to be a cause of his CLBP. Subsequently, participants’ adopted the belief their spine needed protecting when bending and lifting:

*“I suppose if you lift incorrectly it will cause back pain. I mean we have all had it drummed in to us (manual-handling training), how to bend our knees and how to do all that malarkey” [S2]*

### Vulnerability of the spine

Many viewed their spine as vulnerable, central to function and critical to one’s well-being. Given participants’ had ‘one back’, that was hard to see, combined with a feeling of weakness, the back was commonly described as ‘precious’, and when compared to an ankle sprain required more protection:

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3 *"It just feels as though the spine controls so much of your function in your legs and*  
4 *everything, that if you injure it, it's much more serious than perhaps injuring your*  
5 *ankle"* [S2]  
6  
7

8  
9 Consistent with higher levels of disability, participants' fear avoidant beliefs suggested they  
10 believed pain indicated harm, and was a warning signal from the back:

11  
12 *"your back is trying to tell you something. It's trying to tell you to stop doing whatever*  
13 *you're doing if it's hurting...because you are making it worse."* [S3]  
14  
15

### 16 Future outlook

17  
18 Participants tried to maintain a positive future outlook; this was mainly based on prior pain  
19 experiences, and individual personalities.  
20  
21

22 *"I even think now that I will wake up and it will all go away and it maybe will."* [S2]  
23  
24

25 Despite this, there was an overriding feeling of uncertainty:

26 *"I don't want to think about that because I don't know how I'm going to be"* [S5]  
27  
28

29 For some Punjabi participants' religion was expressed as a key part of their lives and  
30 interlinked with their positive outlook on pain. One participant described a hand injury  
31 whereby his fingers were amputated as 'God's will' and expressed his positive outlook in the  
32 context of his religious beliefs:  
33  
34  
35

36 *"Someone up there wanted them so they were gone...my sin plate was wiped clean*  
37 *on that day and we start again."* [S1]  
38  
39

## 40 **Theme 2: Coping with CLBP**

### 41 Active coping strategies

42  
43 White British participants' predominantly demonstrated active coping 'self-help' strategies  
44 based on prior CLBP experiences and searching online for knowledge and understanding:  
45  
46  
47

48 *"I went onto NHS choices and typed in sciatica - just that word and a whole load of*  
49 *stuff comes up and there is one big sentence and it says 'keep active...'"* [S2]  
50  
51

52 Amongst the White British group, exercise strategies such as stretching, yoga and football  
53 were utilised. They commonly shared the narrative 'confronting pain and battling on'.  
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3 Influenced by a need to avoid interference in one's life, fulfill family and parental duties and  
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5 to avoid burdening others, this often meant enduring pain.

6  
7 "I even think now that I will wake up and it will all go away and it maybe will." [S2]

### 8 9 Reliance on HCPs and biomedical interventions

10  
11 A lack of understanding and control over pain led some participants to rely on HCPs in an  
12  
13 unrelenting search for a diagnostic label, whilst others sought reassurance via scans:

14  
15 "I wanted to have a scan just to see if there was anything major ermmm major  
16  
17 wrong" [S9]

18  
19 Both groups expressed varying levels of reliance on medication, ranging from daily use, to  
20  
21 situations of desperation where they felt 'physically stuck' or to prevent pain intensifying.

22  
23 In contrast to White British participants, Punjabi participants' demonstrated a passive  
24  
25 reliance on HCPs to provide 'quick fix' interventions including acupuncture, massage and  
26  
27 most frequently manual therapies:

28  
29 "you go there (manual therapist) for a quick fix" [S6]

### 30 31 Protective and avoidance coping strategies

32  
33 In terms of bending, lifting and heavy physical tasks, many participants used protective and  
34  
35 avoidance strategies. Meanwhile, experiencing exercise-related pain, increased fear  
36  
37 avoidance around exercise, which promoted resting behaviours. Uncertainty about the  
38  
39 cause of pain increased hypervigilance to the threat of pain and adherence to manual  
40  
41 handling advice to protect the back reflecting a belief of spinal vulnerability:

42  
43 "I think a bit more.... if I have a task that it would probably involve lifting a box or  
44  
45 whatever, I will now consciously think, make sure you bend your knees and you keep  
46  
47 your back straight if you're lifting something or whatever. Whereas previously you  
48  
49 think you are fine, it doesn't matter, nothing is going to happen so..." [S1]

### 50 51 Coping transition

52  
53 An interesting difference emerged in the coping trajectories of White British and Punjabi  
54  
55 participants. Although, it was not clear how this transition took place, all Punjabi participants'  
56  
57 reported a transition from a passive reliance on HCPs for a "quick fix" to more active coping



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3 strategies such as self-searching the internet, as well as replacing rest with increased  
4 physical and social activities in order to resume normal life:

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6  
7 *“Instead of relax it.... I'd just go back to my normal routine”* [S6].

### 8 **Theme 3: The psychological and emotional dimensions of CLBP**

#### 9 Psychological and emotional consequences

10  
11  
12 Across both groups, a number of negative psychological and emotional dimensions of CLBP  
13 were expressed. Those with more disabling CLBP most frequently reported depressed  
14 mood, hopelessness, frustration, catastrophising thoughts, and uncertainty about pain and  
15 lack of control over it.  
16  
17

18  
19  
20 Depressed mood was most often expressed in relation to the persistence of CLBP, and as a  
21 consequence of failed interventions, disruption to sleep and engagement in meaningful  
22 activities. Some attributed disabling CLBP to weight gain resulting in depressed mood:  
23  
24

25  
26  
27 *“because I put on a lot of weight when I was bed bound that got me really down”* [S5]

28  
29  
30 Hopelessness was attributed to a lack of control over pain and a lack of support from HCPs,  
31 who in some cases painted a pessimistic outlook:

32  
33  
34 *“No I mean they just said it's just down to wear and tear basically and you've got to*  
35 *live with it”* [S9]

36  
37  
38 Frustration was repeatedly expressed in relation to a lack of understanding of the cause of  
39 pain, and the interference with daily life, and in some cases the desire to exercise and lose  
40 weight. Participants with more disabling pain held catastrophic CLBP thoughts. Similar to  
41 depressed mood and frustration, this was associated with diagnostic uncertainty and a lack  
42 of control over pain, resulting in catastrophising about the future:  
43  
44

45  
46  
47 *“I might not walk again”* [S5]

#### 48 Catastrophic nature of pain flare-ups

49  
50  
51 Often participants' used catastrophic language to portray the unpredictable, fluctuating and  
52 uncontrollable disabling impact of flare-ups, for example:  
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3 *"I would say at it's very worst point it feels like a ball of fire. It's debilitating to the*  
4 *point where I want to cut my left-side off. It's awful and the longer the pain continues*  
5 *the worse it seems to spread"* [S4]  
6  
7

8  
9 For some this entailed a physical and emotional struggle. However only a few seemed to  
10 form a link between their thoughts and CLBP:  
11

12 *"When I have got a project or something... I am not thinking about my back at all. I*  
13 *am just cracking on. I'm noticing it more because I have got time on my hands"* [S4]  
14  
15

### 16 Threat to self-identity

17  
18 Cross-cultural comparisons highlighted that CLBP posed a major threat to participants' *'self'*  
19 *and their identity*. Some described negative consequences of CLBP such as low self-  
20 esteem, reduced independence and disempowerment. One participant expressed disabling  
21 CLBP as a major loss:  
22  
23  
24  
25

26 *"Everything is just gone now like dignity, confidence. I had a stick but I would only*  
27 *use that sometimes if I was going out"* [S5]  
28  
29

30 During flare-ups, a small number expressed difficulties carrying out daily functional activities.  
31 The greatest impact seemed to be on bending-related tasks such as putting on socks and  
32 Hoovering. This led to dependency on family members and changing roles in their  
33 relationships, which negatively impacted participants' psychological and emotional well-  
34 being.  
35  
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## 40 **Theme 4: The social and cultural-religious impact of CLBP**

### 41 Threat to family/friend relationships and social life

42  
43 Mostly expressed by White British participants', the interference of CLBP on family  
44 relationships and fulfilling parental roles was described as 'restrictive' on their  
45 spouse/partner, often eliciting negative emotions in family members. One participant  
46 identified her coping strategies as a potential cause of frustration:  
47  
48  
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52 *"My husband also gets frustrated with me. He says 'what you being a legend for, why*  
53 *don't you just sit down and do it later'. I don't know... he still thinks I have OCD"* [S4]  
54  
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3 CLBP inhibited social interactions across both groups. Social isolation was the consequence  
4 for some previously sociable participants' with more disabling pain:  
5

6 *"Just walking round town I have to stop and go in a café and have a coffee just to sit*  
7 *down to rest my back. I stay at home now"* [S9]  
8  
9

### 10 Work impact

11  
12 Disrupting work roles, those sitting at work constantly fidgeted and had move in an attempt  
13 to control pain. Participants also commented how CLBP impacted on colleagues. Sickness  
14 absence was discussed by most with varied views, some cited having time off work due to a  
15 flare-up:  
16  
17  
18  
19

20 *"I did have time off 'cos my back was hurting too much"* [S7]  
21

### 22 The impact of CLBP on cultural and religious wellbeing

23  
24 CLBP negatively impacted cultural-religious wellbeing of Punjabi participants, consistently  
25 impeding meditation, particularly as this involved sitting cross-legged on a floor for long  
26 periods:  
27  
28  
29

30 *"I do sit down crossed legs on the floor when we pray and meditate and maybe that*  
31 *has slight impact on it, you know when it gets just maybe it gets tired"* [S6]  
32  
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34 This impact varied from 'the hips and back locking', to an inability to sit leaving one  
35 participant secluding herself from religious rituals that involved sitting:  
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38 *"[Referring to sitting in the temple] I'll just go when it's quiet y'know, ermmm do my*  
39 *praying and then come back out and then just go downstairs where there's chairs or..*  
40 *I can just hang around somewhere else and that kind of...I feel excluded sometimes*  
41 *because y'know people tend to like wanna sit upstairs and I have to like go just*  
42 *downstairs"* [S10]  
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48 Cultural roles and obligations were impacted. In this context, one Punjabi female described  
49 the 'perceived' female cultural role and how CLBP disrupted her ability to carry out  
50 household duties including cooking. Viewed as essential to the female role amongst  
51 Punjabi's, difficulties with or an inability to carry out these duties had far-reaching  
52 consequences such as finding a marriage partner:  
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3           *“With the Asian culture a girl has to do housework - she has to get prepared for her*  
4           *married life, so she has to learn how to cook, she has to learn how to do housework,*  
5           *look after her husband and when you can't do that, you're you know not suitable*  
6           *anymore”* [S10]  
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### 10 11 The response of family, friends and wider community to CLBP

12 Participants' reported experiencing varied responses from friends and family members to  
13 their CLBP. These included feeling pushed to seek healthcare to 'get it fixed', feeling  
14 supported in some cases, and over supported in others. In contrast, one Punjabi participant  
15 experienced very little empathy and support:  
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19           *“My family don't take me seriously anymore because they're just sick of hearing*  
20           *about it and my friends just don't understand”* [S10]  
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24 Some Punjabi participants' felt stigmatized, with cultural comparisons indicating a perceived  
25 lack of empathy and understanding from people within the Punjabi community:  
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28           *“In other cultures do kind of ... they tend to be a bit more understanding”* [S10]  
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31 CLBP advice from Punjabi community members, the self-acclaimed 'back pain experts', left  
32 one participant frustrated:  
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35           *“Unfortunately we live in a community that everyone thinks they are a qualified*  
36           *doctor. You know, don't do this, do this sort of a thing”* [S1]  
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### 39 Recalling family experiences of CLBP

40 Participants recalled back pain experiences of family members with regards to their coping  
41 strategies, levels of disability and interactions with HCPs. Some family members reluctantly  
42 relied on medication, whilst others adopted active coping strategies and demonstrated self-  
43 efficacy. However, participants did not consistently adopt the coping strategies observed.  
44 For example, one Punjabi participant initially utilised passive interventions (including  
45 massage) in contrast to his father:  
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3 *“He has not let it really impact him to be honest because he still goes to the gym, he*  
4 *still lift weights, just does everything. Before every now and again his back hurts a*  
5 *little bit. He does what he does - he hasn't changed anything” [S6]*  
6  
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## 8 **Theme 5: Reflecting on HCP interactions, management experience and expectations**

### 9 **of future management**

#### 10 Varying quality of therapeutic alliance

11 Reflecting on previous HCP interactions, many experienced variations in therapeutic  
12 alliance, with mostly negative interactions. Strong therapeutic alliance was associated with  
13 HCPs providing clear communication. This included a clear explanation about the cause of  
14 pain, as well as reassurance, collaborative compassionate care with on-going support and  
15 guidance. This increased adherence to treatment, built empowerment and trust in their  
16 HCPs:  
17

18 *“I've great faith in the physio” [S2]*  
19

20 In contrast, several factors were attributed to weak therapeutic alliance. Some depicted a  
21 power struggle, where the HCP was in control, *and* access to investigations such as MRI  
22 scans was rejected, others reported a lack of individualised holistic care. However, most  
23 cited HCPs communication as a major problem, particularly not being given time, not being  
24 taken seriously, not feeling understood nor listened to. One participant reported feeling  
25 disrespected:  
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27 *“It really did upset me when I went to see a consultant - I felt very belittled by how he*  
28 *approached me” [S9]*  
29

30 Expectations were often unmet, where participants did not receive investigations, a clear  
31 diagnosis, a physical examination or manual therapy whilst enduring unexpected pain flare-  
32 ups. A perceived lack of guidance and support from HCPs was also cited, in some cases  
33 resulting in feelings of helplessness and low mood.  
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### Interpreting the HCP explanation

Iatrogenic language used by HCPs was fear-inducing for some participants. Interpretations of HCPs explanations led to a sense of vulnerability around the spine and a need to adopt caution. One participant in his thirties recalled his interpretation of 'wear and tear':

*"It makes you think that something you've got something permanent and you're basically going to have to live with it"* [S6]

However, uncertainty about the actual cause of their pain was most common, partly due to mixed messages conveyed by HCPs and inconclusive radiological investigations.

### Appraising interventions and ability to control CLBP

Reflecting on prior CLBP management, this was embedded within the biomedical model for the majority. Treatment interventions were appraised in relation to their therapeutic effect and the participant's ability to control their pain. Medications, despite being taken for long periods were deemed largely ineffective by many, as was acupuncture. In addition, a reliance on manual therapies offered minimal long-term effect:

*"If I'm honest - at the time it's a psychological plaster"* [S4]

### Expectations of future management

Interestingly, when exploring cross-cultural expectations of future management, all participants' sought an individualised, mind-body approach, which involved a physical 'hands on' examination. Many expressed the need for HCPs to possess strong communication skills which include: empathy, active listening skills, providing time, clear communication and to:

*"Explain things thoroughly, don't frighten the patient, and just generally be welcoming"* [S3]

## Discussion

This is the first study to examine the lived experience and CLBP beliefs of White British and English speaking Punjabi people. Our findings suggest several between-group similarities including biomedical back pain beliefs, unfulfilling HCP interactions and negative psychological emotional and social influences of CLBP. Differences included CLBP disrupting Punjabi participants' participation in cultural-religious activities, and the perceived female role within the home. Whilst White British participants adopted active coping strategies, their Punjabi counterparts initially reported a preference for passive coping strategies, but all reported a transition to active coping strategies. Punjabi participants also experienced a lack of empathy and understanding from the Punjabi community.

### *Biomedical beliefs*

Biomedical CLBP beliefs were common amongst all participants, their family, friends and particularly the wider Punjabi community. This supports the view that biomedical beliefs may not be exclusive to certain populations, instead reflecting the views of western society overall.<sup>8,36</sup> Biomedical beliefs conveyed by HCPs were adopted by, or were similar to those already held by, participants', consistent with other studies.<sup>13,37</sup> These beliefs were often associated with negative CLBP information,<sup>38</sup> around bending and lifting, perpetuating beliefs of spinal vulnerability culminating in fear avoidance beliefs and behaviours.<sup>39</sup> Further, the role of cultural-religious pain beliefs in promoting a positive future outlook has been documented in other cultural groups.<sup>40</sup> However only one Punjabi participant expressed pain beliefs within a positive cultural-religious context, perhaps reflecting participants' predominantly biomedical beliefs.

### *Coping strategies and transition*

Illustrated as an on-going challenge by many participants, coping strategies have been shown to influence the development and persistence of CLBP.<sup>41</sup> Most White British

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3 participants at times utilised active coping strategies such as self-searching for knowledge  
4 and exercises, thus demonstrating self-efficacy. A recent qualitative CLBP study<sup>42</sup> reported  
5 patients require an explanation and understanding of their CLBP, consistent with our study.  
6  
7 Many searched relentlessly, primarily via reliance on HCPs for biomedical interventions,  
8 perhaps reflecting the importance participants attached to finding a diagnosis that would  
9 legitimise their pain.<sup>19</sup> Meanwhile, Punjabi participants' initial reliance on HCPs to provide  
10 passive 'quick fix' interventions and a dependency on family members may highlight their  
11 biomedical beliefs, underpinned by a lack of understanding and control over pain resulting in  
12 low self-efficacy. In support, passive coping strategies have been identified in a previous UK  
13 study among a South Asian population with chronic pain.<sup>43</sup> However, acculturation levels  
14 were low and perhaps participants lacked knowledge about western medicine. Other UK  
15 studies in South Asian populations have identified a reliance on 'complementary'  
16 medications.<sup>44</sup> In contrast, in our study Punjabi participants' pursued more conventional  
17 western medications and interventions. This may reflect greater awareness of, or access to,  
18 these treatment options. A novel finding of our study is that all Punjabi participants reported  
19 a transition from passive to active coping strategies.<sup>35</sup> This may reflect the limited effects of  
20 passive interventions, as well as greater knowledge and understanding of CLBP and the  
21 potential benefits of active coping strategies. Alternatively, this group may have complied  
22 with the HCPs approach to management even if it was not their preference.  
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#### 42 *Psychological and emotional dimensions*

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44 The impact of CLBP has been found to extend beyond physical domains,<sup>3</sup> with many  
45 negative and often life-changing psychological and emotional effects.<sup>19 36 45</sup> Contrary to  
46 earlier research,<sup>46</sup> participants did not appear to consider these factors as contributors to  
47 CLBP, instead viewing these as secondary effects of CLBP. Supporting this, one study  
48 found South Asians were unwilling to recognise the influence of psychological, emotional  
49 and social factors on their pain.<sup>43</sup> However, negative beliefs about the control of CLBP and  
50 the resulting passive coping often reported by participants may have a mediating influence  
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3 on depressed mood, pain and disability.<sup>47</sup> Feelings of frustration were common amongst  
4 participants' due to a lack of explanation and understanding about CLBP, including  
5 inconclusive diagnostic radiological investigations. This may reflect their desire for answers  
6 linked with pain legitimisation and validation.<sup>48</sup> Contrary to previous research,<sup>49</sup> perceptions  
7 of 'not feeling believed' were not consistent with participants' views, nor were feelings of  
8 anger and perceived injustice associated with the negative impact of CLBP. Perhaps, these  
9 feelings did exist, but were not expressed due to fear of being judged or it negatively  
10 impacting on physiotherapy. Furthermore, our findings lend support to a study showing  
11 catastrophic thoughts were associated with a magnified threat to the 'unpredictable' and  
12 'fluctuating' nature of pain flare-ups, excessive worry about pain and a pessimistic view of  
13 controlling pain.<sup>50</sup>

#### 24 25 26 *Social and cultural-religious dimensions*

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28 Similar to other studies, CLBP was highly disabling, described as a 'major loss' by some. It  
29 impacted on many aspects of individual's lives including their identity, self-esteem and  
30 independence, leaving some disempowered.<sup>45 51 52</sup> For many, this meant their lives were 'on  
31 hold', a finding consistent with a recent systematic review.<sup>36</sup> Our data supports the notion  
32 that CLBP impacts meaningful relationships, threatening parental and family duties and for  
33 some resulting in social isolation.<sup>3 5 45</sup> With regards to work, although participants'  
34 demonstrated some avoidance behaviours in the workplace, at the time of interviewing only  
35 one participant was absent from work due to CLBP. This may reflect active coping in relation  
36 to work, possibly influenced by financial concerns associated with sickness absence, good  
37 work support and job satisfaction<sup>53</sup> or positive HCP advice relating to work.

