Paired interviews of shared experiences around chronic low back pain: classic mismatch between patients and their doctors

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Background. Current treatments for chronic low back pain (LBP) appear to be inadequate and there are growing calls for new approaches. This study explores the paired interviews of shared experiences among chronic LBP patients and their physicians with the ultimate goal of improving doctor–patient communication and clinical outcomes.

Methods. In-depth interviews of a purposeful sample of paired chronic LBP patients and their doctors were conducted, transcribed and analysed using a multistep iterative process. Interview pairs were examined for important themes and major areas of convergence and divergence/mismatch.

Results. Patients’ stories focused on their suffering from severe and disabling LBP while conveying a high level of reliance on their family physicians. Physicians described many challenges in treating this patient population. Patient and doctor stories were convergent regarding the severity/seriousness of illness, the lack of effective treatments and the existence of many barriers to care. Notable areas of mismatch: biomedical/biomechanical versus biopsychosocial (BPS) models of illness, treatment expectations/goals of reducing pain versus improving function and the importance of a definitive diagnosis.

Discussion. Patient and physician stories revealed shared themes and convergences, as well as significant discordance and mismatch. Family physicians, trained in and adherent to the BPS model, may have great difficulty when matched with biomechanically oriented patients. Reconceptualizing doctors and LBP patients as a single teachable dyad may be useful. Clinical application of paired interviews of shared experiences may be useful in bridging communication and paradigmatic gaps, reducing mismatch and developing shared treatment plans.

Keywords. Chronic disease management, doctor–patient relationship, patient-centred care, pain, low back pain.

Introduction

Chronic low back pain (LBP) is a problem of enormous proportions in its cost to society and burden of suffering. Back pain is the second leading reason for a symptom-related visit in the USA, accounting for \textasciitilde2.3\% of all office encounters.\textsuperscript{1,2} It is estimated that cost exceed $100 billion per year in the USA alone, of which over two-thirds may be attributed to lost wages and productivity.\textsuperscript{3}

Despite more than two decades of intense and increasingly rigorous research efforts on LBP, there has been little progress in reducing the burden of suffering. Health care costs associated with LBP continue to rise, the percentage of office visits for LBP has remained constant and effective new treatment modalities have been elusive.\textsuperscript{3–5} A clinically relevant pathologic diagnosis for LBP symptoms can only be established in a small percentage of cases, even with the use of new imaging techniques.\textsuperscript{6,7} Such imaging is associated with increased costs and over utilization, without evidence of improved outcomes.\textsuperscript{6,8} Despite efforts from groups like the UK-based National Institute for Health and Clinical Excellence (NICE) to produce updated treatment guidelines, tremendous difficulty exists in optimizing treatments for this condition in
Valuable insights on chronic LBP have come from qualitative and mixed method research, including the use of narrative or story collecting approaches. These studies have shown that patients with back pain value being taken seriously by their physicians, feel entrapped within the health care system, value a specific LBP diagnosis and have many psychosocial issues that need to be addressed by their primary care physicians (PCPs), including fears of the future and despair due to the lack of a specific diagnosis. Meanwhile, physicians expressed frustration with the difficulty of chronic LBP care and noted many diagnostic and psychosocial challenges when trying to build an empathic relationship with patients with chronic LBP.

While providing valuable insights, none of these studies examined ‘paired’ interviews of patients and physicians. Extensive literature review revealed only a single study that compared the stories of six unpaired patients and doctors around the same disease process (non-specific chronic pain). To our knowledge, no studies have been published that explore paired interviews around the same index cases of chronic LBP patients. Exploration of patient and physician paired interviews may hold additional potential for improving patient care and outcomes. Research in other fields has shown that patients with higher levels of agreement and understanding with their providers have improved outcomes, including higher patient satisfaction, decreased catastrophizing, lower perceived levels of pain, decreased objective disability survey score, decreased intervention seeking and increased adherence to clinical recommendations.

Methods

Sites and participants
This study was conducted at the Family Care Center at Memorial Hospital, a model teaching practice of the Department of Family Medicine at The Warren Alpert Medical School of Brown University. It serves 12,500 patients from the Blackstone Valley region of Rhode Island and southeastern Massachusetts, the majority of whom are medically underserved. Patients are seen either by fully licensed family practitioners (‘attending physicians’) or by postgraduate family practice trainees (‘residents’) with an attending physician as preceptor.