#### 38 39 40 41 42 43 44 45 46 47 48 49 50 *Therapeutic alliance and a person-centred approach*

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52 Strong therapeutic alliance in the management of CLBP has been associated with greater  
53 treatment compliance, improved clinical outcomes<sup>54</sup> and greater levels of patient  
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3 satisfaction.<sup>55</sup> However, most participants' experienced weak therapeutic alliance.  
4 Associated with weak therapeutic alliance,<sup>56</sup> the management of CLBP for most was viewed  
5 as lacking an individualised and holistic approach. Furthermore, participants' predominantly  
6 experienced a lack of guidance and support, and poor HCP communication.<sup>19</sup> Examination  
7 of HCP communication revealed a lack of clear explanation and participants' understanding  
8 about pain, instead creating uncertainty for many. Language has been identified as an  
9 important facet of effective communication given it is personal and variable, particularly  
10 amongst different ethnic populations. Consistent with findings in other populations,<sup>7</sup> HCPs  
11 commonly used fear-inducing language, which in combination with biomedical CLBP beliefs  
12 and poor HCP communication is linked to weak therapeutic alliance and CLBP related  
13 disability.<sup>57</sup> These factors may reflect HCPs lack of interpersonal skills, particularly  
14 specialised communication skills, and their over-utilisation of biomedical approaches to  
15 CLBP management,<sup>58</sup> posing a greater challenge to managing ethnic minority populations.  
16 These findings question how HCPs interact with people living with CLBP. HCPs may require  
17 training to enhance their communication skills and partnerships with patients.<sup>59 60</sup>  
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34 It is also worth noting that participants' in our study did not experience inequalities in  
35 accessing care or treatment, contrary to findings in other South Asian ethnic populations,<sup>61 62</sup>  
36 who utilised participants' with low acculturation levels. Participants' experience of HCP  
37 interactions highlighted a biomedical approach to CLBP. This may be due to the influence of  
38 HCPs biomedical CLBP beliefs on their clinical management.<sup>13</sup> Interestingly, most  
39 participants' sought an individualised self-management approach<sup>59 60 63</sup> delivered by  
40 empathetic HCPs with effective communication,<sup>64</sup> perhaps more aligned with the bio-  
41 psychosocial model. This quest, along with Punjabi participants' transition to seek active  
42 coping strategies, demonstrates a desire for self-efficacy, which has been linked with  
43 reduced disability.<sup>65</sup> HCPs biomedical preference for managing CLBP may highlight  
44 discordance with the bio-psychosocial model advocated by recent NICE guidelines,<sup>69</sup> and  
45 has been associated with poor adherence to treatment.<sup>13</sup> Thus more individualised multi-  
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3 dimensional approaches to management,<sup>66</sup> built on effective communication facilitating  
4 strong therapeutic alliance<sup>67</sup> and self-management might be needed.  
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### 8 *Cultural differences*

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10 To date, qualitative research in the UK has paid little attention to the CLBP experience  
11 through a cultural and ethnic lens. This requires consideration, given the degree to which  
12 individuals identify with their ethnic group, share beliefs and engage in culture roles, which  
13 can influence pain experiences.<sup>40</sup> Consistent with other ethnic minority CLBP studies,<sup>7 11</sup>  
14 Punjabi participants' experienced a disruption to cultural-religious wellbeing, and endured a  
15 negative response from the wider community. In this context, some novel and potentially  
16 important themes were identified. As Punjabi participants expressed, religion maybe  
17 important to people in ethnic minority populations,<sup>40</sup> disruption to sitting-based meditation in  
18 some cases resulted in immense frustration and isolation. In some populations the perceived  
19 view of the female role involves housework and preparing for marriage, or serving the  
20 husband.<sup>3 11</sup> This perception appears similar to those held within the Punjabi community.  
21 CLBP undermined the ability to carry out these duties. For one participant this created  
22 uncertainty about finding a marriage partner, and feelings of guilt and burden on other  
23 female family members, due to increased workloads placed upon them. Our findings support  
24 those in other ethnic populations where gender differences exist in the experience of CLBP.<sup>3</sup>  
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5 One novel finding of our study was that Punjabi participants' perceived a lack of empathy  
and understanding from the Punjabi community, and for some CLBP was a source of  
stigmatisation.<sup>59</sup> These factors may reflect cultural attitudes towards people with CLBP  
within Punjabi communities. Influencing factors may include biomedical beliefs held or  
limited understanding of CLBP or because stoicism and playing down pain may be more  
acceptable than gesturing emotion.<sup>68</sup> Findings of this study illustrate the existence of  
cultural-religious and gender differences specific to Punjabi participants. It is noteworthy that  
while the recent NICE guidelines<sup>69</sup> call for a bio-psychosocial approach to CLBP, there is no  
specific guidance on how to acknowledge or manage socio-cultural factors and beliefs.

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3 Consequently, it may be challenging for HCPs to provide individualised, culturally sensitive  
4 bio-psychosocial management for CLBP patients from different ethnic populations.  
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### 8 **Strengths limitations and implications for future research**

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10 One of the study strengths is its relevance to clinical practice. This is the first cross-cultural  
11 study to explore CLBP beliefs and experiences in English speaking Punjabi and White  
12 British people living with CLBP. The study findings were data-driven and embedded in the  
13 participants' voice. Reflexivity was demonstrated throughout with the authors declaring how  
14 their ethnicity; novice researcher role, special clinical interest in CLBP and *a-priori*  
15 knowledge may have influenced data collection, analysis and interpretation.  
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18 Member checking was not conducted to validate interview transcripts due to time and  
19 funding. High acculturation levels and variations in socio-demographic status, may limit the  
20 transferability of the findings. Therefore, future research could consider Punjabi populations  
21 with low acculturation rates in different geographical regions.  
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### 32 **Implications for practice and policy**

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34 This study contributes to existing knowledge by providing HCPs managing CLBP in White  
35 British and English-speaking Punjabi people new insights,  
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38 Which could improve CLBP management within these groups. There may be specific  
39 training needs for HCPs to better understand the multifactorial nature of CLBP, specifically  
40 the individual's beliefs and experiences within their psychosocial and cultural-religious  
41 context.<sup>58 70</sup> This, in addition to developing a flexible communication style that facilitates  
42 strong therapeutic alliance may help tailor management within a person-centred approach.  
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48 Other HCP priorities could include disseminating evidence-based beliefs amongst patients  
49 and the public including ethnic minority populations.<sup>7 47</sup>  
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## Conclusion

CLBP beliefs and experiences similar across both groups were biomedically-orientated. CLBP was associated with negative psychological and social consequences. Cross-cultural differences related to the negative impact on cultural-religious aspects of Punjabi participants' lives particularly the perceived female role. Punjabi participants also reported a transition from passive to active CLBP coping strategies and experiencing a lack of empathy from Punjabi community members. HCPs should therefore adopt a culturally-sensitive approach to the management of CLBP, which considers individuals' beliefs and experiences.

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## Footnotes

**Twitter:** Follow @gsingh1902, @ChrisNewtonPT, @A\_Soundy, @kieranosull @HeneghanNicola

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## Supplementary File 2

### 1<sup>st</sup> Topic guide

*Notes: The topic guide will be a flexible tool which is open to revision as new areas of interest arise during the process of data collection. In order to limit the length of the interviews, it is not essential that each interview should include every line of questioning as detailed below. Depth of exploration of fruitful areas of discussion is more important than complete coverage of all areas in every interview.*

#### Introduction to the interview:

The interviewer will reassure the person being interviewed that:

- The research study is interested in finding out about their beliefs and experiences in living with CLBP
- There is no intention of 'testing' the interviewees about how well they are managing their CLBP.
- That they are free to say as much or as little as they wish in response to any line of questioning.
- That the content of the interview will not be divulged to their Doctor or Physiotherapist.

#### Background information:

In order to be able to describe the sample of patients who contribute to the study, the interviewer will invite the person being interviewed to provide information about:

- Ethnicity - participant to define their ethnicity
- Age
- Occupation
- When their LBP first started
- Previous treatment

#### Interview guide with prompts:

##### Opening

##### A. History of illness and health seeking behaviour

- 1) When did it start to impact on your daily life?
- 2) Who have seen regarding your CLBP problem?

##### Probe:

- Have you had any Investigations?

*Prompts i.e MRI/ x-ray*

- What did they show?
- What treatment (s) have you had in the past for your LBP?
- How **helpful** were these **treatments**?

## **B. Coping strategies**

3) How do you cope with your CLBP at present?

### **Probe:**

- What strategies do you have to manage your CLBP?
- What do you do when you have a flare up of pain?
- How do those around you cope/help (i.e. family or friends)?
- Does anyone in your family suffer with CLBP? How do they cope?  
How well do you think you manage your CLBP?

## **C. Cause of condition**

4) What have you been told about the **cause** of your CLBP?

- How did this make you feel?

5) What are your thoughts about the cause of your CLBP? Why do you think this?

### **D. CLBP beliefs**

6) Have you come across any other views or beliefs related to the cause of CLBP amongst people you know?

### **Probe:**

- Where do you think they come from?
- Is that what you think yourself?

## **E. Alternative treatments**

7) Some people use alternative treatments e.g. acupuncture/reiki/reflexology for LBP,

8) What are your thoughts on these types of treatment?

9) Is this something you have used or would consider using?

- a. Why?
- b. Why not?

**Probe:**

- Benefits
- Disadvantages

**F. CLBP and physical activity**

10) What are your thoughts about people with back pain doing **physical tasks/jobs**?

**Probe:**

- Is bending/ lifting safe to do?
- Is there anything you avoid doing because of your CLBP?

**G. Living with CLBP**

11) What do you think is the effect of CLBP on your mood?

12) How much of your focus and attention does your CLBP take?

13) What do you feel will be the **best way to treat** your CLBP from now?

**Probe:**

- What type of treatment?

14) How do you see the **future** with regards to your CLBP?

**Probe:**

- How hopeful are you about the future?
- Do you feel your LBP will get better?

**Ending questions**

15) Is there anything else that you would like to say that we may not have covered already or discussed?

Thank you for co-operation and for taking the time to answer all the questions.

**After 3<sup>rd</sup> interview Revised Topic guide****Background information:**

In order to be able to describe the sample of patients who contribute to the study, the interviewer will invite the person being interviewed to provide information about:

- Ethnicity - participant to define their ethnicity
- Age

- Occupation
- PMH
- DH
- Activity levels /exercise
- Sleep hygiene

### **Interview guide with prompts:**

#### **Opening**

##### **A. History of illness and health seeking behaviour**

#### **Could you tell me the story about your LBP?**

##### **Probe (if it is not clear from the narrative question)**

- When it started, how it started?
- When did it start to impact on your life?
- How did this affect you?

##### **B. CLBP experiences and beliefs**

Childhood/Family history of LBP/pain

#### **Can you recall any early life experiences of LBP /pain?**

- What was your experience?
- Were you told anything about it at the time? By whom?
- How did you cope with it?
- How did your family/friends react /respond towards your LBP/pain?
- What was the attitude of your parents towards your LBP/pain?

#### **While you were growing up, did your parents/family member(s) suffer with LBP/pain?**

- What was their experience?
- How did it impact on them?
- What was the cause of their pain?
- How did they try to cope with it?
- Did it have any impact on you and your family?
- Do you feel these experiences of pain have affected the way you think about your LBP?

#### **Who have you been to see regarding your LBP?**

- What was your experience?
- Did you have any examinations or tests? i.e. MRI/ x-ray
- What did they show?
- How was this explained to you?
- Was the language used simple, or did it include medical terms?
- What was your understanding of this?

- How did this make you feel?

**What have you been told about the cause of your LBP?**

- By whom?
- How was this explained to you?
- Was the language used simple, or did it include medical terms?
- What was your understanding of this?
- How did this make you feel?

**What are your thoughts about the cause of your LBP?**

- What makes you think this?
- What things have influenced your thoughts?
  - Family, culture, pain experiences, interactions with HCPs?

**What do you feel people around you think causes LBP?**

- Where do you think these ideas come from?

**What treatment(s) have you had in the past for your LBP?**

- What was your experience of these treatments?
- Did they match what you thought would be best for your LBP? If not, why not?
- Did these treatments influence your:
  - Control over your LBP?
  - Ability to do things you wanted to do?
  - Confidence regarding your back?

**How do you cope with your LBP now?**

- If you had a flare up, how would you manage it? Why?
- How would you manage an acute ankle or knee sprain?
- Would this be the same or different to a LBP flare up? If not, why?
- How do those around you respond or react to you regarding your LBP (i.e. family or friends)?

**C. HCP relationships****How do you feel HCP's have interacted with you regarding your LBP?**

- What was your experience of the time they spent?
- How well did they listening to you?
- Did they build your confidence?

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3 **Do you feel your cultural background influences your relationship with HCP's and the**  
4 **way you have been treated?**

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- 6 • What are your experiences?
  - 7 • Have you experienced any differences or inequalities due to your cultural
  - 8 background?
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#### 12 **D. Views on exercise and physical activity**

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15 **What are your thoughts about people with LBP doing physical exercise?**

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- 17 • Why?
  - 18 • Is there anything you should avoid doing because of your LBP? Why?
  - 19 • What are views on people with LBP bending/ lifting? Why?
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#### 22 **E. Alternative treatments**

23 Many people use alternative treatments e.g. acupuncture/reiki/reflexology for LBP

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26 **What are your thoughts on these types of treatments? Why?**

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29 **What do you think are the best treatments for LBP? Why?**

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#### 32 **F. Living with CLBP**

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35 **In your experience has LBP impacted on your:**

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- 37 • Health? Activity? Social life? Work? General health? Comorbidities? Other pain
  - 38 areas? Sleep? Mood?
  - 39 • How?
  - 40 • How much do you think about your back? Why?
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42 **How do you picture yourself in 5 years with regards to your CLBP?**

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- 44 • How hopeful are you about the future?
  - 45 • Do you feel your LBP will get better? Why?
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#### 48 **Ending questions**

49 **Is there anything else that you would like to say that we may not have covered already**

50 **or discussed?**

51 Thank you for co-operation and for taking the time to answer all the questions.

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### Supplementary File 3

#### Audit Trail example

#### Interview transcript excerpts and comments

The GS's comments on interviews are illustrated below,

##### Transcript S1, lines 1019-1042

I: Right, that's interesting. So with regards to bending and lifting, what are your thoughts on that?

P: I make sure that... when I am lifting something or I have to bend down, I make absolutely sure that I am bending my knees and not just tipping over or whatever

I: Ok

P: You know, your manual handling and all that comes in...so you start thinking, the last thing I want to do is injure myself further or cause any more discomfort

I: Ok

P: So you are bending your knees and making sure you are lifting it... **GS's thoughts Impact of manual handling training/Impact of pain on function – bending/lifting - Adopted cautious/protective behaviour to bending /lifting - Psychological impact vigilance/catastrophising**

I: And how long have you been doing that for?

P: Well, years now

I: So before your back started hurting?

P: O yeah

I: Then has that changed at all since your back?

P: No....I think a bit more....conscious. Consciously, it's almost like if you have....when I say you..., if I have a task that it would probably involve lifting a box or whatever, I will now consciously think, make sure you bend your knees and you keep your back straight if you're lifting something or whatever. Whereas previously you think you are fine, it doesn't matter, nothing is going to happen so.... **GS's thoughts Psychological impact of pain – hypervigilance/ catastrophising with lifting having - Adopted manual handling behaviour to protect back from future pain - Increased threat to back**

I: So your thought process around your lifting has changed?

P: It has changed, yes. It will change

I: Ok. So what thoughts are going through your mind then when you see something heavy on the floor?

P: Making sure that you don't end up causing more damage **GS's thoughts Coping strategies- Atitudinal to pain -Biomedical belief -Protective behaviour/Caution**

## Supplementary File 4

Table: Theme 1 examples

Theme	Subtheme	Code	Example quotes from participants
Biomedical back pain beliefs	Subtheme 1.1: Cause of CLBP attributed to physical (structural/anatomical) factors	<u>Back strain with bending</u>	"I went pick a pair of socks up from the floor so and as I went to pick it up as I was getting back up there was just like this crack sounding noise and erm I think that was my first experience of it." [S10]
		<u>Back strain with lifting</u> <u>Specific traumatic event</u>	"It was definitely related, there was a timber and I went to pick it up and I felt my back hurt" [S2] "I was involved in a car accident where my car, at a roundabout junction, was hit from the back and I think because of the angle I was standing with my neck turned, the impact was quite severe" [S1 PM MD MPR]. "I had a complicated pregnancy in 1995. Ahh, with my son, it was a very difficult birth; really prolonged labour and ammm significant problems during the actual birth. That was quite a shock, needless to say. I didn't have any epidural or anything like that when I had him so my body went in to shock I think with the experience ....I started to get it...." [S4 WBF MD MPR] "It could be a trapped nerve, a slipped disc" [S1 PM MD MPR]
		<u>Biomedical self diagnosis</u>	"...I suppose I'd always think it gets to the point where they cant actually find anything wrong so...its wear and tear because of your age, because there's 50 odd years of...and its almost something which I accept. You almost expect it because you see old people who are struggling with joints and this sort of thing and you think well yeah but for 80 odd years those knees have worked so I can understand a bit of it" [S8 WM LD LPR] "My mother in law just says its lifting and stuff" [S3 WBF MD MPR].
		<u>Biomedical Back Pain beliefs in the Family and cultural community</u>	"They think that by lifting heavy weights or something or moving something heavy that that does their back in"[S7 PM MD MPR]
	Subtheme 1.2: Recalling HCP biomedical diagnosis and the biomedical beliefs	<u>Biomedical diagnosis</u>  <u>Biomedical diagnosis via MRI</u>	"They thought it was sciatica"[S5 PF HD HPR] "The doctors have told me that I have got sacralisation"[S2 WBM MD HPR] [Recalling MRI diagnosis] "It ermm showed like a bulging...ermm at the lower...spine but it was down to my age" [S9 WBF MD HPR] "I had an M.R.I. scan which was showing that I had got wear and tear on the vertebrates and that L4 and L5 were closing up" [S3 WBF MD

	<i>adopted</i>	<p><u>Manual handling influence: protect spine with lifting and bending</u></p> <p><u>Nurse occupational belief</u></p>	<p>MPR].          “ I suppose if you lift incorrectly it will cause back pain.... I mean we have all had it drummed in to us, how to bend our knees and how to do all that malarkey” [S2 WBM MD HPR]          “Well that’s what you get on all these health and safety things at work and lifting weights, they, they reckon you’re supposed to bend at the knees, keep your back straight and stand with your legs” [S8 WM LD LPR]          “I was a nurse for many many years on a very heavy surgical ward and I wonder if maybe I have damaged it while nursing, you kind of associate nursing with back pain, well I do anyway.”[S2 WBM MD HPR]</p>
	<i>Subtheme 1.3: Vulnerability of the spine</i>	<p><u>Central to function</u></p> <p><u>Can’t see the back</u></p> <p><u>Feeling weak and cautious</u></p> <p><u>Precious</u></p> <p><u>Needs urgent attention</u></p> <p><u>Fear avoidant beliefs</u></p>	<p>“I rely on it well most people rely on their back”[S6 PM LD LPR]          “Your spine in general is...central to you ..... I think you’re reminded of it more each day” [S8 WM LD LPR]          “Because your back’s...behind you, you can’t see what’s going on inside it or outside it.”[S10 PF HD HPR]          “It’s always been slightly weaker well felt slightly weaker well it felt slightly weaker so I was just a bit more cautious of it”[S6 PM LD LPR]          “I’ve always had a bit of a weakness in my back for quite a few years” [S9 WBF MD HPR]          “My back seems a bit more precious” [S6 PM LD LPR]          “I feel like my back’s more precious rather than my wrist or ankle because it is a vital piece” [S5 PF HD HPR]          “So if you know there is a problem, go and fix it...the thing is if you don’t fix it...then the impact of it...so the old English saying ‘a stitch in time saves nine” [S1 PM MD MPR].          “Do try and get it sorted out at the most earliest point. Don’t leave it” [S3 WBF MD MPR].          “Obviously not lifting really heavy stuff”[S5 PF HD HPR]          “...Only pick up something that you feel you could pick up, it’s not too heavy.” [S10 PF HD HPR]</p>
	<i>Subtheme 1.4: Future outlook</i>	<p><u>Positivity</u></p> <p><u>Pessimism</u></p>	<p>“I even think now that I will wake up and it will all go away and it maybe will.” [S2 WBM MD HPR]          “Well hopefully in a little less pain than I am in right now” [S3 WBF MD MPR]          “I think it’s always going to hurt me and it’s always going to cause me pain” [S5 PF HD HPR]          “When I look into the future I just think how am I gonna cope with a child when I can’t yknow</p>

		<p><u>Uncertainty</u></p> <p><u>Religious beliefs interlinked with outlook on pain</u></p>	<p>carry heavy things" [S10 PF HD HPR]          "I can only play it by ear" [S8 WM LD LPR]          "But I'm not sure....having lived with it for this long, I'm not sure" [S3 WBF MD MPR]          [Referring to finger amputation] "As I would say, someone up there wanted them so they were gone .....my sin plate clean on that day and we start again sort of thing" [S1 PM MD MPR]</p>
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**Table: Theme 2 examples**

Theme	Subtheme	Code	Quote from participants
Coping with CLBP	<i>Subtheme 2.1: Active coping strategies</i>	<p><u>Self-searching for knowledge and understanding</u></p> <p><u>Learning from pain experience</u></p> <p><u>Confronting pain and battling on</u></p>	<p>"Ammm, it was just something off the internet that suggested you stretch and what not..."[S3 WBF MD MPR]          "You have got to look at why it is hurting and you can ask yourself that question. Don't expect anyone else to have all the answers" [S4 WBF MD MPR]          "With me neck it certainly helps being..active, being yknow rather than sitting staring at a screen" [S8 WM LD LPR]          "All I was bothered about was getting things better for him (disabled child) because he literally couldn't do anything" [S4 WBF MD MPR]          "I just managed it and got on with it..I tend to be quite stubborn" [S3 WBF MD MPR]</p>
		<p><u>Acceptance and adapting to pain, due to a lack of understanding, ineffective interventions and pain duration</u></p>	<p>"I have kind of giving up looking for an answer. I just think whatever happens I have just got to deal with it" [S5 PF HD HPR]          "Put up with it because basically nothing seemed to work" [S3 WBF MD MPR]          "It became normal to me because I've had that for so long. It got normal for me to me feel little niggles in my back"[S6 PM LD LPR]</p>
	<i>Subtheme 2.2: Reliance on HCP's and biomedical interventions</i>	<p><u>Unrelenting search for understanding answers</u></p> <p><u>Explanation &amp; reassurance via investigation</u></p>	<p>"I wonder what it is and for the children ..... I would like to know" [S3 WBF MD MPR]          "I'm looking for answers but I want those answers. I am a dog with a bone" [S4 WBF MD MPR]          "Well I wanted a second scan" [S3 WBF MD MPR]          "An X-ray, MRI scan or anything just so I could have some reassurance that it's nothing major" [S10 PF HD HPR]</p>

		<p><u>Reliance on medication</u></p> <p><u>Punjabi reliance on Biomedical Quick fix</u></p>	<p>"I basically lived on painkillers ever since" [S3 WBF MD MPR]</p> <p>"Well if it does get severe to the point where I can actually feel it..... That's the day I would probably go home and have a couple of paracetamol or something" [S1 PM MD MPR]</p> <p>"Manipulation yeah ..... I just wanted to get the back fixed"[S7 PM MD MPR]</p> <p>" I have a massage every 4-6 weeks. Am... and acupuncture" [S5 PF HD HPR]</p> <p>"I have had new chairs.....I got the one with the lumbar support and an incline" [S1 PM MD MPR]</p>
	<p><i>Subtheme 2.3: Protective and avoidance coping strategies</i></p>	<p><u>Adopted caution, protect spine</u></p> <p><u>Avoidance behaviour: exercise, physical task</u></p>	<p>"If you keep bending at the back all the time. The back takes the strain for everything. If you're bending at the knee to access what it is you need to get it takes the pressure out of your back from a moving and handling perspective" [S4 WBF MD MPR]</p> <p>"I can stay in the office and look after my back ..... whereas previously I might think, o well I might go for a walk around the building .....I wouldn't be doing that because it wouldn't be enjoyable and it would hurt" [S2 WBM MD HPR]</p> <p>"Subconsciously you know that you should move a certain way to avoid injury. You know that, well I do because it is part of how I live yeah" [S4 WBF MD MPR]</p> <p>"I can't do this my back hurts, or I can't do that my back hurts" [S10 PF HD HPR]</p> <p>"Yeah I have stopped swimming" [S4 WBF MD MPR]</p> <p>"I used to be very active, I just don't do any exercise really at the minute" [S9 WBF MD HPR]</p> <p>"If I bend over, that's how my back went, and it's more than once, it's twice now, anytime I go to bend down now I think maybe it's going to go again or I shouldn't be doing this" [S6 PM LD LPR]</p> <p>"I don't do any heavy lifting" [S2 WBM MD HPR]</p> <p>"On my drive now I've got a load of bricks and if I need to lift them up ..... ten years ago I wouldn't of thought nothing about it I would of picked them ..... whereas now maybe.... I think really haven't got it in me to lift them ..... I feel a bit weaker so it's more, now it's become if I can avoid it I avoid it . I just think why take the risk on that"[S6 PM LD LPR]</p>
	<p><i>Subtheme 2.4: Coping</i></p>	<p><u>Punjabis passive to active</u></p>	<p>"I felt like I was doing more instead of sitting in my bed all day" [S5 PF HD HPR]</p>

	<i>transition</i>	<u>coping style</u>	<p>“Over time I tried to not spend too much time lying down and just tried to keep myself active as possible ..... just try to keep things moving” [S7 PM MD MPR]</p> <p>“I’ve had to like buy books and stuff myself and do research on the internet myself to ermm be able to look into these things more” [S10 PF HD HPR]</p>
	<i>Subtheme 2.5: Health benefits of an active lifestyle in Punjabis</i>	<u>Psychological, emotional effect</u>	<p>“I try and do other things now to...like maybe go to the cinema and like sit in the big seats and like try and make myself a bit comfortable and like..because I’ve had it for so long I’ve gotten used to like erm making plans with my back pain so erm I’m not as depressed as I would’ve been maybe 5-10 years ago” [S10 PF HD HPR]</p>

**Table: Theme 3 examples**

<b>Theme</b>	<b>Subtheme</b>	<b>Code</b>	<b>Quote from participants</b>
<b>The psychological and emotional impact of CLBP</b>	<i>Subtheme 3.1: Psychological and emotional consequences</i>	<u>Depressed mood</u>	<p>“I wake up grumpy. I mean obviously for a person who has been able to sleep 7,8,9 hours when you are constantly waking up....even the small break in a sleep” [S1 PM MD MPR]</p> <p>“I’ve never felt as low as I have done” [S9 WBF MD HPR]</p> <p>“The injections didn’t work. I kind of felt low”[S7 PM MD MPR]</p> <p>“Sometimes I still feel really bad, really low mood because I can’t do what I used “[S5 PF HD HPR]</p> <p>“I am awful. I am moody a lot of the time.... it does make me grumpy” [S3 WBF MD MPR]</p>
		<u>Hopelessness</u>	<p>“Not much I can do about it is basically what the guy said” [S4 WBF MD MPR]</p> <p>“There was no other route to go down” [S3 WBF MD MPR]</p> <p>“I went and saw a chiropractor... he gave an x-ray looking for back symptoms ...they said it didn’t show anything, there was nothing they could do” [S7 PM MD MPR]</p>
		<u>Frustration</u>	<p>“I had an MRI scan and that’s when they done and my spine was fine I was just annoyed that there was no answers” [S5 PF HD HPR]</p> <p>“It’s a ball ache and it’s getting on my</p>

		<p><u>Catastrophising thoughts</u></p> <p><u>Uncertainty</u></p> <p><u>Lack of control over pain</u></p>	<p>nerves" [S4 WBF MD MPR]</p> <p>"It's so frustrating where, when...sighs, yknow things like, picking up my sewing machine I just think well what's up with me?! It's ridiculous" [S9 WBF MD HPR]</p> <p>"You wonder, what if? What if you can't carry on at the same level that you are" [S1 PM MD MPR]</p> <p>"It just makes you think is this the start of something bigger for me?"[S6 PM LD LPR]</p> <p>"They couldn't really give me an explanation really I was thinking then oh what's caused my problem now"[S7 PM MD MPR]</p> <p>"Apprehensive, apprehensive about all those things that I have just spoken about. About what would the impact be in later life.....ahh, that's about it at the moment" [S1 PM MD MPR]</p> <p>"But I'm not sure....having lived with it for this long, I'm not sure" [S3 WBF MD MPR]</p> <p>"It's not improving, it's getting probably a bit more.....regular" [S1 PM MD MPR]</p> <p>"I'm just getting to the stage where I'm thinking on the days where it gets really really bad that I'm gone beyond the need of self-help" [S4 WBF MD MPR]</p>
	<p><i>Subtheme 3.2: Catastrophic nature of pain flare-ups</i></p>	<p><u>Catastrophic description: impact on body and mind</u></p>	<p>"I just...I got up and I had...I got up on the Monday morning ermmm and I felt like a cripple...I felt like I was folding it half, it was hard work to stand up straight"[S8 WBM LD LPR]</p> <p>"It's horrible. It's the worst pain. It makes you cry it's that bad. the pain is ermmm you just can't, you just feel like you've lost control. You can't do anything for yourself you can't like... you can't even go to yknow the loo because you're taking so many steps to get there and every step you take you're like ow, ow, ow and it's that acute ermm it's just horrible. You just...I think you just kind of lose yourself and that's when you start getting depressed like "oh god it's happened again" [S10 PF HD HPR]</p>
	<p><i>Subtheme 3.3: Threat to self-identity</i></p>	<p><u>Threat to self</u></p>	<p>"I suppose it's hindering my life" [S3 WBF MD MPR]</p> <p>"Obviously it's restricted what I can</p>

		<p><u>Disrupting personal care/daily function</u></p> <p><u>Dependency on family</u></p> <p><u>Disrupting house chores</u></p> <p><u>Barrier to recreational activities</u></p> <p><u>Sleep disruption</u></p>	<p>and can't do" [S2 WBM MD HPR]</p> <p>"It's a small thing like bending over the sink to brush your teeth" [S4 WBF MD MPR]</p> <p>"I got out of bed ...it took me quite a while to sort of straighten up" [S8 WM LD LPR]</p> <p>"My socks, my shoes, tying my shoes up, I can't bend down" [S9 WBF MD HPR]</p> <p>"It's embarrassing sometimes and degrading because he ..has to help me put my underwear on because I cant bend down to even put my knickers on" [S9 WBF MD HPR]</p> <p>"I get the hoover out and hoover, within 10 minutes I'm absolutely shattered and it's hurting my back" [S9 WBF MD HPR]</p> <p>"Mowing the lawn... It's that pushing forward movement I mean it's a push mower.. I mean it takes us about an hour to mow our lawn. And I know that if I sit down after doing that, that I will be in trouble" [S3 WBF MD MPR]</p> <p>"I can't stand at a sink for more than 10 minutes without pain." [S10 PF HD HPR]</p> <p>"A fair weather golfer.... by the time I played a few holes. I could feel that there was additional pressure on the back" [S1 PM MD MPR]</p> <p>"I can't ride my bike because it's in the leaning forward position and I'll have only gone half a mile but it causes pain in my back" [S3 WBF MD MPR]</p> <p>"Over the last year it is a genuine struggle if I woke up in the night I struggle to get back to sleep" [S4 WBF MD MPR]</p> <p>"It's okay during the day but at night I'm really suffering"[S5 PF HD HPR]</p> <p>"I am constantly tossing and turning ...."[S1 PM MD MPR]</p> <p>"I sleep on my side but then....i start to ache in my hips and then I have to change sides .... I do wake up because of it and then it takes me about 20 minutes to go back to sleep" [S10 PF HD HPR].</p>
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Table: Theme 4 examples

Theme	Subtheme	Code	Quote from participants
The social and cultural-religious impact of CLBP	Subtheme 4.1: <i>Threat to family/friend relationships and social life</i>	<u>Disrupting family roles/social activity</u>  <u>Elicit negative family emotions</u>  <u>Social disruption, isolation</u>	“If my back goes I can’t do nothing, I wouldn’t be able to do any housework or...ermmm no bending certainly no bending” [S10 PF HD HPR] “If I’m restricted so is she [wife] in respect of doing things and going out and stuff....”[S2 WBM MD HPR] “Even when I’m driving when we go over a speed bump or a pothole the intense pain that shoots up my back is amazing” [S3 WBF MD MPR] “When I’m down everybody else feels down in the family” [S9 WBF MD HPR] “You have to stand up in a bar or evening and that just is so painful....., so I tend not to be social” [S10 PF HD HPR].
	Subtheme 4.2: <i>Work impact</i>	<u>Disrupting work</u>  <u>Burdening colleagues</u>  <u>Sickness absence</u>  <u>Financial pressures</u>	“The pain constraints on work”[S1 PM MD MPR]. “I’ve also had to raise it with work because of the amount of time I sit by the computer and they’ve had to get me a special chair” [S10 PF HD HPR] “While my job is actually fully sitting down, any activities where they have asked me to go and do outreach sessions, I have had to restrict them or send other people, which again isn’t ideal but other people can deputise as necessary” [S2 WBM MD HPR] “I didn’t drive.....,I went into the office a few times but then got a lift into the office from colleagues” [S7 PM MD MPR] “I think I only might have had a few days off in the whole time I was there for the pain” [S3 WBF MD MPR] “I’m off work I’ve had so much time off work”[S9 WBF MD HPR] “I’m in the building trade without a back I can’t earn no money. So that goes through your mind as well as that you’re not going to get no sick pay or anything” [S6 PM LD LPR] “Still go to work ermmm...because I’ve got still got bills to pay and I’ve still for me daughter to support through university and so on and so forth so there’s that pressure” [S8 WM

		<p><u>Changing role</u></p>	<p>LD LPR]                  “Initially I suppose I thought...might as well have to look for a different type of job because of the....the physical aspect if you like” [S8 WBM LD LPR]</p>
	<p><i>Subtheme 4.3:                  The impact of CLBP on cultural and religious wellbeing</i></p>	<p><u>Religious rituals: disrupted sitting to meditate /secluding self</u></p> <p><u>Disrupting female role within the home/burdening others</u></p>	<p>“I couldn’t do like sit on the floor if it was too hard ..if I sat on the floor for a certain amount of time, then got up, started moving around, my legs would get pins and needles and would reach my back” [S7 PM MD MPR]                  “ [Referring to sitting in the temple] I’ll just go when it’s quiet yknow, ermmm do my praying and then come back out and then just go downstairs where there’s chairs or.. I can just hang around somewhere else and that kind of...I feel secluded sometimes because yknow people tend to like wanna sit upstairs and I have to like go just downstairs” [S10 PF HD HPR]                  “Because of the pain yknow like I can’t help around the house as much as I would like” [S10 PF HD HPR]</p>
	<p><i>Subtheme 4.4:                  The response of family, friends and wider community to CLBP</i></p>	<p><u>Family: varying response/ support</u></p> <p><u>Punjabi community: Lack of empathy/ understanding</u></p> <p><u>Punjabi community: Stigmatized</u></p>	<p>“My brother....., he was just getting more and more annoyed every time because there was no answers”[S5 PF HD HPR]                  “People were badgering me, yknow its not getting any better you ought to go .....and see”[S8 WM LD LPR]                  “Yeah and whenever I did anything they’d say oh watch your back, you’d be carefully about, you don’t want that happening again” [S9 WBF MD HPR]                  “Everyone thinks like “oh her back her back, she just uses that as an excuse now...” [S10 PF HD HPR]                  “Unfortunately there is always this advice from the community that oh I had a similar thing...no you didn’t because you have no idea what the cause of my problem is...”[S1 PM MD MPR]                  “I believe they’re like the doctors that I’ve experienced. They always assume the worst first yknow” [S10 PF HD HPR]                  “Oh there comes a fat cow, she’s got back, yknow she just can’t get up, or oh let’s make room for her she’s like she can’t stand up or just that kind of response. It’s not about pain it’s about...oh she’s too big, she can’t do</p>

			it cus she's too big"[S10 PF HD HPR]
	<i>Subtheme 4.5: Recalling family experiences of CLBP</i>	<u>Varying impact of CLBP/coping strategies</u>	<p>"He [Brother] has medication to deal with that on a daily basis"[S4 WBF MD MPR]</p> <p>"He [Dad] felt like a bit of self-dignity went because he was always self-dependent and independent, always doing his own thing"[S5 PF HD HPR]</p> <p>"He [referring to husbands back pain] could sit but he couldn't stand and he couldn't walk...he could just barely walk from the edge of his room to the other side... to get to the kitchen and he would be bent over and he would be crippled". [S3 WBF MD MPR]</p> <p>"He [Dad] has not let it really impact him to be honest" because he still goes to the gym, he still lift weights, just does everything. Before every now and again his back hurts a little bit. He does what he does it he hasn't changed anything"[S6 PM LD LPR]</p> <p>"Well my mum used to have back pain and she always used to say 'oh doctors don't do anything they say they just can't do anything with it'"[S10 PF HD HPR]</p> <p>"My dad suffered from back pain. He had a slipped disk. They said he would never walk again"[S5 PF HD HPR]</p> <p>"She [Husbands physio] explained things; she showed us.....she showed us a back. What you should do with it, what you can do... she gave him exercises to do and how to manage it in the future better" [S3 WBF MD MPR]</p>
		<u>Varying HCP interactions</u>	