A purposeful sample was recruited from the active patient rolls of the Family Care Center. PCPs and nursing staff at the Family Care Center were contacted and asked to review their patient lists of those diagnosed with chronic LBP for those who fit inclusion and exclusion criteria. Inclusion criteria for patients were chronic LBP (>6 months of daily or near daily pain), age >18 years, fluency in spoken English and willingness to participate in an in-depth interview. Exclusion criteria were limited to a history of psychotic illness or severe co-morbidities that might interfere with the interview process. Potential patient participants who met the criteria were then contacted, either by their PCP or by a research assistant, and if they agreed to participate, an interview was conducted. Participants’ PCPs (either attending or resident family physicians) were then subsequently interviewed.

The protocol for this study was approved by the Institutional Review Board of Memorial Hospital of Rhode Island. All study participants gave their written informed consent before sharing medical or personal information with an investigator. Confidentiality was maintained throughout the study. Information from interviews was not shared between patient and physician participants and nothing was entered into the medical record regarding the study.

Data collection
Data were collected using in-depth interviews (average length 60 minutes) that employed a semi-structured moderator’s guide of open-ended questions with investigator-developed prompts. Interviews of both patients and physicians were designed to allow participants to tell their stories, construct an illness timeline, establish the history of the LBP and explore its complications and effects on the lives of those suffering from it. Physicians were asked to provide their observations and impressions regarding the individual patient case (i.e. the patient participant with LBP who was interviewed), as well as general thoughts on their chronic LBP populations and practice patterns. Patient–physician pairs were interviewed within 1 month of each other to avoid timeline confounders. Audio recordings were made of each interview. Interviewer process notes, observations and insights were also immediately recorded. Following each interview, patient charts were consulted for demographic information and to confirm medication histories and co-morbidities. Interviews of each patient and his/her doctor were identified as an interview ‘dyad’; once completed, each dyad was transcribed verbatim and prepared for analysis.

Data analysis
Data were analysed using a multistep iterative process (see Fig. 1). Investigators used immersion–crystallization to document important themes, categories and recurrent ideas. Immersion–crystallization is a qualitative analytic style involving cycles of concentrated textual review of data, combined with reflection and intuitive insights, until reportable interpretation becomes apparent.
AA and JB read all interview transcripts and the other authors read 20%. AA constructed a list of thematic codes and applied them to two interview dyads. The thematic codes were then discussed with the other authors and amended. AA then coded all interviews for these themes, with quality assessment of a sample by JB. As a group, the authors then discussed thematic codes across all interviews. For each theme, data were compared between patient and physician within the dyad. The results of these discussions were melded with key insights from the literature into a Thematic Codebook that was continually modified through iterative cycles of individual and group analysis involving the authors and three groups of consultants. The final draft of the Thematic Codebook consisted of 10 major thematic categories (see Table 3). Within each dyad, patient and physician stories were compared for points of ‘convergence’ (common views or opinions), ‘divergence/mismatch’ (dissenting views or opinions), as well as ‘omissions’ (withholding information and failure to divulge) and ‘commissions’ (active misleading).

After elucidation of categories and analysis of dyads, patterns of convergence and mismatch that emerged across doctor–patient pairings were sought for further discussion before final results and conclusions were determined. Alternate hypotheses and interpretations were entertained throughout the entire analytical process. Final categories of results, including areas of convergence and mismatch, were informed by questions asked in the interview guide and the final version of the Thematic Coding Sheet.

Results

General findings
Thirty participants were recruited using purposeful sampling methods, underwent full written informed consent, and were interviewed. Of these 30, only 23 participants were able to be included in the analysis due to unavailability of the PCP to be interviewed in a timely manner (3), patient not meeting inclusion criteria on secondary review (presence of psychotic mental illness) (1) and audiotape/transcription quality errors (3). The seven patients not included in the analysis were similar in terms of age and sex to the sample. Thirteen different physicians were interviewed for the 23 cases as some had more than one LBP patient from the sample. Physicians were interviewed once per patient if they had more than one patient in the study and were interviewed at discrete times for each patient. No physicians declined to participate in this study (see Table 1).

Analysis revealed major themes and frameworks of illness central to either the doctor or the patient population. Examining multiple dyads for convergence/divergence, omission/commission and areas of narrator emphasis revealed three major areas of convergence
and three major areas of divergence/mismatch (see Table 4). Areas of convergence include: (i) patients suffered from severe/serious chronic LBP, (ii) current treatments are ineffective and (iii) many barriers exist to care. Areas of mismatch include: (i) biomedical versus biopsychosocial (BPS) model of illness, (ii) treatment goal of reducing pain versus improving function and (iii) the importance of a definitive diagnosis.