**Table: Theme 5 examples**

Theme	Subtheme	Code	Quote from participants
<b>Reflecting on HCP interactions, management experience and expectations of future management</b>	<i>Subtheme 5.1: Varying quality of therapeutic alliance</i>	<u>Strong therapeutic alliance</u>	<p>"I felt that it was explained pretty much...completely if you like" [S2 WBM MD HPR]</p> <p>"I left that consultation knowing that I can physically do more than what I thought I could do"[S6 PM LD LPR]</p> <p>"She helped me and showed me how to do it"[S5 PF HD HPR]</p> <p>"I felt they were a lot more like approachable, they were a lot more</p>

		<p><u>Weak therapeutic alliance</u></p>	<p>understanding....I was listened to, that was the biggest thing” [S10 PF HD HPR]                  “I’m doing exercises, .... which I’ve been told to do”[S9 WBF MD HPR]                  “My confidence was improving”[S5 PF HD HPR]                  “[Referring to chiropractic] Why is that treatment not available on the NHS?” [S10 PF HD HPR]                  “I get the feeling sometimes that it’s maybe a textbook thing to treat back pain” [S4 WBF MD MPR]                  “I think probably like my GP didn’t take me seriously.... I don’t think anybody like has the time” [S10 PF HD HPR].                  “I don’t think people understand the severity of the situation”[S4 WBF MD MPR]                  “With the chiropractor there wasn’t much listening ,with the back specialists there was to an extent but it wasn’t too involved” [S6 PM LD LPR]                  “I went back 5 times in total.....So I kept going back until I got more or less what I had hoped for” [S2 WBM MD HPR]                  “I got the impression from the Dr that when I went to see the back specialist they would do at least an ultrasound and she didn’t” [S8 WM LD LPR]                  “I was expecting a diagnosis. .... I want him to tell me” [S3 WBF MD MPR]                  “Yeah, expected no more flare ups ..... within a matter of weeks, 2 weeks if that, I was just sitting down and had another flare up” [S7 PM MD MPR]                  “She hadn’t really done anything to my back, she hadn’t really done the tests or anything”[S7 PM MD MPR]                  “I think I was expecting to be....to kind of have something like that done to me rather than just saying, ‘ok here are the exercises, do them at home” [S5 PF HD HPR]                  “No sort of a aftercare at all you know put an ice pack on your back that’s it” [S6 PM LD LPR]</p>
	<p><i>Subtheme 5.2: Interpreting the HCP explanation</i></p>	<p><u>Adopt caution, Protect spine</u></p> <p><u>Diagnostic</u></p>	<p>“[Told by HCP] Be more careful so when you get into bed, don’t just jump in”[S7 PM MD MPR]                  “Just be careful of what I do, just be careful of how I bend, Dr’s and physio” [S9 WBF MD HPR]                  “It could be your movements, it could be</p>

		<u>uncertainty</u>	<p>your muscles, it could be disc, it could be .. anything. Ermmm but obviously...I don't know what's causing my back pain.." [S10 PF HD HPR]</p> <p>"Mixed messages .... oh it could be your stomach, they told me that wear and tear is on my hip and that's causing pain in.... my back" [S7 PM MD MPR]</p>
	<p><i>Subtheme 5.3: Appraising interventions and ability to control CLBP</i></p>	<p><u>Ineffective medication, acupuncture</u></p> <p><u>Short lasting manual therapies</u></p> <p><u>Variable impact of injection and exercise therapies</u></p>	<p>"Some of the pain killers made no difference" [S2 WBM MD HPR]</p> <p>"I went through the acupuncture stage and that didn't work" [S3 WBF MD MPR]</p> <p>"I did go to see a chiropractor as well ermm because at one stage I was just like oh I can't take this anymore.... I had about 8 treatments?.....I probably had about 2 or 3 treatments in one week ... as soon as it stopped ermm probably about...the first 2 weeks I would say the pain was still there" [S10 PF HD HPR]</p> <p>"They gave me some injections into my facet joints and they didn't help that much... they gave me some more injections but this time they were deeper. So since that time, I've not had any flareups as what they were before but I've had constant pain" [S7 PM MD MPR]</p> <p>"Because I'm exercising its obviously building my muscles and whether that's causing me more pain"[S5 PF HD HPR]</p> <p>"I went to a yoga class three weeks ago and it about killed me but I love it, the next day although there was a dull ache in my back it felt wonderful. I felt like I had really stretched it out" [S4 WBF MD MPR]</p> <p>"My flexibility has increased"[S6 PM LD LPR]</p> <p>"The pain goes away if I do stretching, it goes away and like arching your back over and putting your hands on your buttocks and arching back" [S3 WBF MD MPR]</p> <p>"Exercises ... I do them everyday, every morning or night... the underlying problems still there its not going away, its not getting any better" [S9 WBF MD HPR]</p> <p>"When I was walking or running or whatever I was doing the pain was worse than it was before" [S10 PF HD HPR]</p> <p>"My back pain got worse...it was like exercises everyday to do like my back and twisting it" [S7 PM MD MPR]</p>

	<p><i>Subtheme 5.4: Expectations of future management</i></p>	<p><u>Individualised management Mind body approach</u></p> <p><u>Effective communication : listen, give time,</u></p> <p><u>Physical examination Clear explanation and understanding of pain</u></p> <p><u>Support and guidance, gain control</u></p> <p><u>Increase exercise</u></p>	<p>“Almost take it case by case, person by person and work out what’s best for that person”[S8 WM LD LPR]</p> <p>“The psychological mixed with other things, it’s a huge things” [S4 WBF MD MPR]</p> <p>“I think you can help yourself a lot.... By...believing in yourself” [S8 WM LD LPR]</p> <p>“Listening to what I have to say” [S6 PM LD LPR]</p> <p>“They will give me enough time to explain the problem” [S2 WBM MD HPR]</p> <p>“I think, to me its almost just a matter of communicating rather than having a rigid set routine” [S8 WM LD LPR]</p> <p>“Give me some sort of examination of the problem area” [S2 WBM MD HPR]</p> <p>“All I want to know is what’s triggering it” [S4 WBF MD MPR]</p> <p>“Explain why and what they’re doing in detail that would be understandable, cause sometimes the physio would explain something in their term... like L1 or something, I remember hearing that”[S5 PF HD HPR]</p> <p>“Give you the right advice and guidance”[S3 WBF MD MPR]</p> <p>“Maybe some follow up consultations to see how have you progressed” [S6 PM LD LPR]</p> <p>“Most importantly that they will give me some advice or treatment, exercise. Something that I can go home and feel that there is progress being made” [S2 WBM MD HPR]</p> <p>“Exercise – yeah well I need to keep doing exercise”[S7 PM MD MPR]</p> <p>“Just some sort of activity I can do that helps it and relieves the pain”[S9 WBF MD HPR]</p>
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**Supplementary File 1****Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist**

No. Item	Guide questions	Description	Location in manuscript (Section)
<b>Domain 1: Research team and reflexivity</b>			
<i>Personal Characteristics</i>			
1. Interviewer/facilitator	Which author/s conducted the interview or focus group?	GS, CN	Methods and Results
2. Credentials	What were the researcher's credentials? E.g. PhD, MD	GS – BSc CN –MSc, BSc KOS – PhD, MSc PG Cert HE AS – PhD, BSc NH - PhD, MSc, Grad Dip Phys, PG Cert HE,	Methods
3. Occupation	What was their occupation at the time of the study?	Musculoskeletal Physiotherapists	Methods
4. Gender	Was the researcher male or female?	Male	Methods
5. Experience and training	What experience or training did the researcher have?	GS/CN undertook 3 hours of NIHR training on semi-structured interviewing	Methods
<i>Relationship with participants</i>			
6. Relationship established	Was a relationship established prior to study commencement?	No	Methods
7. Participant knowledge of the interviewer	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	Participants were briefed on the purpose of the study and understood that it was a research project for GS.  Ethical approval had been granted, participants reviewed the participant information leaflet prior to giving their written informed consent to be involved.	Methods, Acknowledgements: footnotes (ethical approval)
8. Interviewer	What characteristics were	Potential source of bias: GS is a	Methods, Strengths

1 2 3 4 5 6	characteristics	reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	British Punjabi male and CN a White British male with 11 and 13 years musculoskeletal physiotherapist experience respectively, both with special interests in CLBP disorders	limitations and implications for future research
7	<b>Domain 2: study design</b>			
8 9 10 11	<i>Theoretical framework</i>			
12 13 14 15 16 17 18 19	9. Methodological orientation and Theory	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	Interpretive description and thematic analysis	Methods
20 21	<i>Participant selection</i>			
22 23 24 25 26	10. Sampling	How were participants selected? e.g. purposive, convenience, consecutive, snowball	Purposive sampling	Methods
27 28 29 30 31 32	11. Method of approach	How were participants approached? e.g. face-to-face, telephone, mail, email	Mail – study  Information, and a consent letter for telephone contact were posted to eligible individuals with their physiotherapy appointment letter.	Methods
33 34 35	12. Sample size	How many participants were in the study?	Ten	Methods and Results – Table 1
36 37 38 39 40 41 42 43 44 45	13. Non-participation	How many people refused to participate or dropped out? Reasons?	Ten potential participants that were invited for a semi-structured interview, all gave informed consent and completed the interview. There were no participants who subsequently refused to participate, withdrew consent or dropped out.	Methods
46 47	<i>Setting</i>			
48 49 50 51	14. Setting of data collection	Where was the data collected? e.g. home, clinic, workplace	All interviews were conducted in a quiet room in the physiotherapy department.	Methods
52 53 54 55	15. Presence of non-participants	Was anyone else present besides the participants and researchers?	No	n/a
56 57 58 59	16. Description of sample	What are the important characteristics of the sample? e.g. demographic	The sample comprised of five White British (2 males: 3 females) and five English speaking Punjabi (3 males: 2 females) people, with	Methods and Results – Table 1



	data, date	a mean age of 40 years. Data was collected between April 2014 and April 2015.	
	<i>Data collection</i>		
17. Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Interviews were semi-structured using a topic guide (Supplementary File 3) informed by contemporary CLBP literature, and research team expertise. Further refinements were made following two pilot interviews with CLBP patients.	Methods, Supplementary File 3
18. Repeat interviews	Were repeat interviews carried out? If yes, how many?	No	n/a
19. Audio/visual recording	Did the research use audio or visual recording to collect the data?	The interviews were audio-recorded	Methods
20. Field notes	Were field notes made during and/or after the interview or focus group?	No	n/a
21. Duration	What was the duration of the interviews or focus group?	Interviews lasted between 60-70 minutes.	Methods
22. Data saturation	Was data saturation discussed?	Recruitment continued until data saturation was met for the purpose of the study.	Methods
23. Transcripts returned	Were transcripts returned to participants for comment and/or correction?	No	n/a
<b>Domain 3: analysis and findings</b>			
<i>Data analysis</i>			
24. Number of data coders	How many data coders coded the data?	GS, CN and AS independently assessed the accuracy and completeness of all the transcripts	Methods
25. Description of the coding tree	Did authors provide a description of the coding tree?	Provided in Table 3: The thematic development illustrating key stages when themes were changed.	Results – Table 3
26. Derivation of themes	Were themes identified in advance or derived from the data?	GS, CN and AS ensured themes related to the thematic development and emerging	Methods

		themes	
27. Software	What software, if applicable, was used to manage the data?	Microsoft word	n/a
28. Participant checking	Did participants provide feedback on the findings?	Member checking was not conducted to validate interview transcripts due to time and funding issues.	Strengths limitations and implications for future research
<i>Reporting</i>			
29. Quotations presented	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	Yes, specific comments were supported with direct quotes derived from each participant. Quotations were identified using anonymised participant codes.	Results and Supplementary file 5
30. Data and findings consistent	Was there consistency between the data presented and the findings?	Yes	n/a
31. Clarity of major themes	Were major themes clearly presented in the findings?	Yes	n/a
32. Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	Yes	Discussion

# BMJ Open

## Exploring the Lived Experience And Chronic Low Back Pain Beliefs Of English Speaking Punjabi And White British People: a qualitative study within the NHS

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**Title**

Exploring the Lived Experience And Chronic Low Back Pain Beliefs Of English Speaking  
Punjabi And White British People: A qualitative study within the NHS

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## Abstract

**Introduction:** Disabling chronic low back pain (CLBP) is associated with negative beliefs and behaviours, which are influenced by culture, religion and interactions with healthcare practitioners (HCPs). In the United Kingdom (UK) HCPs encounter people from different cultures and ethnic backgrounds, with South Asian Indian's (including Punjabis) forming the largest ethnic minority group. Better understanding of the beliefs and experiences of ethnic minorities with CLBP might inform effective management.

**Objectives:** To explore the CLBP beliefs and experiences of English-speaking Punjabi and White British people living with CLBP, explore how beliefs may influence the lived experience of CLBP and conduct cross-cultural comparisons between the two groups.

**Design:** Qualitative study using semi structured interviews, set within an interpretive description framework and thematic analysis.

**Setting:** An NHS Hospital Physiotherapy department, Leicester, UK.

**Participants:** 10 CLBP participants (5 English-speaking Punjabi and 5 White British) purposively recruited from Physiotherapy waiting lists.

**Results:** Participants from both groups held negative biomedical CLBP beliefs such as the 'spine is weak'; experienced unfulfilling interactions with HCP's commonly due to a perceived lack of support, and negative psychosocial dimensions of CLBP with most participants catastrophising about their CLBP. Specific findings to Punjabi participants included (i) disruption to cultural-religious wellbeing, as well as (ii) a perceived lack of understanding and empathy regarding their CLBP from the Punjabi community. In contrast to their White British counterparts', Punjabi participants reported initially utilising passive coping strategies, however all participants reported a transition towards active coping strategies.

**Conclusion:** CLBP beliefs and experiences, irrespective of ethnicity, were primarily biomedically-orientated. However, cross-cultural differences included cultural-religious well-

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3 being, the community response to CLBP experienced by Punjabi participants, and coping  
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5 styles. These findings might help inform management of people with CLBP.  
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### 9 **Strengths and limitations of this study**

- 11 • The first study to provide a cross-cultural exploration of CLBP beliefs and  
12 experiences of English-speaking Punjabi and White British people living with CLBP.  
13
- 14 • Using purposive sampling, 1:1 semi-structured interviews were conducted through a  
15 cultural lens to explore beliefs and experiences of Punjabi and White British people  
16 with CLBP.  
17
- 18 • The study findings were data-driven and embedded in the participants' voice.  
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- 20 • Participants were all English-speaking and were only selected from one geographical  
21 location, which may limit the transferability of the findings.  
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- 23 • Member checking was not conducted to validate interview transcripts.  
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## Introduction

Chronic low back pain (CLBP) is the primary cause of disability and financial burden to healthcare and society in the United Kingdom (UK).<sup>1</sup> Despite increasing resources spent to improve CLBP management, the associated disability continues to rise.<sup>2</sup>

Historically, the impact of CLBP on developing populations was perceived to be minimal, but is now understood to be similar to western populations.<sup>3-8</sup> In the UK a higher incidence of spinal pain has been reported in South Asians,<sup>9</sup> and a higher prevalence of widespread musculoskeletal pain reported in South Asian Indian Punjabis (22%) compared with Europeans (9%).<sup>10</sup>

Biomedical beliefs about CLBP are common within western populations and are emergent within developing populations.<sup>3 11 12</sup> Factors thought to influence these beliefs include ethnicity, religion, family and friends, as well as unhelpful interactions with healthcare practitioners (HCPs).<sup>13 14</sup>

Current CLBP research has largely focused on western societies with little emphasis on minority ethnic populations; a concern given ethnic migration and cultural diversity is increasing within western societies. According to the last UK Census (2011)<sup>15</sup> Leicester hosts the largest Indian (referring to themselves as Asian or British Asian) population (30%) of any local authority in England and Wales.

Understanding cultural variations in pain perception, beliefs, expectations, and behaviours is important to accurately identify patients' needs and behaviours relative to one's own potentially divergent culture.<sup>16</sup> This may help avoid health inequalities and suboptimal outcomes,<sup>17 18</sup> an important consideration for healthcare policy makers and those

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3 responsible for service provision. To tailor management, HCPs might benefit from  
4 understanding an individual's beliefs and experiences of CLBP within the cultural context in  
5 which they occur.<sup>7 19</sup> Therefore, research is required to understand the management of  
6 CLBP within different populations within the UK. Cross-cultural comparative studies utilising  
7 qualitative methodologies may provide in-depth understanding of individual and culture  
8 specific beliefs and experiences of CLBP. However, the authors are not aware that any such  
9 comparisons have been made between English speaking Punjabi and White British CLBP  
10 populations  
11

12 Briefly, Punjabi people are characterised by migrating from the traditional area of the Punjab  
13 region in India or Pakistan, or having relatives that had done so. They may speak the  
14 Punjabi language and share values, customs and beliefs, identifying with Sikhism, Hinduism  
15 or Islam.  
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17 Therefore, this study aimed to investigate the beliefs and experiences of people living with  
18 CLBP in English speaking Punjabi and White British populations. The objectives were to  
19 explore how these beliefs influence, and impact on, the experience of living with CLBP and  
20 identify similarities and differences between the two ethnic groups.  
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## Methodology

Using semi structured interviews this study followed the COnsolidated criteria for REporting Qualitative studies (COREQ) (Supplementary File 1).<sup>20</sup> Interpretative description (ID) was chosen as this qualitative approach has been specifically developed for healthcare enquiries of a clinical phenomenon, using subjective accounts, for the purpose of informing clinical understanding.<sup>21</sup> Prior theoretical and clinical knowledge is valued as a starting point for research in ID, although this can be challenged and developed as the research progresses.<sup>22</sup>

### *Sample*

Purposive sampling<sup>23</sup> was employed to recruit White British and Punjabi participants sufficient to enable relevant data to be obtained and analysed.<sup>24</sup> The study setting was Leicester (UK), which hosts a large White British and Punjabi population.

Eligible participants were White British and English speaking Punjabi people aged 18-65 years with CLBP of  $\geq 6$ -month duration.<sup>25</sup> Individuals with a previous history of surgery for CLBP, diagnosed with a specific or a serious underlying cause of their CLBP (i.e. fracture, infection, inflammatory spondyloarthropathy, cancer, or nerve root compression)<sup>26 27</sup> or who had previous physiotherapy treatment from the authors (GS, CN) were excluded.