Patient findings
Patients described suffering from severe or disabling LBP and expressed their pain in a variety of ways, using the numerical pain scale, subjective descriptors, metaphors and describing functional limitations. The majority of those interviewed noted a high level of trust in and reliance on their PCPs, regardless of the results of their treatment regimen. Patients’ views on the effectiveness of pain medication and surgery varied greatly, and in general, they were open to try any complementary or adjunct therapy, which was available to them.

Physician findings
Physician stories tended to be summaries of patients’ symptoms, suffering and treatments with the inclusion of broad psychological and social parameters and hypotheses. Physicians often noted high levels of frustration both with their individual LBP patients and in managing their care. Reasons for this frustration included multiple complaints/limited time per visit, psychiatric co-morbidities that complicate delivery of care and feeling relegated to a support role in the face of treatment ineffectiveness. Many observed that disability had a large role in the identity of their patients, which loomed over most aspects of their lives.

Areas of convergence
Throughout patient–physician dyads, paired stories showed notable areas of convergence. Both groups acknowledged the severity and seriousness of chronic LBP and the suffering that accompanied it. Both physicians and patients readily acknowledged that current treatments for LBP are ineffective. Some dyads described the difficulties of treating chronic LBP as a disease process. Others, like the following, focused on more personal conflicts within the medical system:

Patient 3: I get dissatisfied [at the clinic] because it seems like there’s nothing getting done…. I guess that they are getting tired of hearing complaints after a while. But do something, and I won’t complain any more.

Physician 3: At some level, I’m aware that I’m probably not meeting all of her expectations … She’s in such chronic pain and I know that her treatment is limited.

Physicians and patients each noted similar barriers to effective care, including the high cost of medical/surgical interventions, lack of adequate health insurance, the time consuming process of the disability benefit system and low education/socio-economic status. One dyad noted the vicious circle when chronic LBP afflicts someone with a limited education:

Patient 12: My reading is poor, I can’t spell for jack… it’s like I’m in a no-win situation … All my work comes physical.

Physician 12: Given his level of education he needs to do labor type jobs, so from the standpoint of vocational training, he’s disabled.

Areas of mismatch
While convergence between doctor and patient stories was noted in some areas, prominent mismatch and divergence greatly overshadowed these results. Perhaps the most striking finding of these paired narratives was the mismatch in their explanatory model of illness. Creating a model of chronic LBP involves integrating the aetiology, natural history, severity and contributing psychosocial stressors of the illness. Patients almost uniformly had a biomedical/biomechanical (BM) model for their chronic LBP, while nearly every doctor constructed a BPS model31 (see Table 2).

Patients’ BM models in our sample emphasized the concrete nature of their injuries (e.g. bones and

Table 1

<table>
<thead>
<tr>
<th>Characteristics of interview participants</th>
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<tbody>
<tr>
<td>Patient participants</td>
<td>23</td>
</tr>
<tr>
<td>Male</td>
<td>12</td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
</tr>
<tr>
<td>Average patient age</td>
<td>45 (range 28–72)</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>7</td>
</tr>
<tr>
<td>Unemployed</td>
<td>6</td>
</tr>
<tr>
<td>Disability</td>
<td>10</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>12</td>
</tr>
<tr>
<td>Unmarried</td>
<td>11</td>
</tr>
<tr>
<td>Narcotic users</td>
<td>16 (70%)</td>
</tr>
<tr>
<td>Psychiatric co-morbidities</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>16 (70%)</td>
</tr>
<tr>
<td>Anxiety/PTSD</td>
<td>9 (39%)</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>2 (9%)</td>
</tr>
<tr>
<td>Physician participants</td>
<td></td>
</tr>
<tr>
<td>Residents physicians</td>
<td>5</td>
</tr>
<tr>
<td>Attending physicians</td>
<td>8</td>
</tr>
<tr>
<td>Average resident experience in family medicine (years)</td>
<td>2.6</td>
</tr>
<tr>
<td>Average attending experience in family medicine (years)</td>
<td>17.9</td>
</tr>
</tbody>
</table>

Table 2

<table>
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<tr>
<th>Explanatory models</th>
<th>BM</th>
<th>BPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>Doctor ($P &lt; 0.001$)</td>
<td>1</td>
<td>22</td>
</tr>
</tbody>
</table>
the physician’s implication that the patient’s model of illness was inferior and inadequate:

Patient 2: The last 2 years, I have really gone downhill. There was another time I took a fall and that injured me too.

Physician 2: He has more than just mechanical lower back problems. He is actually structurally improving … I think he knows that he’s depressed, but he feels like he’s depressed for other reasons. I don’t think he realizes they [are connected]—he doesn’t have insight.

Many of the family physicians in this sample felt that the BM model was inferior to the BPS model of chronic LBP; several noted that this as a barrier to care. This was also conveyed in the tone of the physicians’ interviews as several were dismissive and critical of their patients’ ability to conceptualize illness and show clinical improvement.

Another area of mismatch between doctor and patient pairs was treatment goals and expectations. Patients focused on pain symptoms and framed their future goals in terms of reducing its severity without much reference to improving function. In contrast, physicians were generally focused on improving their patient’s overall functional status, while managing their pain as a secondary goal. Several physicians described feeling frustrated at spending significant exam time trying to impress the importance of focusing on functional concerns with little result:

Patient 6: I’m diagnosed with chronic pain syndrome … I must have tried 15–20 medications … the pain is so great and constant that [my doctor] has had a challenge with my pain management.

Physician 6: We try to talk about being more functional, more active, staying as functional as possible despite his disabilities—and all he wants is ‘can you find a stronger pain medicine? Why can’t I get this? Give me more money, give me more …’

Along the theme of pain management, there was doctor–patient divergence regarding the role of narcotics in chronic LBP. The vast majority of patients (70%) in this study were taking narcotic analgesics at the time of their interview. Though no patients reported diverting narcotics, doctors wondered if their patients were being dishonest about the amount of medication they reported taking and hesitated to prescribe escalating doses for fear of addiction. Resident physicians were uncomfortable about being ‘pain medication policemen’ and noted that they felt obligated to be vigilant for drug seeking behaviour. As a result of this, patients described their frustration at the lack...
of pain relief and questioned their doctors’ understanding that their pain was ‘real’:

Patient 3: They won’t give me anything for pain. That gets up my rear a mile. It’s not that I’m an addict. I’m not ... It gets me mad because I legitimately need them.

Physician 3: I’m not discounting her pain, but I think she’s able to function with it, which may have prompted me not to move up to narcotics ... I don’t know how much I’m enabling her versus I’m not taking her back pain as seriously as she would like it.

Although the search for a definitive diagnosis for the chronic LBP was a source of frustration for doctors and patients alike, there was a significant mismatch in how the two groups addressed it. Doctors had low expectations of finding a diagnosis that would have changed treatment course. They were readily prepared to give up on that quest and move on to management issues regarding pain and function. In contrast, many patients held to the hope of finding a pathoanatomic cause for their pain. The presence or absence of a diagnosis was central to many patients’ explanatory models:

Patient 4: When I first got sick, I had every type of symptom out there but there was nothing coming back with the tests, and I was like “I’m not making this up!”

Physician 4: I would like to find out what’s wrong with her ... but the idea that you diagnose and then the diagnosis leads to proper treatment which leads to cure, this doesn’t fit that paradigm ... I think she went to [a specialist] who said she probably has chronic fatigue syndrome, so she’s sort of attached to that ... Having that label has helped her to deal with the symptoms.

Imaging that showed a physical defect seemed to provide closure for patients, while a lack of a definitive scan discouraged others. When physicians had an X-ray or magnetic resonance imaging that showed visible structural damage that was clearly responsible for LBP, they used it as a tool to reassure patients that the cause of their chronic pain was known. However, when imaging was inconclusive (as was most often the case), physicians were unaffected and quick to move on, while patients felt flustered and disheartened.

Discussion

The results of this study provided insights into both patient and physician attitudes, beliefs and models. Patients’ stories focused on their suffering from severe and disabling LBP, while physicians described many challenges in treating this patient population. Patient and doctor stories were convergent regarding the severity/seriousness of illness, the lack of effective treatments and the existence of many barriers to care.

Notable areas of mismatch between patient and physician models of illness were present: BM versus BPS models of illness, treatment expectations/goals of reducing pain versus improving function and the importance of a definitive diagnosis. Physicians in this sample described spending significant encounter time bringing their patients’ goals, expectations and BM model closer to their own BPS framework. Patients, however, did not generally internalize this model, choosing instead a more BM model. Similarly, physicians in this sample generally did not accept their patients’ BM model, clinging tenaciously to the BPS philosophy. The divergence and discordance of explanatory models can be partially understood by examining the context for this research: our study was conducted at an academic family medicine training centre that stresses the BPS model throughout the education of its family medical residents. While the physicians’ BPS model is designed to promote better comprehensive, patient-centred care, the complicated nature of chronic LBP and the complexity of the BPS model may prevent patients from embracing it. In addition, patient participants may have been uncomfortable with the implications of social and psychological determinants for their LBP, something implied by the BPS model. Peters et al. described how patients with medically unexplained symptoms use BM ideas to understand and describe their symptoms and illnesses and results that are reaffirmed in this study. Although previous literature has described the BM model as ‘inadequate’ for chronic LBP, we question whether imposing a BPS model of illness on this patient population is feasible or effective.