### *Recruitment*

Potential participants were identified by GS following a GP or Consultant referral to an NHS Physiotherapy department for CLBP between April 2014 and April 2015. Study information was posted to eligible individuals with their physiotherapy appointment letter. Following this, an interview was arranged via telephone, prior to physiotherapy commencing. GS obtained written informed consent pre-interview. Recruitment continued until saturation was achieved<sup>28</sup>, where robust common themes were established which included knowledge that could

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3 also be applied back to and illustrate the individual cases which were identified.<sup>21</sup> All  
4 participants were eligible and included. The sample comprised of five White British (2 males:  
5 3 females) and five English speaking Punjabi (3 males: 2 females) people, with a mean age  
6 of 40 years (Table 1). All Punjabi participants were English speaking, third generation, UK  
7 born citizens.  
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### 13 14 15 *Data collection*

16 In-depth semi-structured interviews were conducted by GS (British Punjabi male) or CN  
17 (White British male), with 11 and 13 years musculoskeletal physiotherapy experience  
18 respectively, with a special interest and *a-priori* knowledge of CLBP. Both authors undertook  
19 three hours of National Institute of Health Research training on semi-structured  
20 interviewing.<sup>29</sup> No prior relationship was established with participants, following the interview  
21 all participants commenced physiotherapy treatment with physiotherapists that were not  
22 involved with this study. Interviews took place in a quiet room in the physiotherapy  
23 department and lasted between 60-70 minutes.  
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35 A topic guide was informed by contemporary CLBP literature,<sup>7 13</sup> and research team  
36 expertise. This informed the basis and boundary of focus moving forward to analysis in  
37 accordance with interpretive description<sup>21</sup>. Further refinements were made following two pilot  
38 interviews with CLBP patients.<sup>30</sup> The topic guide included open-ended questions related to  
39 the individual's 'story of their CLBP', their beliefs about causation, management and the  
40 future) as well as the lived experience of CLBP (related to interaction with HCPs, coping with  
41 CLBP and its personal, psychological, social and cultural impact) (Supplementary File 2).  
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51 Participants provided demographic data and completed validated questionnaires for pain  
52 severity (Numerical Pain Rating Scale was a sub-item score from the Short Form Orebro  
53 Musculoskeletal Questionnaire (SFOQ)),<sup>31</sup> functional disability (Oswestry Disability Index)<sup>32</sup>  
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3 and psychosocial risk profile (including sleep, anxiety, depression, catastrophising, fear-  
4 activity and fear-work were sub-item scores from the SFOQ)<sup>31</sup> (Tables 1 and 2).  
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7

### 8 9 **Data analysis**

10 Interviews were audio-recorded and transcribed verbatim by GS who analysed the data  
11 using thematic analysis.<sup>33</sup> GS considered each script repeatedly as a way to immerse  
12 himself in the data before coding began<sup>21</sup>. Each transcript was analysed line-by-line using an  
13 iterative model immediately after the first interview. This involved: data sampling, collection  
14 and analysis occurring in tandem as an on-going constant comparative process<sup>34</sup> to facilitate  
15 the capture of emergent themes during data collection.<sup>33</sup> This process allowed active  
16 engagement and familiarisation with the data. However some of the terms for beliefs and  
17 coping were identified from previous literature.<sup>7 13</sup> These terms represented critical analysis  
18 and recontextualisation of knowledge from which the analysis could be shaped<sup>21</sup>. From this,  
19 initial themes were generated and data-driven coding facilitated the development of a  
20 thematic table, which was modified as data analysis and interpretation evolved  
21 (Supplementary File 3). Crucially this involved critique by the co-authors (CN, KOS, AS and  
22 NH)<sup>35</sup> to enhance rigour and trustworthiness of study findings.<sup>23</sup> GS, CN and AS  
23 independently assessed the accuracy and completeness of all the transcripts, ensuring  
24 these related to the thematic development and emerging themes; this process was collated  
25 as an audit trail (Supplementary File 4). Data collection and analysis was transparent and  
26 detailed.  
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## Results

Five main themes emerged from the interviews: i) biomedical back pain beliefs, ii) coping with CLBP, iii) the psychological and emotional dimensions of living with CLBP, iv) the social and cultural-religious impact of CLBP and v) reflecting on HCP interactions, management experience and expectations of future management. These themes are presented in a compare/contrast style between the ethnic groups. Due to the commonalities between the two groups, the findings presented apply to both groups unless otherwise stated (Supplementary File 5).

**Table 1: Participant Characteristics**

Participant code	CLBP duration (years)	Age (years)	Sex	Ethnicity
S1	25	40	Male	Punjabi
S2	2	51	Male	White British
S3	18	35	Female	White British
S4	20	42	Female	White British
S5	2	23	Female	Punjabi
S6	7	37	Male	Punjabi
S7	4	40	Male	Punjabi
S8	1	53	Male	White British
S9	2	49	Female	White British
S10	14	38	Female	Punjabi

**Table 2: Participant pain, disability and psychosocial risk profile data**

Participant code	NPRS	ODI (%)	SFOQ	Sleep	Anxiety	Depression	Catastrophising	Fear-Activity	Fear-Work	Employment Status
S1	7	(Moderate) 28	(Moderate) 48	4	5	4	7	7	3	Working
S2	8	(Moderate) 38	(High) 59	1	6	5	10	5	5	Working
S3	5	(Moderate) 24	(Moderate) 46	6	0	0	5	10	5	Working
S4	8	(Moderate) 30	(Moderate) 48	5	7	2	10	2	2	Retired
S5	3	(High) 51	(High) 50	7	6	7	5	0	1	Off work
S6	2	(Low) 14	(Low) 22	2	0	0	3	4	3	Working
S7	5	(Moderate) 24	(Moderate) 41	6	3	2	8	7	1	Working
S8	2	(Low) 14	(Low) 29	2	3	1	3	8	3	Working
S9	4	(Moderate) 40	(High) 73	7	8	9	8	9	3	Working
S10	8	(High) 50	(High) 77	7	1	6	10	10	7	Working

**ODI = Oswestry Disability Index, SFOQ = Short Form Orebro musculoskeletal pain questionnaire, NPRS = Numeric Pain Rating Scale**

## Theme 1: Biomedical back pain beliefs

### Cause of CLBP attributed to physical and structural/anatomical factors

All participants held similar biomedical CLBP beliefs. Common causal beliefs attributed CLBP to physical and structural/anatomical factors. These mainly included bending and lifting strains, for example:

*“I basically bent down to pick up a pen or something and it clicked and I couldn’t straighten myself up” [S6]*

Consistent with these beliefs, in cases where a physical causal mechanism could not be recalled, participants self-diagnosed a structural/anatomical cause for their CLBP. The most frequently expressed labels included: ‘slipped disc’ (n=5), ‘wear and tear’ (n=3) and ‘trapped nerve’ (n=3).

### Recalling HCPs biomedical diagnosis and the biomedical beliefs adopted

Most participants recalled a diagnostic label derived from HCPs embedded within the biomedical model, consistent with their own beliefs. Nonetheless, some interpreted this information negatively. Following a consultation with a chiropractor, one participant perceived his back “...was out of place” [S7]

Biomedical CLBP beliefs were influenced by manual-handling training and by participants’ occupation. A HCP working in a hospital believed the repetitive nature of manual handling in ward settings to be a cause of his CLBP. Subsequently, participants’ adopted the belief their spine needed protecting when bending and lifting:

*“I suppose if you lift incorrectly it will cause back pain. I mean we have all had it drummed in to us (manual-handling training), how to bend our knees and how to do all that malarkey” [S2]*

### Vulnerability of the spine

Many viewed their spine as vulnerable, central to function and critical to one’s well-being. Given participants’ had ‘one back’, that was hard to see, combined with a feeling of weakness, the back was commonly described as ‘precious’, and when compared to an ankle sprain required more protection:

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2  
3 *“It just feels as though the spine controls so much of your function in your legs and*  
4 *everything, that if you injure it, it’s much more serious than perhaps injuring your*  
5 *ankle”* [S2]  
6  
7

8 Consistent with higher levels of disability, participants’ fear avoidant beliefs suggested they  
9 believed pain indicated harm, and was a warning signal from the back:  
10

11  
12 *“your back is trying to tell you something. It’s trying to tell you to stop doing whatever*  
13 *you’re doing if it’s hurting...because you are making it worse.”* [S3]  
14  
15

### 16 Future outlook

17 Participants tried to maintain a positive future outlook; this was mainly based on prior pain  
18 experiences, and individual personalities.  
19  
20

21  
22 *“I even think now that I will wake up and it will all go away and it maybe will.”* [S2]  
23  
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25 Despite this, there was an overriding feeling of uncertainty:  
26

27 *“I don’t want to think about that because I don’t know how I’m going to be”* [S5]  
28  
29

30 For some Punjabi participants’ religion was expressed as a key part of their lives and  
31 interlinked with their positive outlook on pain. One participant described a hand injury  
32 whereby his fingers were amputated as ‘God’s will’ and expressed his positive outlook in the  
33 context of his religious beliefs:  
34  
35

36 *“Someone up there wanted them so they were gone...my sin plate was wiped clean*  
37 *on that day and we start again.”* [S1]  
38  
39

## 40 **Theme 2: Coping with CLBP**

### 41 Active coping strategies

42 White British participants’ predominantly demonstrated active coping ‘self-help’ strategies  
43 based on prior CLBP experiences and searching online for knowledge and understanding:  
44  
45

46  
47 *“I went onto NHS choices and typed in sciatica - just that word and a whole load of*  
48 *stuff comes up and there is one big sentence and it says “keep active....”* [S2]  
49  
50

51 Amongst the White British group, exercise strategies such as stretching, yoga and football  
52 were utilised. They commonly shared the narrative ‘confronting pain and battling on’.  
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Influenced by a need to avoid interference in one's life, fulfill family and parental duties and to avoid burdening others, this often meant enduring pain.

"I even think now that I will wake up and it will all go away and it maybe will." [S2]

### Reliance on HCPs and biomedical interventions

A lack of understanding and control over pain led some participants to rely on HCPs in an unrelenting search for a diagnostic label, whilst others sought reassurance via scans:

*"I wanted to have a scan just to see if there was anything major ermmm major wrong" [S9]*

Both groups expressed varying levels of reliance on medication, ranging from daily use, to situations of desperation where they felt 'physically stuck' or to prevent pain intensifying.

In contrast to White British participants, Punjabi participants' demonstrated a passive reliance on HCPs to provide 'quick fix' interventions including acupuncture, massage and most frequently manual therapies:

*"you go there (manual therapist) for a quick fix" [S6]*

### Protective and avoidance coping strategies

In terms of bending, lifting and heavy physical tasks, many participants used protective and avoidance strategies. Meanwhile, experiencing exercise-related pain, increased fear avoidance around exercise, which promoted resting behaviours. Uncertainty about the cause of pain increased hypervigilance to the threat of pain and adherence to manual handling advice to protect the back reflecting a belief of spinal vulnerability:

*"I think a bit more.... if I have a task that it would probably involve lifting a box or whatever, I will now consciously think, make sure you bend your knees and you keep your back straight if you're lifting something or whatever. Whereas previously you think you are fine, it doesn't matter, nothing is going to happen so..." [S1]*

### Coping transition

An interesting difference emerged in the coping trajectories of White British and Punjabi participants. Although, it was not clear how this transition took place, all Punjabi participants' reported a transition from a passive reliance on HCPs for a "quick fix" to more active coping



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3 strategies such as self-searching the internet, as well as replacing rest with increased  
4 physical and social activities in order to resume normal life:

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6  
7 *“Instead of relax it.... I’d just go back to my normal routine”* [S6].

### 8 **Theme 3: The psychological and emotional dimensions of CLBP**

#### 9 Psychological and emotional consequences

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12 Across both groups, a number of negative psychological and emotional dimensions of CLBP  
13 were expressed. Those with more disabling CLBP most frequently reported depressed  
14 mood, hopelessness, frustration, catastrophising thoughts, and uncertainty about pain and  
15 lack of control over it.  
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20 Depressed mood was most often expressed in relation to the persistence of CLBP, and as a  
21 consequence of failed interventions, disruption to sleep and engagement in meaningful  
22 activities. Some attributed disabling CLBP to weight gain resulting in depressed mood:  
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27 *“because I put on a lot of weight when I was bed bound that got me really down”* [S5]

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30 Hopelessness was attributed to a lack of control over pain and a lack of support from HCPs,  
31 who in some cases painted a pessimistic outlook:

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33  
34 *“No I mean they just said it’s just down to wear and tear basically and you’ve got to  
35 live with it”* [S9]

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38 Frustration was repeatedly expressed in relation to a lack of understanding of the cause of  
39 pain, and the interference with daily life, and in some cases the desire to exercise and lose  
40 weight. Participants with more disabling pain held catastrophic CLBP thoughts. Similar to  
41 depressed mood and frustration, this was associated with diagnostic uncertainty and a lack  
42 of control over pain, resulting in catastrophising about the future:  
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47 *“I might not walk again”* [S5]

#### 48 Catastrophic nature of pain flare-ups

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51 Often participants’ used catastrophic language to portray the unpredictable, fluctuating and  
52 uncontrollable disabling impact of flare-ups, for example:  
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3 *"I would say at it's very worst point it feels like a ball of fire. It's debilitating to the*  
4 *point where I want to cut my left-side off. It's awful and the longer the pain continues*  
5 *the worse it seems to spread"* [S4]  
6  
7

8  
9 For some this entailed a physical and emotional struggle. However only a few seemed to  
10 form a link between their thoughts and CLBP:  
11

12 *"When I have got a project or something... I am not thinking about my back at all. I*  
13 *am just cracking on. I'm noticing it more because I have got time on my hands"* [S4]  
14  
15

### 16 Threat to self-identity

17  
18 Cross-cultural comparisons highlighted that CLBP posed a major threat to participants' *'self*  
19 *and their identity*. Some described negative consequences of CLBP such as low self-  
20 esteem, reduced independence and disempowerment. One participant expressed disabling  
21 CLBP as a major loss:  
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24

25 *"Everything is just gone now like dignity, confidence. I had a stick but I would only*  
26 *use that sometimes if I was going out"* [S5]  
27  
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29

30 During flare-ups, a small number expressed difficulties carrying out daily functional activities.  
31 The greatest impact seemed to be on bending-related tasks such as putting on socks and  
32 hoovering. This led to dependency on family members and changing roles in their  
33 relationships, which negatively impacted participants' psychological and emotional well-  
34 being.  
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## 40 **Theme 4: The social and cultural-religious impact of CLBP**

### 41 Threat to family/friend relationships and social life

42  
43 Mostly expressed by White British participants', the interference of CLBP on family  
44 relationships and fulfilling parental roles was described as 'restrictive' on their  
45 spouse/partner, often eliciting negative emotions in family members. One participant  
46 identified her coping strategies as a potential cause of frustration:  
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51 *"My husband also gets frustrated with me. He says 'what you being a legend for, why*  
52 *don't you just sit down and do it later'. I don't know... he still thinks I have OCD"* [S4]  
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3 CLBP inhibited social interactions across both groups. Social isolation was the consequence  
4  
5 for some previously sociable participants' with more disabling pain:

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7 *"Just walking round town I have to stop and go in a café and have a coffee just to sit*  
8  
9 *down to rest my back. I stay at home now"* [S9]

### 10 Work impact

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12 Disrupting work roles, those sitting at work constantly fidgeted and had move in an attempt  
13  
14 to control pain. Participants also commented how CLBP impacted on colleagues. Sickness  
15  
16 absence was discussed by most with varied views, some cited having time off work due to a  
17  
18 flare-up:

19  
20 *"I did have time off 'cos my back was hurting too much"* [S7]

### 21 The impact of CLBP on cultural and religious wellbeing

22  
23 CLBP negatively impacted cultural-religious wellbeing of Punjabi participants, consistently  
24  
25 impeding meditation, particularly as this involved sitting cross-legged on a floor for long  
26  
27 periods:

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29  
30 *"I do sit down crossed legs on the floor when we pray and meditate and maybe that*  
31  
32 *has slight impact on it, you know when it gets just maybe it gets tired"* [S6]

33  
34 This impact varied from 'the hips and back locking', to an inability to sit leaving one  
35  
36 participant secluding herself from religious rituals that involved sitting:

37  
38 *"[Referring to sitting in the temple] I'll just go when it's quiet y'know, ermmm do my*  
39  
40 *praying and then come back out and then just go downstairs where there's chairs or..*  
41  
42 *I can just hang around somewhere else and that kind of...I feel excluded sometimes*  
43  
44 *because y'know people tend to like wanna sit upstairs and I have to like go just*  
45  
46 *downstairs"* [S10]

47  
48 Cultural roles and obligations were impacted. In this context, one Punjabi female described  
49  
50 the 'perceived' female cultural role and how CLBP disrupted her ability to carry out  
51  
52 household duties including cooking. Viewed as essential to the female role amongst  
53  
54 Punjabi's, difficulties with or an inability to carry out these duties had far-reaching  
55  
56 consequences such as finding a marriage partner:

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3           *“With the Asian culture a girl has to do housework - she has to get prepared for her*  
4           *married life, so she has to learn how to cook, she has to learn how to do housework,*  
5           *look after her husband and when you can't do that, you're you know not suitable*  
6           *anymore”* [S10]  
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### 10 11 The response of family, friends and wider community to CLBP

12 Participants' reported experiencing varied responses from friends and family members to  
13 their CLBP. These included feeling pushed to seek healthcare to 'get it fixed', feeling  
14 supported in some cases, and over supported in others. In contrast, one Punjabi participant  
15 experienced very little empathy and support:  
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19           *“My family don't take me seriously anymore because they're just sick of hearing*  
20           *about it and my friends just don't understand”* [S10]  
21  
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23

24 Some Punjabi participants' felt stigmatized, with cultural comparisons indicating a perceived  
25 lack of empathy and understanding from people within the Punjabi community:  
26  
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29           *“In other cultures do kind of ... they tend to be a bit more understanding”* [S10]  
30

31 CLBP advice from Punjabi community members, the self-acclaimed 'back pain experts', left  
32 one participant frustrated:  
33  
34

35           *“Unfortunately we live in a community that everyone thinks they are a qualified*  
36           *doctor. You know, don't do this, do this sort of a thing”* [S1]  
37  
38

### 39 Recalling family experiences of CLBP

40 Participants recalled back pain experiences of family members with regards to their coping  
41 strategies, levels of disability and interactions with HCPs. Some family members reluctantly  
42 relied on medication, whilst others adopted active coping strategies and demonstrated self-  
43 efficacy. However, participants did not consistently adopt the coping strategies observed.  
44 For example, one Punjabi participant initially utilised passive interventions (including  
45 massage) in contrast to his father:  
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3 *“He has not let it really impact him to be honest because he still goes to the gym, he*  
4 *still lift weights, just does everything. Before every now and again his back hurts a*  
5 *little bit. He does what he does - he hasn't changed anything” [S6]*  
6  
7

## 8 9 **Theme 5: Reflecting on HCP interactions, management experience and expectations** 10 **of future management**

### 11 *Varying quality of therapeutic alliance*

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14 Reflecting on previous HCP interactions, many experienced variations in therapeutic  
15 alliance, with mostly negative interactions. Strong therapeutic alliance was associated with  
16 HCPs providing clear communication. This included a clear explanation about the cause of  
17 pain, as well as reassurance, collaborative compassionate care with on-going support and  
18 guidance. This increased adherence to treatment, built empowerment and trust in their  
19 HCPs:  
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25

26 *“I've great faith in the physio” [S2]*  
27

28 In contrast, several factors were attributed to weak therapeutic alliance. Some depicted a  
29 power struggle, where the HCP was in control, *and* access to investigations such as MRI  
30 scans was rejected, others reported a lack of individualised holistic care. However, most  
31 cited HCPs communication as a major problem, particularly not being given time, not being  
32 taken seriously, not feeling understood nor listened to. One participant reported feeling  
33 disrespected:  
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40 *“It really did upset me when I went to see a consultant - I felt very belittled by how he*  
41 *approached me” [S9]*  
42  
43

44 Expectations were often unmet, where participants did not receive investigations, a clear  
45 diagnosis, a physical examination or manual therapy whilst enduring unexpected pain flare-  
46 ups. A perceived lack of guidance and support from HCPs was also cited, in some cases  
47 resulting in feelings of helplessness and low mood.  
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### Interpreting the HCP explanation

Iatrogenic language used by HCPs was fear-inducing for some participants. Interpretations of HCPs explanations led to a sense of vulnerability around the spine and a need to adopt caution. One participant in his thirties recalled his interpretation of 'wear and tear':

*"It makes you think that something you've got something permanent and you're basically going to have to live with it" [S6]*

However, uncertainty about the actual cause of their pain was most common, partly due to mixed messages conveyed by HCPs and inconclusive radiological investigations.