Our findings are in marked contrast to the broad range of literature on reattribution, a practice model in which the physician tries to imprint a BPS understanding of illness onto a patient with a somatized mental disorder (i.e. physical symptoms without an organic basis). Studies of reattribution interventions have found short-term improvement in global functioning and depressive symptoms after reattribution interventions, while others note changes in doctor–patient communication without an improvement in outcomes. While a large percentage of chronic LBP sufferers likely fit into the category of ‘somatizers’ because of the nature of their pain and comorbid psychiatric illness, this study’s results suggest reattribution may not be an effective treatment strategy for the LBP population.

We suggest that a new conceptual framework is needed to better aid patient–physician encounters around chronic LBP. Physicians may have better
success in improving their therapeutic alliance, reduc-
ing mismatch and increasing agreement with their pa-
tients if they accept patients’ reliance on the BM
model of illness and are able to work with parts of the
BM model when discussing treatment plans and ex-
pectations of illness. Increased agreement and under-
standing between patient and provider can lead to
better clinical outcomes21–28 and may be fruitful in
the management of chronic LBP.

Efforts are ongoing to help physicians better incor-
porate patient views into their treatment plans for
chronic LBP. The recent summary of the NICE guide-
lines for persistent non-specific LBP recommend that
physicians, ‘take into account the person’s expectation
and preferences’.9 This statement acknowledges the
need to incorporate patient beliefs but does not offer
tangible methods to address inherent mismatch be-
tween doctor and patient. This is no small task as
previous studies suggest that even when physicians
believe patients may be making choices that are not
in their own best interest, it is difficult for them to
challenge patients’ views without damaging their
relationship.38–40 One of physicians’ chief concerns is
maintaining a high level of trust with their patients.41
Though physicians in this sample did not express a re-
luctance to challenge their patients for fear of losing
their trust, many observed that conflict around nega-
tive patient outlook and maladaptive behaviours was
frustrating and was a barrier to care delivery.

It is likely that both the patient and the physician
could benefit from additional education and instruc-
tion about each other’s beliefs and models of illness.
Rather than employing a unipolar paradigm where
the physician impresses their BPS model and views of
illness onto the patient who holds a BM model, we
should view patients and physicians as a single teach-
able dyad that can co-create a shared narrative around
LBP. Conducting further research on the topic is
clearly indicated. For example, we might benefit from
a trial that utilizes an intervention to reduce doctor–
patient mismatch surrounding models of illness, treat-
ment goals and the role of a definitive diagnosis in
a patient’s chronic LBP. Such a study could employ
a clinical encounter that encourages patients and their
physician to engage each other specifically about
LBP—a chronic condition that often gets overlooked
or receives minimal consult time during acute visits—
and openly discuss their views and expectations of the
disease. This would serve to educate the two parties
about each other’s beliefs and expectations, help fos-
ter a convergent, shared treatment plan and may po-
tentially improve objective health care outcomes
and patient/provider satisfaction with care.

The limitations to this study include both sampling
and other methodological issues. Although the sam-
ple size allowed us to achieve data saturation, it con-
sted of participants from only one site. Due to rules

of confidentiality from the institutional review board,
no clinical information was passed by the research
team from the patient to the physician, which may
have limited our ability to address conflicts or incon-
sistencies between stories. The use of a moderators’
guide may have been led interviewees into specific
content areas, irrespective of the semi-structured na-
ture of the interview, and key areas may have been
missed. As with all studies based on report, the
results of these interviews may reflect cognitively
filtered living experience rather than direct behav-
ior. Finally, the research team has its own biases,
preconceived concepts and models about LBP and
patient care. Through repeated iterative cycles of
analysis and the use of outside consultants, we
believe that sufficient rigour was present to overcome
many of these biases. Nonetheless, as in all investiga-
tions, the research process is inextricably linked to
the researchers themselves.

In summary, despite efforts to improve current
treatments and find alternative regimens, chronic LBP
remains an enormous problem for patients and their
practitioners. This study demonstrates that the direct
comparison of doctor and patient shared stories can
reveal important themes and categories central to the
lives and treatment courses of chronic LBP patients.
The use of this approach may help elucidate the mind-
set of those suffering from LBP and allow physicians
to gain additional insights as to where their own ideas
converge, connect or contrast with those of their
patients. These insights can serve as a valuable clinical
tool to improve the care of a difficult to treat patient
population. We must continue to explore new ap-
proaches in order to improve our care delivery to
chronic LBP patients.

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