### Appraising interventions and ability to control CLBP

Reflecting on prior CLBP management, this was embedded within the biomedical model for the majority. Treatment interventions were appraised in relation to their therapeutic effect and the participant's ability to control their pain. Medications, despite being taken for long periods were deemed largely ineffective by many, as was acupuncture. In addition, a reliance on manual therapies offered minimal long-term effect:

*"If I'm honest - at the time it's a psychological plaster" [S4]*

### Expectations of future management

Interestingly, when exploring cross-cultural expectations of future management, all participants' sought an individualised, mind-body approach, which involved a physical 'hands on' examination. Many expressed the need for HCPs to possess strong communication skills which include: empathy, active listening skills, providing time, clear communication and to:

*"Explain things thoroughly, don't frighten the patient, and just generally be welcoming" [S3]*

## Discussion

This is the first study to examine the lived experience and CLBP beliefs of English speaking Punjabi and White British people. Our findings suggest several between-group similarities amongst most participants including biomedical back pain beliefs, unfulfilling HCP interactions and negative psychological emotional and social influences of CLBP. Differences included CLBP disrupting Punjabi participants' participation in cultural-religious activities. One Punjabi participant reported CLBP disrupted her 'perceived female role' within the home. Many Punjabi participants also experienced a lack of empathy and understanding from the Punjabi community. Whilst White British participants adopted active coping strategies, all of their Punjabi counterparts initially reported a preference for passive coping strategies, but all reported a transition to active coping strategies.

### *Biomedical beliefs*

Biomedical CLBP beliefs were common amongst all participants, their family, friends and particularly the wider Punjabi community. This supports the view that biomedical beliefs may not be exclusive to certain populations, instead reflecting the views of western society overall.<sup>8,36</sup> Biomedical beliefs conveyed by HCPs were adopted by, or were similar to those already held by, participants', consistent with other studies.<sup>13,37</sup> These beliefs were often associated with negative CLBP information,<sup>38</sup> around bending and lifting, perpetuating beliefs of spinal vulnerability culminating in fear avoidance beliefs and behaviours.<sup>39</sup> Further, the role of cultural-religious pain beliefs in promoting a positive future outlook has been documented in other cultural groups.<sup>40</sup> However only one Punjabi participant expressed pain beliefs within a positive cultural-religious context, perhaps reflecting participants' predominantly biomedical beliefs.

### *Coping strategies and transition*

Illustrated as an on-going challenge by many participants, coping strategies have been shown to influence the development and persistence of CLBP.<sup>41</sup> Most White British participants at times utilised active coping strategies such as self-searching for knowledge and exercises, thus demonstrating self-efficacy. A recent qualitative CLBP study<sup>42</sup> reported patients require an explanation and understanding of their CLBP, consistent with our study. Many searched relentlessly, primarily via reliance on HCPs for biomedical interventions, perhaps reflecting the importance participants attached to finding a diagnosis that would legitimise their pain.<sup>19</sup> Meanwhile, Punjabi participants' initial reliance on HCPs to provide passive 'quick fix' interventions and a dependency on family members may highlight their biomedical beliefs, underpinned by a lack of understanding and control over pain resulting in low self-efficacy. These coping strategies may have been influenced by interactions with family, or cultural community members, or the HCP management approach. In support, passive coping strategies have been identified in a previous UK study among a South Asian population with chronic pain.<sup>43</sup> However, acculturation levels were low and perhaps participants lacked knowledge about western medicine. Other UK studies in South Asian populations have identified a reliance on 'complementary' medications.<sup>44</sup> In contrast, in our study Punjabi participants' pursued more conventional western medications and interventions. This may reflect greater awareness of, or access to, these treatment options, given Punjabi participants were third generation UK born and likely well acculturated. A novel finding of our study is that all Punjabi participants reported a transition from passive to active coping strategies.<sup>3 5</sup> This may reflect the limited effects of passive interventions, as well as greater knowledge and understanding of CLBP and the potential benefits of active coping strategies. Alternatively, this group may have perceived the HCP as an authoritarian figure and complied with the HCPs approach to management even if it was not their preference.



### *Psychological and emotional dimensions*

The impact of CLBP has been found to extend beyond physical domains,<sup>3</sup> with many negative and often life-changing psychological and emotional effects.<sup>19 36 45</sup> Contrary to earlier research,<sup>46</sup> participants did not appear to consider these factors as contributors to CLBP, instead viewing these as secondary effects of CLBP. Supporting this, one study found South Asians were unwilling to recognise the influence of psychological, emotional and social factors on their pain.<sup>43</sup> However, negative beliefs about the control of CLBP and the resulting passive coping often reported by participants may have a mediating influence on depressed mood, pain and disability.<sup>47</sup> Feelings of frustration were common amongst participants' due to a lack of explanation and understanding about CLBP, including inconclusive diagnostic radiological investigations. This may reflect their desire for answers linked with pain legitimisation and validation.<sup>48</sup> Contrary to previous research,<sup>49</sup> perceptions of 'not feeling believed' were not consistent with participants' views, nor were feelings of anger and perceived injustice associated with the negative impact of CLBP. Perhaps, these feelings did exist, but were not expressed due to fear of being judged or it negatively impacting on physiotherapy. Furthermore, our findings lend support to a study showing catastrophic thoughts were associated with a magnified threat to the 'unpredictable' and 'fluctuating' nature of pain flare-ups, excessive worry about pain and a pessimistic view of controlling pain.<sup>50</sup>

### *Social dimensions*

Similar to other studies, CLBP was highly disabling, described as a 'major loss' by some. It impacted on many aspects of individual's lives including their identity, self-esteem and independence, leaving some disempowered.<sup>45 51 52</sup> For many, this meant their lives were 'on hold', a finding consistent with a recent systematic review.<sup>36</sup> Our data supports the notion that CLBP impacts meaningful relationships, threatening parental and family duties and for some resulting in social isolation.<sup>3 5 45</sup> With regards to work, although participants'

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2  
3 demonstrated some avoidance behaviours in the workplace, at the time of interviewing only  
4 one participant was absent from work due to CLBP. This may reflect active coping in relation  
5 to work, possibly influenced by financial concerns associated with sickness absence, good  
6 work support and job satisfaction<sup>53</sup> or positive HCP advice relating to work.  
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### 10 11 12 *Therapeutic alliance and a person-centred approach*

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14 Strong therapeutic alliance in the management of CLBP has been associated with greater  
15 treatment compliance, improved clinical outcomes<sup>54</sup> and greater levels of patient  
16 satisfaction.<sup>55</sup> However, most participants' experienced weak therapeutic alliance.  
17 Associated with weak therapeutic alliance,<sup>56</sup> the management of CLBP for most was viewed  
18 as lacking an individualised and holistic approach. Furthermore, participants' predominantly  
19 experienced a lack of guidance and support, and poor HCP communication.<sup>19</sup> Examination  
20 of HCP communication revealed a lack of clear explanation and participants' understanding  
21 about pain, instead creating uncertainty for many. Language has been identified as an  
22 important facet of effective communication given it is personal and variable, particularly  
23 amongst different ethnic populations. Consistent with findings in other populations,<sup>7</sup> HCPs  
24 commonly used fear-inducing language, which in combination with biomedical CLBP beliefs  
25 and poor HCP communication is linked to weak therapeutic alliance and CLBP related  
26 disability.<sup>57</sup> These factors may reflect HCPs lack of interpersonal skills, particularly  
27 specialised communication skills, and their over-utilisation of biomedical approaches to  
28 CLBP management,<sup>58</sup> posing a greater challenge to managing ethnic minority populations.  
29 These findings question how HCPs interact with people living with CLBP. HCPs may require  
30 training to enhance their communication skills and partnerships with patients.<sup>59 60</sup>  
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50 It is also worth noting that participants' in our study did not experience inequalities in  
51 accessing care or treatment, contrary to findings in other South Asian ethnic populations,<sup>61 62</sup>  
52 who utilised participants' with low acculturation levels. Participants' experience of HCP  
53 interactions highlighted a biomedical approach to CLBP. This may be due to the influence of  
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HCPs biomedical CLBP beliefs on their clinical management.<sup>13</sup> Interestingly, most participants' sought an individualised self-management approach<sup>59 60 63</sup> delivered by empathetic HCPs with effective communication,<sup>64</sup> perhaps more aligned with the bio-psychosocial model. This quest, along with Punjabi participants' transition to seek active coping strategies, demonstrates a desire for self-efficacy, which has been linked with reduced disability.<sup>65</sup> HCPs biomedical preference for managing CLBP may highlight discordance with the bio-psychosocial model advocated by recent NICE guidelines,<sup>66</sup> and has been associated with poor adherence to treatment.<sup>13</sup> Thus more individualised multi-dimensional approaches to management,<sup>67</sup> built on effective communication facilitating strong therapeutic alliance<sup>68</sup> and self-management might be needed.

### *Cultural differences*

To date, qualitative research in the UK has paid little attention to the CLBP experience through a cultural and ethnic lens. This requires consideration, given the degree to which individuals identify with their ethnic group, share beliefs and engage in culture roles, which can influence pain experiences.<sup>40</sup> Consistent with other ethnic minority CLBP studies,<sup>7 11</sup> Punjabi participants' experienced a disruption to cultural-religious wellbeing, and endured a negative response from the wider community. In this context, some novel and potentially important themes were identified. As Punjabi participants expressed, religion maybe important to people in ethnic minority populations,<sup>40</sup> disruption to sitting-based meditation in some cases resulted in immense frustration and isolation. In some populations the perceived view of the female role involves housework and preparing for marriage, or serving the husband.<sup>3 11</sup> This perception may be similar to those held within the Punjabi community. CLBP undermined the ability to carry out these duties. For one participant this created uncertainty about finding a marriage partner, and feelings of guilt and burden on other female family members, due to increased workloads placed upon them. Our findings support those in other ethnic populations where gender differences exist in the experience of CLBP.<sup>3</sup>

<sup>5</sup> One novel finding of our study was that Punjabi participants' perceived a lack of empathy

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3 and understanding from the Punjabi community, and for some CLBP was a source of  
4 stigmatisation.<sup>59</sup> These factors may reflect cultural attitudes towards people with CLBP  
5 within Punjabi communities. Influencing factors may include biomedical beliefs held or  
6 limited understanding of CLBP. Alternatively stoicism and perhaps the communication and  
7 meaning of pain may differ amongst these people and playing down pain may be more  
8 acceptable than gesturing emotion.<sup>69</sup> Stoicism towards CLBP may have existed amongst  
9 community members possibly due to levels of acculturation, personal response to, or outlook  
10 on CLBP. Other influences may include the participants' relationship with the community  
11 members they encountered. Findings of this study illustrate the existence of cultural-religious  
12 and gender differences specific to Punjabi participants, and highlight the need to consider  
13 factors specific to the individual in the management of CLBP.<sup>67</sup> It is noteworthy that while the  
14 recent NICE guidelines<sup>66</sup> call for a bio-psychosocial approach to CLBP, there is no specific  
15 guidance on how to acknowledge or manage socio-cultural factors and beliefs.  
16 Consequently, it may be challenging for HCPs to provide individualised, culturally sensitive  
17 bio-psychosocial management for CLBP patients from different ethnic populations.  
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### 34 **Strengths limitations and implications for future research**

35 One of the study strengths is its relevance to clinical practice. This is the first cross-cultural  
36 study to explore CLBP beliefs and experiences in English speaking Punjabi and White  
37 British people living with CLBP. The study findings were data-driven and embedded in the  
38 participants' voice. Reflexivity was demonstrated throughout with the authors declaring how  
39 their ethnicity; novice researcher role, special clinical interest in CLBP and *a-priori*  
40 knowledge may have influenced data collection, analysis and interpretation.  
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48 Waiting for treatment may have influenced participants' response. Member checking was not  
49 conducted to validate interview transcripts due to time and funding. High acculturation levels,  
50 over-representation of Punjabi male participants and variations in socio-demographic status,  
51 may limit the transferability of the findings. Therefore, future research could consider Punjabi  
52 populations with low acculturation rates in different geographical regions.  
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### Implications for practice and policy

This study contributes to existing knowledge by providing HCPs managing CLBP in White British and English-speaking Punjabi people new insights,

Which could improve CLBP management within these groups. There may be specific training needs for HCPs to better understand the multifactorial nature of CLBP, specifically the individual's beliefs and experiences within their psychosocial and cultural-religious context.<sup>58 70</sup> This, in addition to developing a flexible communication style that facilitates strong therapeutic alliance may help tailor management within a person-centred approach. Other HCP priorities could include disseminating evidence-based beliefs amongst patients and the public including ethnic minority populations.<sup>7 47</sup>

### Conclusion

CLBP beliefs and experiences similar across both groups were biomedically-orientated. CLBP was associated with negative psychological and social consequences. Cross-cultural differences related to the negative impact on cultural-religious aspects of Punjabi participants' lives. Punjabi participants also reported a transition from passive to active CLBP coping strategies and experiencing a lack of empathy from Punjabi community members. HCPs should therefore adopt a culturally-sensitive approach to the management of CLBP, which considers individuals' beliefs and experiences.

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## Footnotes

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**Supplementary File 1****Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist**

No. Item	Guide questions	Description	Location in manuscript (Section)
<b>Domain 1: Research team and reflexivity</b>			
<i>Personal Characteristics</i>			
1. Interviewer/facilitator	Which author/s conducted the interview or focus group?	GS, CN	Methods and Results
2. Credentials	What were the researcher's credentials? E.g. PhD, MD	GS – BSc CN –MSc, BSc KOS – PhD, MSc PG Cert HE AS – PhD, BSc NH - PhD, MSc, Grad Dip Phys, PG Cert HE,	Methods
3. Occupation	What was their occupation at the time of the study?	Musculoskeletal Physiotherapists	Methods
4. Gender	Was the researcher male or female?	Male	Methods
5. Experience and training	What experience or training did the researcher have?	GS/CN undertook 3 hours of NIHR training on semi-structured interviewing	Methods
<i>Relationship with participants</i>			
6. Relationship established	Was a relationship established prior to study commencement?	No	Methods
7. Participant knowledge of the interviewer	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	Participants were briefed on the purpose of the study and understood that it was a research project for GS.  Ethical approval had been granted, participants reviewed the participant information leaflet prior to giving their written informed consent to be involved.	Methods, Acknowledgements: footnotes (ethical approval)
8. Interviewer	What characteristics were	Potential source of bias: GS is a	Methods, Strengths

characteristics	reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	British Punjabi male and CN a White British male with 11 and 13 years musculoskeletal physiotherapist experience respectively, both with special interests in CLBP disorders	limitations and implications for future research
<b>Domain 2: study design</b>			
<i>Theoretical framework</i>			
9. Methodological orientation and Theory	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	Interpretive description and thematic analysis	Methods
<i>Participant selection</i>			
10. Sampling	How were participants selected? e.g. purposive, convenience, consecutive, snowball	Purposive sampling	Methods
11. Method of approach	How were participants approached? e.g. face-to-face, telephone, mail, email	Mail – study Information, and a consent letter for telephone contact were posted to eligible individuals with their physiotherapy appointment letter.	Methods
12. Sample size	How many participants were in the study?	Ten	Methods and Results – Table 1
13. Non-participation	How many people refused to participate or dropped out? Reasons?	Ten potential participants that were invited for a semi-structured interview, all gave informed consent and completed the interview. There were no participants who subsequently refused to participate, withdrew consent or dropped out.	Methods
<i>Setting</i>			
14. Setting of data collection	Where was the data collected? e.g. home, clinic, workplace	All interviews were conducted in a quiet room in the physiotherapy department.	Methods
15. Presence of non-participants	Was anyone else present besides the participants and researchers?	No	n/a
16. Description of sample	What are the important characteristics of the sample? e.g. demographic	The sample comprised of five White British (2 males: 3 females) and five English speaking Punjabi (3 males: 2 females) people, with	Methods and Results – Table 1

	data, date	a mean age of 40 years. Data was collected between April 2014 and April 2015.	
	<i>Data collection</i>		
17. Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Interviews were semi-structured using a topic guide (Supplementary File 3) informed by contemporary CLBP literature, and research team expertise. Further refinements were made following two pilot interviews with CLBP patients.	Methods, Supplementary File 3
18. Repeat interviews	Were repeat interviews carried out? If yes, how many?	No	n/a
19. Audio/visual recording	Did the research use audio or visual recording to collect the data?	The interviews were audio-recorded	Methods
20. Field notes	Were field notes made during and/or after the interview or focus group?	No	n/a
21. Duration	What was the duration of the interviews or focus group?	Interviews lasted between 60-70 minutes.	Methods
22. Data saturation	Was data saturation discussed?	Recruitment continued until data saturation was met for the purpose of the study.	Methods
23. Transcripts returned	Were transcripts returned to participants for comment and/or correction?	No	n/a
<b>Domain 3: analysis and findings</b>			
<i>Data analysis</i>			
24. Number of data coders	How many data coders coded the data?	GS, CN and AS independently assessed the accuracy and completeness of all the transcripts	Methods
25. Description of the coding tree	Did authors provide a description of the coding tree?	Provided in Table 3: The thematic development illustrating key stages when themes were changed.	Results – Table 3
26. Derivation of themes	Were themes identified in advance or derived from the data?	GS, CN and AS ensured themes related to the thematic development and emerging	Methods

		themes	
27. Software	What software, if applicable, was used to manage the data?	Microsoft word	n/a
28. Participant checking	Did participants provide feedback on the findings?	Member checking was not conducted to validate interview transcripts due to time and funding issues.	Strengths limitations and implications for future research
<i>Reporting</i>			
29. Quotations presented	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	Yes, specific comments were supported with direct quotes derived from each participant. Quotations were identified using anonymised participant codes.	Results and Supplementary file 5
30. Data and findings consistent	Was there consistency between the data presented and the findings?	Yes	n/a
31. Clarity of major themes	Were major themes clearly presented in the findings?	Yes	n/a
32. Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	Yes	Discussion

## Supplementary File 2

### 1<sup>st</sup> Topic guide

*Notes: The topic guide will be a flexible tool which is open to revision as new areas of interest arise during the process of data collection. In order to limit the length of the interviews, it is not essential that each interview should include every line of questioning as detailed below. Depth of exploration of fruitful areas of discussion is more important than complete coverage of all areas in every interview.*

#### Introduction to the interview:

The interviewer will reassure the person being interviewed that:

- The research study is interested in finding out about their beliefs and experiences in living with CLBP
- There is no intention of 'testing' the interviewees about how well they are managing their CLBP.
- That they are free to say as much or as little as they wish in response to any line of questioning.
- That the content of the interview will not be divulged to their Doctor or Physiotherapist.

#### Background information:

In order to be able to describe the sample of patients who contribute to the study, the interviewer will invite the person being interviewed to provide information about:

- Ethnicity - participant to define their ethnicity
- Age
- Occupation
- When their LBP first started
- Previous treatment

#### Interview guide with prompts:

##### Opening

##### A. History of illness and health seeking behaviour

- 1) When did it start to impact on your daily life?
- 2) Who have seen regarding your CLBP problem?

##### Probe:

- Have you had any Investigations?



Prompts i.e MRI/ x-ray

- What did they show?
- What treatment (s) have you had in the past for your LBP?
- How **helpful** were these **treatments**?

## **B. Coping strategies**

3) How do you cope with your CLBP at present?

### **Probe:**

- What strategies do you have to manage your CLBP?
- What do you do when you have a flare up of pain?
- How do those around you cope/help (i.e. family or friends)?
- Does anyone in your family suffer with CLBP? How do they cope?  
How well do you think you manage your CLBP?

## **C. Cause of condition**

4) What have you been told about the **cause** of your CLBP?

- How did this make you feel?

5) What are your thoughts about the cause of your CLBP? Why do you think this?

### **D. CLBP beliefs**

6) Have you come across any other views or beliefs related to the cause of CLBP amongst people you know?

### **Probe:**

- Where do you think they come from?
- Is that what you think yourself?

## **E. Alternative treatments**

7) Some people use alternative treatments e.g. acupuncture/reiki/reflexology for LBP,

8) What are your thoughts on these types of treatment?

9) Is this something you have used or would consider using?

- a. Why?
- b. Why not?

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3 **Probe:**

- 4  
5 • Benefits  
6  
7 • Disadvantages  
8  
9

10 **F. CLBP and physical activity**

11  
12  
13 10) What are your thoughts about people with back pain doing **physical tasks/jobs**?

14  
15 **Probe:**

- 16  
17 • Is bending/ lifting safe to do?  
18  
19 • Is there anything you avoid doing because of your CLBP?  
20  
21

22 **G. Living with CLBP**

23  
24  
25 11) What do you think is the effect of CLBP on your mood?

26  
27 12) How much of your focus and attention does your CLBP take?

28  
29 13) What do you feel will be the **best way to treat** your CLBP from now?

30  
31 **Probe:**

- 32 • What type of treatment?  
33  
34

35 14) How do you see the **future** with regards to your CLBP?  
36

37 **Probe:**

- 38  
39 • How hopeful are you about the future?  
40  
41 • Do you feel your LBP will get better?  
42  
43

44 **Ending questions**

45 15) Is there anything else that you would like to say that we may not have covered  
46 already or discussed?  
47

48  
49 Thank you for co-operation and for taking the time to answer all the questions.  
50

51 **After 3<sup>rd</sup> interview Revised Topic guide**

52 **Background information:**

53  
54 In order to be able to describe the sample of patients who contribute to the study, the  
55 interviewer will invite the person being interviewed to provide information about:  
56  
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- 58 • Ethnicity - participant to define their ethnicity  
59 • Age  
60

- Occupation
- PMH
- DH
- Activity levels /exercise
- Sleep hygiene

## Interview guide with prompts:

### Opening

#### A. History of illness and health seeking behaviour

#### Could you tell me the story about your LBP?

##### Probe (if it is not clear from the narrative question)

- When it started, how it started?
- When did it start to impact on your life?
- How did this affect you?

#### B. CLBP experiences and beliefs

Childhood/Family history of LBP/pain

#### Can you recall any early life experiences of LBP /pain?

- What was your experience?
- Were you told anything about it at the time? By whom?
- How did you cope with it?
- How did your family/friends react /respond towards your LBP/pain?
- What was the attitude of your parents towards your LBP/pain?

#### While you were growing up, did your parents/family member(s) suffer with LBP/pain?

- What was their experience?
- How did it impact on them?
- What was the cause of their pain?
- How did they try to cope with it?
- Did it have any impact on you and your family?
- Do you feel these experiences of pain have affected the way you think about your LBP?

#### Who have you been to see regarding your LBP?

- What was your experience?
- Did you have any examinations or tests? i.e. MRI/ x-ray
- What did they show?
- How was this explained to you?
- Was the language used simple, or did it include medical terms?
- What was your understanding of this?

- How did this make you feel?

### **What have you been told about the cause of your LBP?**

- By whom?
- How was this explained to you?
- Was the language used simple, or did it include medical terms?
- What was your understanding of this?
- How did this make you feel?

### **What are your thoughts about the cause of your LBP?**

- What makes you think this?
- What things have influenced your thoughts?
  - Family, culture, pain experiences, interactions with HCPs?

### **What do you feel people around you think causes LBP?**

- Where do you think these ideas come from?

### **What treatment(s) have you had in the past for your LBP?**

- What was your experience of these treatments?
- Did they match what you thought would be best for your LBP? If not, why not?
- Did these treatments influence your:
  - Control over your LBP?
  - Ability to do things you wanted to do?
  - Confidence regarding your back?

### **How do you cope with your LBP now?**

- If you had a flare up, how would you manage it? Why?
- How would you manage an acute ankle or knee sprain?
- Would this be the same or different to a LBP flare up? If not, why?
- How do those around you respond or react to you regarding your LBP (i.e. family or friends)?

## **C. HCP relationships**

### **How do you feel HCP's have interacted with you regarding your LBP?**

- What was your experience of the time they spent?
- How well did they listening to you?
- Did they build your confidence?

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3 **Do you feel your cultural background influences your relationship with HCP's and the**  
4 **way you have been treated?**  
5

- 6
- 7 • What are your experiences?
  - 8 • Have you experienced any differences or inequalities due to your cultural  
9 background?  
10

11  
12  
13 **D. Views on exercise and physical activity**  
14

15  
16 **What are your thoughts about people with LBP doing physical exercise?**

- 17
- 18 • Why?
  - 19 • Is there anything you should avoid doing because of your LBP? Why?
  - 20 • What are views on people with LBP bending/ lifting? Why?  
21  
22

23 **E. Alternative treatments**  
24

25 Many people use alternative treatments e.g. acupuncture/reiki/reflexology for LBP  
26  
27

28 **What are your thoughts on these types of treatments? Why?**  
29

30  
31 **What do you think are the best treatments for LBP? Why?**  
32

33  
34 **F. Living with CLBP**  
35

36  
37 **In your experience has LBP impacted on your:**

- 38
- 39 • Health? Activity? Social life? Work? General health? Comorbidities? Other pain  
40 areas? Sleep? Mood?
  - 41 • How?
  - 42 • How much do you think about your back? Why?  
43  
44

45 **How do you picture yourself in 5 years with regards to your CLBP?**

- 46
- 47 • How hopeful are you about the future?
  - 48 • Do you feel your LBP will get better? Why?  
49

50 **Ending questions**

51 **Is there anything else that you would like to say that we may not have covered already**  
52 **or discussed?**

53 Thank you for co-operation and for taking the time to answer all the questions.  
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## Supplementary File 3

Table 3: The thematic development illustrating key stages

	Thematic development stage 1		Thematic development stage 2	Thematic development stage 3	Final theme stage 4
<b>Theme 1</b>	Back pain beliefs	Revised Topic guide	Back pain beliefs	Biomedical Back pain beliefs	Biomedical Back pain beliefs
<b>Theme 2</b>	Coping with CLBP		Coping with CLBP	Coping with CLBP	Coping with CLBP
<b>Theme 3</b>	Psychosocial, dimensions of pain		Impact of CLBP	Psychological, emotional and social dimensions of CLBP	The psychological and emotional dimensions of living with CLBP
<b>Theme 4</b>	Cultural impact of CLBP		Cultural impact of CLBP	Cultural impact of CLBP	The social and cultural-religious impact of CLBP
<b>Theme 5</b>	HCP interactions		HCP interactions, management experience and future expectations	HCP interactions, management experience and future expectations	Reflecting on HCP interactions, management experience and expectations of future management

CLBP = Chronic low back pain  
HCP = Health care practitioner

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3 **Supplementary File 4**  
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5 **Audit Trail example**  
6

7 **Interview transcript excerpts and comments**  
8

9 The GS's comments on interviews are illustrated below,  
10

11 **Transcript S1, lines 1019-1042**

12 I: Right, that's interesting. So with regards to bending and lifting, what are your thoughts on  
13 that?  
14

15 P: I make sure that.... when I am lifting something or I have to bend down, I make  
16 absolutely sure that I am bending my knees and not just tipping over or whatever  
17

18 I: Ok

19 P: You know, your manual handling and all that comes in....so you start thinking, the last  
20 thing I want to do is injure myself further or cause any more discomfort  
21

22 I: Ok

23 P: So you are bending your knees and making sure you are lifting it....**GS's thoughts**  
24 *Impact of manual handling training/Impact of pain on function – bending/lifting - Adopted*  
25 *cautious/protective behvoieur to bending /lifting -Psychological impact*  
26 *vigilance/catstrophising*

27 I: And how long have you been doing that for?

28 P: Well, years now

29 I: So before your back started hurting?

30 P: O yeah

31 I: Then has that changed at all since your back?

32 P: No....I think a bit more....conscious. Consciously, it's almost like if you have....when I say  
33 you..., if I have a task that it would probably involve lifting a box or whatever, I will now  
34 consciously think, make sure you bend your knees and you keep your back straight if you're  
35 lifting something or whatever. Whereas previously you think you are fine, it doesn't matter,  
36 nothing is going to happen so.... **GS's thoughts** *Psychological impact of pain –*  
37 *hypervigilance/ catastrophising with lifting having - Adopted manual handling behavoiur to*  
38 *protect back from future pain - Increased threat to back*

39 I: So your thought process around your lifting has changed?

40 P: It has changed, yes. It will change

41 I: Ok. So what thoughts are going through your mind then when you see something heavy  
42 on the floor?

43 P: Making sure that you don't end up causing more damage **GS's thoughts** *Coping*  
44 *startgeies- Atuuidtde to pain -Biomedical belief -Protective behavoiur/Caution*  
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## Supplementary File 5

Table: Theme 1 examples

Theme	Subtheme	Code	Example quotes from participants
Biomedical back pain beliefs	<i>Subtheme 1.1: Cause of CLBP attributed to physical (structural/a anatomical) factors</i>	<u>Back strain with bending</u>	"I went pick a pair of socks up from the floor so and as I went to pick it up as I was getting back up there was just like this crack sounding noise and erm I think that was my first experience of it." [S10]
		<u>Back strain with lifting</u> <u>Specific traumatic event</u>	"It was definitely related, there was a timber and I went to pick it up and I felt my back hurt" [S2] "I was involved in a car accident where my car, at a roundabout junction, was hit from the back and I think because of the angle I was standing with my neck turned, the impact was quite severe" [S1 PM MD MPR]. "I had a complicated pregnancy in 1995. Ahh, with my son, it was a very difficult birth; really prolonged labour and ammm significant problems during the actual birth. That was quite a shock, needless to say. I didn't have any epidural or anything like that when I had him so my body went in to shock I think with the experience ....I started to get it...." [S4 WBF MD MPR] "It could be a trapped nerve, a slipped disc" [S1 PM MD MPR]
		<u>Biomedical self diagnosis</u>	"...I suppose I'd always think it gets to the point where they cant actually find anything wrong so...its wear and tear because of your age, because there's 50 odd years of...and its almost something which I accept. You almost expect it because you see old people who are struggling with joints and this sort of thing and you think well yeah but for 80 odd years those knees have worked so I can understand a bit of it" [S8 WM LD LPR] "My mother in law just says its lifting and stuff" [S3 WBF MD MPR].
		<u>Biomedical Back Pain beliefs in the Family and cultural community</u>	"They think that by lifting heavy weights or something or moving something heavy that that does their back in"[S7 PM MD MPR]
	<i>Subtheme 1.2: Recalling HCP biomedical diagnosis and the biomedical beliefs</i>	<u>Biomedical diagnosis</u>  <u>Biomedical diagnosis via MRI</u>	"They thought it was sciatica"[S5 PF HD HPR] "The doctors have told me that I have got sacralisation"[S2 WBM MD HPR] [Recalling MRI diagnosis] "It ermm showed like a bulging...ermm at the lower...spine but it was down to my age" [S9 WBF MD HPR] "I had an M.R.I. scan which was showing that I had got wear and tear on the vertebrates and that L4 and L5 were closing up" [S3 WBF MD



	<i>adopted</i>	<p><u>Manual handling influence: protect spine with lifting and bending</u></p> <p><u>Nurse occupational belief</u></p>	<p>MPR].          “ I suppose if you lift incorrectly it will cause back pain.... I mean we have all had it drummed in to us, how to bend our knees and how to do all that malarkey” [S2 WBM MD HPR]          “Well that’s what you get on all these health and safety things at work and lifting weights, they, they reckon you’re supposed to bend at the knees, keep your back straight and stand with your legs” [S8 WM LD LPR]          “I was a nurse for many many years on a very heavy surgical ward and I wonder if maybe I have damaged it while nursing, you kind of associate nursing with back pain, well I do anyway.”[S2 WBM MD HPR]</p>
	<i>Subtheme 1.3: Vulnerability of the spine</i>	<p><u>Central to function</u></p> <p><u>Can’t see the back</u></p> <p><u>Feeling weak and cautious</u></p> <p><u>Precious</u></p> <p><u>Needs urgent attention</u></p> <p><u>Fear avoidant beliefs</u></p>	<p>“I rely on it well most people rely on their back”[S6 PM LD LPR]          “Your spine in general is...central to you ..... I think you’re reminded of it more each day” [S8 WM LD LPR]          “Because your back’s...behind you, you can’t see what’s going on inside it or outside it.”[S10 PF HD HPR]          “It’s always been slightly weaker well felt slightly weaker well it felt slightly weaker so I was just a bit more cautious of it”[S6 PM LD LPR]          “I’ve always had a bit of a weakness in my back for quite a few years” [S9 WBF MD HPR]          “My back seems a bit more precious” [S6 PM LD LPR]          “I feel like my back’s more precious rather than my wrist or ankle because it is a vital piece” [S5 PF HD HPR]          “So if you know there is a problem, go and fix it...the thing is if you don’t fix it...then the impact of it...so the old English saying ‘a stitch in time saves nine” [S1 PM MD MPR].          “Do try and get it sorted out at the most earliest point. Don’t leave it” [S3 WBF MD MPR].          “Obviously not lifting really heavy stuff”[S5 PF HD HPR]          “...Only pick up something that you feel you could pick up, it’s not too heavy.” [S10 PF HD HPR]</p>
	<i>Subtheme 1.4: Future outlook</i>	<p><u>Positivity</u></p> <p><u>Pessimism</u></p>	<p>“I even think now that I will wake up and it will all go away and it maybe will.” [S2 WBM MD HPR]          “Well hopefully in a little less pain than I am in right now” [S3 WBF MD MPR]          “I think it’s always going to hurt me and it’s always going to cause me pain” [S5 PF HD HPR]          “When I look into the future I just think how am I gonna cope with a child when I can’t yknow</p>

		<p><u>Uncertainty</u></p> <p><u>Religious beliefs interlinked with outlook on pain</u></p>	<p>carry heavy things” [S10 PF HD HPR]          “I can only play it by ear” [S8 WM LD LPR]          “But I'm not sure....having lived with it for this long, I'm not sure” [S3 WBF MD MPR]          [Referring to finger amputation] “As I would say, someone up there wanted them so they were gone .....my sin plate clean on that day and we start again sort of thing” [S1 PM MD MPR]</p>
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**Table: Theme 2 examples**

Theme	Subtheme	Code	Quote from participants
<b>Coping with CLBP</b>	<i>Subtheme 2.1: Active coping strategies</i>	<p><u>Self-searching for knowledge and understanding</u></p> <p><u>Learning from pain experience</u></p> <p><u>Confronting pain and battling on</u></p>	<p>“Ammm, it was just something off the internet that suggested you stretch and what not...”[S3 WBF MD MPR]            “You have got to look at why it is hurting and you can ask yourself that question. Don't expect anyone else to have all the answers” [S4 WBF MD MPR]            “With me neck it certainly helps being..active, being yknow rather than sitting staring at a screen” [S8 WM LD LPR]            “All I was bothered about was getting things better for him (disabled child) because he literally couldn't do anything” [S4 WBF MD MPR]            “I just managed it and got on with it..I tend to be quite stubborn” [S3 WBF MD MPR]</p>
		<p><u>Acceptance and adapting to pain, due to a lack of understanding, ineffective interventions and pain duration</u></p>	<p>“I have kind of giving up looking for an answer. I just think whatever happens I have just got to deal with it” [S5 PF HD HPR]            “Put up with it because basically nothing seemed to work” [S3 WBF MD MPR]            “It became normal to me because I've had that for so long. It got normal for me to me feel little niggles in my back”[S6 PM LD LPR]</p>
	<i>Subtheme 2.2: Reliance on HCP's and biomedical interventions</i>	<p><u>Unrelenting search for understanding answers</u></p> <p><u>Explanation &amp; reassurance via investigation</u></p>	<p>“I wonder what it is and for the children ..... I would like to know” [S3 WBF MD MPR]            “I'm looking for answers but I want those answers. I am a dog with a bone” [S4 WBF MD MPR]            “Well I wanted a second scan” [S3 WBF MD MPR]            “An X-ray, MRI scan or anything just so I could have some reassurance that it's nothing major” [S10 PF HD HPR]</p>

		<p><u>Reliance on medication</u></p> <p><u>Punjabi reliance on Biomedical Quick fix</u></p>	<p>"I basically lived on painkillers ever since" [S3 WBF MD MPR]</p> <p>"Well if it does get severe to the point where I can actually feel it..... That's the day I would probably go home and have a couple of paracetamol or something" [S1 PM MD MPR]</p> <p>"Manipulation yeah ..... I just wanted to get the back fixed"[S7 PM MD MPR]</p> <p>" I have a massage every 4-6 weeks. Am... and acupuncture" [S5 PF HD HPR]</p> <p>"I have had new chairs.....I got the one with the lumbar support and an incline" [S1 PM MD MPR]</p>
	<p><i>Subtheme 2.3: Protective and avoidance coping strategies</i></p>	<p><u>Adopted caution, protect spine</u></p> <p><u>Avoidance behaviour: exercise, physical task</u></p>	<p>"If you keep bending at the back all the time. The back takes the strain for everything. If you're bending at the knee to access what it is you need to get it takes the pressure out of your back from a moving and handling perspective" [S4 WBF MD MPR]</p> <p>"I can stay in the office and look after my back ..... whereas previously I might think, o well I might go for a walk around the building .....I wouldn't be doing that because it wouldn't be enjoyable and it would hurt" [S2 WBM MD HPR]</p> <p>"Subconsciously you know that you should move a certain way to avoid injury. You know that, well I do because it is part of how I live yeah" [S4 WBF MD MPR]</p> <p>"I can't do this my back hurts, or I can't do that my back hurts" [S10 PF HD HPR]</p> <p>"Yeah I have stopped swimming" [S4 WBF MD MPR]</p> <p>"I used to be very active, I just don't do any exercise really at the minute" [S9 WBF MD HPR]</p> <p>"If I bend over, that's how my back went, and it's more than once, it's twice now, anytime I go to bend down now I think maybe it's going to go again or I shouldn't be doing this" [S6 PM LD LPR]</p> <p>"I don't do any heavy lifting" [S2 WBM MD HPR]</p> <p>"On my drive now I've got a load of bricks and if I need to lift them up ..... ten years ago I wouldn't of thought nothing about it I would of picked them ..... whereas now maybe.... I think really haven't got it in me to lift them ..... I feel a bit weaker so it's more, now it's become if I can avoid it I avoid it . I just think why take the risk on that"[S6 PM LD LPR]</p>
	<p><i>Subtheme 2.4: Coping</i></p>	<p><u>Punjabis passive to active</u></p>	<p>"I felt like I was doing more instead of sitting in my bed all day" [S5 PF HD HPR]</p>

	<i>transition</i>	<u>coping style</u>	<p>“Over time I tried to not spend too much time lying down and just tried to keep myself active as possible ..... just try to keep things moving” [S7 PM MD MPR]</p> <p>“I’ve had to like buy books and stuff myself and do research on the internet myself to ermm be able to look into these things more” [S10 PF HD HPR]</p>
	<i>Subtheme 2.5: Health benefits of an active lifestyle in Punjabis</i>	<u>Psychological, emotional effect</u>	<p>“I try and do other things now to...like maybe go to the cinema and like sit in the big seats and like try and make myself a bit comfortable and like..because I’ve had it for so long I’ve gotten used to like erm making plans with my back pain so erm I’m not as depressed as I would’ve been maybe 5-10 years ago” [S10 PF HD HPR]</p>

Table: Theme 3 examples

Theme	Subtheme	Code	Quote from participants
<b>The psychological and emotional impact of CLBP</b>	<i>Subtheme 3.1: Psychological and emotional consequences</i>	<u>Depressed mood</u>	<p>“I wake up grumpy. I mean obviously for a person who has been able to sleep 7,8,9 hours when you are constantly waking up....even the small break in a sleep” [S1 PM MD MPR]</p> <p>“I’ve never felt as low as I have done” [S9 WBF MD HPR]</p> <p>“The injections didn’t work. I kind of felt low”[S7 PM MD MPR]</p> <p>“Sometimes I still feel really bad, really low mood because I can’t do what I used “[S5 PF HD HPR]</p> <p>“I am awful. I am moody a lot of the time.... it does make me grumpy” [S3 WBF MD MPR]</p>
		<u>Hopelessness</u>	<p>“Not much I can do about it is basically what the guy said” [S4 WBF MD MPR]</p> <p>“There was no other route to go down” [S3 WBF MD MPR]</p> <p>“I went and saw a chiropractor... he gave an x-ray looking for back symptoms ...they said it didn’t show anything, there was nothing they could do” [S7 PM MD MPR]</p>
		<u>Frustration</u>	<p>“I had an MRI scan and that’s when they done and my spine was fine I was just annoyed that there was no answers” [S5 PF HD HPR]</p> <p>“It’s a ball ache and it’s getting on my</p>

		<p><u>Catastrophising thoughts</u></p> <p><u>Uncertainty</u></p> <p><u>Lack of control over pain</u></p>	<p>nerves" [S4 WBF MD MPR]</p> <p>"It's so frustrating where, when...sighs, yknow things like, picking up my sewing machine I just think well what's up with me?! It's ridiculous" [S9 WBF MD HPR]</p> <p>"You wonder, what if? What if you can't carry on at the same level that you are" [S1 PM MD MPR]</p> <p>"It just makes you think is this the start of something bigger for me?"[S6 PM LD LPR]</p> <p>"They couldn't really give me an explanation really I was thinking then oh what's caused my problem now"[S7 PM MD MPR]</p> <p>"Apprehensive, apprehensive about all those things that I have just spoken about. About what would the impact be in later life.....ahh, that's about it at the moment" [S1 PM MD MPR]</p> <p>"But I'm not sure....having lived with it for this long, I'm not sure" [S3 WBF MD MPR]</p> <p>"It's not improving, it's getting probably a bit more.....regular" [S1 PM MD MPR]</p> <p>"I'm just getting to the stage where I'm thinking on the days where it gets really really bad that I'm gone beyond the need of self-help" [S4 WBF MD MPR]</p>
	<p><i>Subtheme 3.2: Catastrophic nature of pain flare-ups</i></p>	<p><u>Catastrophic description: impact on body and mind</u></p>	<p>"I just...I got up and I had...I got up on the Monday morning ermmm and I felt like a cripple...I felt like I was folding it half, it was hard work to stand up straight"[S8 WBM LD LPR]</p> <p>"It's horrible. It's the worst pain. It makes you cry it's that bad. the pain is ermmm you just can't, you just feel like you've lost control. You can't do anything for yourself you can't like... you can't even go to yknow the loo because you're taking so many steps to get there and every step you take you're like ow, ow, ow and it's that acute ermm it's just horrible. You just...I think you just kind of lose yourself and that's when you start getting depressed like "oh god it's happened again" [S10 PF HD HPR]</p>
	<p><i>Subtheme 3.3: Threat to self-identity</i></p>	<p><u>Threat to self</u></p>	<p>"I suppose it's hindering my life" [S3 WBF MD MPR]</p> <p>"Obviously it's restricted what I can</p>

		<p><u>Disrupting personal care/daily function</u></p> <p><u>Dependency on family</u></p> <p><u>Disrupting house chores</u></p> <p><u>Barrier to recreational activities</u></p> <p><u>Sleep disruption</u></p>	<p>and can't do" [S2 WBM MD HPR]</p> <p>"It's a small thing like bending over the sink to brush your teeth" [S4 WBF MD MPR]</p> <p>"I got out of bed ...it took me quite a while to sort of straighten up" [S8 WM LD LPR]</p> <p>"My socks, my shoes, tying my shoes up, I can't bend down" [S9 WBF MD HPR]</p> <p>"It's embarrassing sometimes and degrading because he ..has to help me put my underwear on because I cant bend down to even put my knickers on" [S9 WBF MD HPR]</p> <p>"I get the hoover out and hoover, within 10 minutes I'm absolutely shattered and it's hurting my back" [S9 WBF MD HPR]</p> <p>"Mowing the lawn... It's that pushing forward movement I mean it's a push mower.. I mean it takes us about an hour to mow our lawn. And I know that if I sit down after doing that, that I will be in trouble" [S3 WBF MD MPR]</p> <p>"I can't stand at a sink for more than 10 minutes without pain." [S10 PF HD HPR]</p> <p>"A fair weather golfer.... by the time I played a few holes. I could feel that there was additional pressure on the back" [S1 PM MD MPR]</p> <p>"I can't ride my bike because it's in the leaning forward position and I'll have only gone half a mile but it causes pain in my back" [S3 WBF MD MPR]</p> <p>"Over the last year it is a genuine struggle if I woke up in the night I struggle to get back to sleep" [S4 WBF MD MPR]</p> <p>"It's okay during the day but at night I'm really suffering"[S5 PF HD HPR]</p> <p>"I am constantly tossing and turning ...."[S1 PM MD MPR]</p> <p>"I sleep on my side but then....i start to ache in my hips and then I have to change sides .... I do wake up because of it and then it takes me about 20 minutes to go back to sleep" [S10 PF HD HPR].</p>
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Table: Theme 4 examples

Theme	Subtheme	Code	Quote from participants
The social and cultural-religious impact of CLBP	Subtheme 4.1: <i>Threat to family/friend relationships and social life</i>	<u>Disrupting family roles/social activity</u>  <u>Elicit negative family emotions</u>  <u>Social disruption, isolation</u>	“If my back goes I can’t do nothing, I wouldn’t be able to do any housework or...ermmm no bending certainly no bending” [S10 PF HD HPR] “If I’m restricted so is she [wife] in respect of doing things and going out and stuff....”[S2 WBM MD HPR] “Even when I’m driving when we go over a speed bump or a pothole the intense pain that shoots up my back is amazing” [S3 WBF MD MPR] “When I’m down everybody else feels down in the family” [S9 WBF MD HPR] “You have to stand up in a bar or evening and that just is so painful....., so I tend not to be social” [S10 PF HD HPR].
	Subtheme 4.2: <i>Work impact</i>	<u>Disrupting work</u>  <u>Burdening colleagues</u>  <u>Sickness absence</u>  <u>Financial pressures</u>	“The pain constraints on work”[S1 PM MD MPR]. “I’ve also had to raise it with work because of the amount of time I sit by the computer and they’ve had to get me a special chair” [S10 PF HD HPR] “While my job is actually fully sitting down, any activities where they have asked me to go and do outreach sessions, I have had to restrict them or send other people, which again isn’t ideal but other people can deputise as necessary” [S2 WBM MD HPR] “I didn’t drive.....,I went into the office a few times but then got a lift into the office from colleagues” [S7 PM MD MPR] “I think I only might have had a few days off in the whole time I was there for the pain” [S3 WBF MD MPR] “I’m off work I’ve had so much time off work”[S9 WBF MD HPR] “I’m in the building trade without a back I can’t earn no money. So that goes through your mind as well as that you’re not going to get no sick pay or anything” [S6 PM LD LPR] “Still go to work ermmm...because I’ve got still got bills to pay and I’ve still for me daughter to support through university and so on and so forth so there’s that pressure” [S8 WM

			LD LPR] “Initially I suppose I thought...might as well have to look for a different type of job because of the....the physical aspect if you like” [S8 WBM LD LPR]
	<i>Subtheme 4.3: The impact of CLBP on cultural and religious wellbeing</i>	<u>Religious rituals: disrupted sitting to meditate /secluding self</u>	“I couldn’t do like sit on the floor if it was too hard ..if I sat on the floor for a certain amount of time, then got up, started moving around, my legs would get pins and needles and would reach my back” [S7 PM MD MPR] “ [Referring to sitting in the temple] I’ll just go when it’s quiet yknow, ermmm do my praying and then come back out and then just go downstairs where there’s chairs or.. I can just hang around somewhere else and that kind of...I feel secluded sometimes because yknow people tend to like wanna sit upstairs and I have to like go just downstairs” [S10 PF HD HPR] “Because of the pain yknow like I can’t help around the house as much as I would like” [S10 PF HD HPR]
	<i>Subtheme 4.4: The response of family, friends and wider community to CLBP</i>	<u>Disrupting female role within the home/burdening others</u>  <u>Family: varying response/ support</u>  <u>Punjabi community: Lack of empathy/ understanding</u>  <u>Punjabi community: Stigmatized</u>	“My brother....., he was just getting more and more annoyed every time because there was no answers”[S5 PF HD HPR] “People were badgering me, yknow its not getting any better you ought to go .....and see”[S8 WM LD LPR] “Yeah and whenever I did anything they’d say oh watch your back, you’d be carefully about, you don’t want that happening again” [S9 WBF MD HPR] “Everyone thinks like “oh her back her back, she just uses that as an excuse now...” [S10 PF HD HPR] “Unfortunately there is always this advice from the community that oh I had a similar thing...no you didn’t because you have no idea what the cause of my problem is...”[S1 PM MD MPR] “I believe they’re like the doctors that I’ve experienced. They always assume the worst first yknow” [S10 PF HD HPR] “Oh there comes a fat cow, she’s got back, yknow she just can’t get up, or oh let’s make room for her she’s like she can’t stand up or just that kind of response. It’s not about pain it’s about...oh she’s too big, she can’t do



			it cus she's too big"[S10 PF HD HPR]
	<i>Subtheme 4.5: Recalling family experiences of CLBP</i>	<u>Varying impact of CLBP/coping strategies</u>	<p>"He [Brother] has medication to deal with that on a daily basis"[S4 WBF MD MPR]</p> <p>"He [Dad] felt like a bit of self-dignity went because he was always self-dependent and independent, always doing his own thing"[S5 PF HD HPR]</p> <p>"He [referring to husbands back pain] could sit but he couldn't stand and he couldn't walk...he could just barely walk from the edge of his room to the other side... to get to the kitchen and he would be bent over and he would be crippled". [S3 WBF MD MPR]</p> <p>"He [Dad] has not let it really impact him to be honest" because he still goes to the gym, he still lift weights, just does everything. Before every now and again his back hurts a little bit. He does what he does it he hasn't changed anything"[S6 PM LD LPR]</p> <p>"Well my mum used to have back pain and she always used to say 'oh doctors don't do anything they say they just can't do anything with it'"[S10 PF HD HPR]</p> <p>"My dad suffered from back pain. He had a slipped disk. They said he would never walk again"[S5 PF HD HPR]</p> <p>"She [Husbands physio] explained things; she showed us.....she showed us a back. What you should do with it, what you can do... she gave him exercises to do and how to manage it in the future better" [S3 WBF MD MPR]</p>
		<u>Varying HCP interactions</u>	

**Table: Theme 5 examples**

Theme	Subtheme	Code	Quote from participants
<b>Reflecting on HCP interactions, management experience and expectations of future management</b>	<i>Subtheme 5.1: Varying quality of therapeutic alliance</i>	<u>Strong therapeutic alliance</u>	<p>"I felt that it was explained pretty much...completely if you like" [S2 WBM MD HPR]</p> <p>"I left that consultation knowing that I can physically do more than what I thought I could do"[S6 PM LD LPR]</p> <p>"She helped me and showed me how to do it"[S5 PF HD HPR]</p> <p>"I felt they were a lot more like approachable, they were a lot more</p>

		<p><u>Weak therapeutic alliance</u></p>	<p>understanding....I was listened to, that was the biggest thing" [S10 PF HD HPR]          "I'm doing exercises, .... which I've been told to do"[S9 WBF MD HPR]          "My confidence was improving"[S5 PF HD HPR]          "[Referring to chiropractic] Why is that treatment not available on the NHS?" [S10 PF HD HPR]          "I get the feeling sometimes that it's maybe a textbook thing to treat back pain" [S4 WBF MD MPR]          "I think probably like my GP didn't take me seriously.... I don't think anybody like has the time" [S10 PF HD HPR].          "I don't think people understand the severity of the situation"[S4 WBF MD MPR]          "With the chiropractor there wasn't much listening ,with the back specialists there was to an extent but it wasn't too involved" [S6 PM LD LPR]          "I went back 5 times in total.....So I kept going back until I got more or less what I had hoped for" [S2 WBM MD HPR]          "I got the impression from the Dr that when I went to see the back specialist they would do at least an ultrasound and she didn't" [S8 WM LD LPR]          "I was expecting a diagnosis. .... I want him to tell me" [S3 WBF MD MPR]          "Yeah, expected no more flare ups ..... within a matter of weeks, 2 weeks if that, I was just sitting down and had another flare up" [S7 PM MD MPR]          "She hadn't really done anything to my back, she hadn't really done the tests or anything"[S7 PM MD MPR]          "I think I was expecting to be....to kind of have something like that done to me rather than just saying, 'ok here are the exercises, do them at home" [S5 PF HD HPR]          "No sort of a aftercare at all you know put an ice pack on your back that's it "[S6 PM LD LPR]</p>
	<p><i>Subtheme 5.2: Interpreting the HCP explanation</i></p>	<p><u>Adopt caution, Protect spine</u></p> <p><u>Diagnostic</u></p>	<p>"[Told by HCP] Be more careful so when you get into bed, don't just jump in"[S7 PM MD MPR]          "Just be careful of what I do, just be careful of how I bend, Dr's and physio" [S9 WBF MD HPR]          "It could be your movements, it could be</p>

		<p><u>uncertainty</u></p>	<p>your muscles, it could be disc, it could be .. anything. Ermmm but obviously...I don't know what's causing my back pain.." [S10 PF HD HPR]                  "Mixed messages .... oh it could be your stomach, they told me that wear and tear is on my hip and that's causing pain in.... my back" [S7 PM MD MPR]</p>
	<p><i>Subtheme 5.3: Appraising interventions and ability to control CLBP</i></p>	<p><u>Ineffective medication, acupuncture</u></p> <p><u>Short lasting manual therapies</u></p> <p><u>Variable impact of injection and exercise therapies</u></p>	<p>"Some of the pain killers made no difference" [S2 WBM MD HPR]                  "I went through the acupuncture stage and that didn't work" [S3 WBF MD MPR]                  "I did go to see a chiropractor as well ermm because at one stage I was just like oh I can't take this anymore.... I had about 8 treatments?.....I probably had about 2 or 3 treatments in one week ... as soon as it stopped ermm probably about....the first 2 weeks I would say the pain was still there" [S10 PF HD HPR]                  "They gave me some injections into my facet joints and they didn't help that much... they gave me some more injections but this time they were deeper. So since that time, I've not had any flareups as what they were before but I've had constant pain" [S7 PM MD MPR]                  "Because I'm exercising its obviously building my muscles and whether that's causing me more pain"[S5 PF HD HPR]                  "I went to a yoga class three weeks ago and it about killed me but I love it, the next day although there was a dull ache in my back it felt wonderful. I felt like I had really stretched it out" [S4 WBF MD MPR]                  "My flexibility has increased"[S6 PM LD LPR]                  "The pain goes away if I do stretching, it goes away and like arching your back over and putting your hands on your buttocks and arching back" [S3 WBF MD MPR]                  "Exercises ... I do them everyday, every morning or night... the underlying problems still there its not going away, its not getting any better" [S9 WBF MD HPR]                  "When I was walking or running or whatever I was doing the pain was worse than it was before" [S10 PF HD HPR]                  "My back pain got worse...it was like exercises everyday to do like my back and twisting it" [S7 PM MD MPR]</p>

	<p><i>Subtheme 5.4: Expectations of future management</i></p>	<p><u>Individualised management Mind body approach</u></p> <p><u>Effective communication : listen, give time,</u></p> <p><u>Physical examination Clear explanation and understanding of pain</u></p> <p><u>Support and guidance, gain control</u></p> <p><u>Increase exercise</u></p>	<p>“Almost take it case by case, person by person and work out what’s best for that person”[S8 WM LD LPR]</p> <p>“The psychological mixed with other things, it’s a huge things” [S4 WBF MD MPR]</p> <p>“I think you can help yourself a lot.... By...believing in yourself” [S8 WM LD LPR]</p> <p>“Listening to what I have to say” [S6 PM LD LPR]</p> <p>“They will give me enough time to explain the problem” [S2 WBM MD HPR]</p> <p>“I think, to me its almost just a matter of communicating rather than having a rigid set routine” [S8 WM LD LPR]</p> <p>“Give me some sort of examination of the problem area” [S2 WBM MD HPR]</p> <p>“All I want to know is what’s triggering it” [S4 WBF MD MPR]</p> <p>“Explain why and what they’re doing in detail that would be understandable, cause sometimes the physio would explain something in their term... like L1 or something, I remember hearing that”[S5 PF HD HPR]</p> <p>“Give you the right advice and guidance”[S3 WBF MD MPR]</p> <p>“Maybe some follow up consultations to see how have you progressed” [S6 PM LD LPR]</p> <p>“Most importantly that they will give me some advice or treatment, exercise. Something that I can go home and feel that there is progress being made” [S2 WBM MD HPR]</p> <p>“Exercise – yeah well I need to keep doing exercise”[S7 PM MD MPR]</p> <p>“Just some sort of activity I can do that helps it and relieves the pain”[S9 WBF MD HPR]</p>
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