Patient Preference and Adherence

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"Doctor-Led, Patient-Centered": A Mixed-Method Research Comparing Patients' and Doctors' Treatment Outcome Choices for Chronic Low Back Pain

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Background: Chronic low back pain (CLBP) significantly impacts quality of life. Treatment outcomes are influenced by the perspectives and expectations of both patients and doctors, making it crucial to understand these views to optimize care and satisfaction.

Purpose: This study aims to analyze the alignment and differences in doctors' and patients' perceptions of treatment outcomes and explore the implications of these differences.

Methods: An explanatory sequential mixed-methods design was used, involving a questionnaire survey and two focus groups. The study was conducted at Dongzhimen Hospital from August 2020 to January 2021. Participants, including patients with any type of CLBP (age≥18) and doctors with at least one year of experience, were selected via purposive sampling. Quantitative data, analyzed with SPSS, were summarized as percentages for categorical variables and as means with standard deviations or medians for continuous variables. Differences between variables were assessed using the Chi-square and nonparametric rank sum tests. Focus group discussions were analyzed thematically to explore differing perspectives on treatment outcomes.

Results: A questionnaire gathered perspectives from 30 patients (mean age 45±11.74 years) and 26 doctors (mean age 41.7±6.7 years). The results informed the development of specific questions for focus group interviews with 8 patients and 8 doctors. Quantitative results revealed that pain/discomfort and activities of daily living were equally important to both groups. However, many outcomes were valued differently. Five themes emerged: 1) Doctors' focus on treating the whole person; 2) Patients' emphasis on cost-effectiveness/satisfaction; 3) Patients' prioritization of body image and physical function; 4) Shared priority beyond pain; 5) Shared concerns on adverse events.

Conclusion: This study highlights the importance of aligning treatment expectations between patients and doctors to improve satisfaction and outcomes in CLBP management. Enhanced communication strategies and shared decision-making are recommended to bridge these gaps.

Keywords: low back pain, outcomes comparison, patient perspective, preference, survey, interview

Introduction

Chronic low back pain (CLBP) is a prevalent and debilitating condition that contributes significantly to the global burden of illness.[1] Recent studies report a lifetime prevalence of activity-limiting CLBP of approximately 39% worldwide, with

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a point prevalence of around 18%.[2] Patients with CLBP face a range of treatment options, including surgical and non-surgical interventions. However, the effectiveness of these treatments depends heavily on accurately classifying patients based on their specific diagnoses and the severity of their condition. The complexity and diversity of medical conditions affecting the lumbar region—which may manifest as low back pain, leg discomfort, or both—pose significant challenges to proper classification and, consequently, to the assessment of treatment outcomes.[3–5] In addition to clinical challenges, the economic burden of CLBP is substantial. Direct healthcare costs are distributed across physiotherapy (17%), medication (13%), and primary health care (13%), while the majority of the total costs arise from indirect factors such as work absenteeism and diminished productivity. These economic implications further underscore the importance of effective and patient-centered treatment strategies for CLBP.[6]

Traditionally, treatment outcomes have been measured and assessed from the perspectives of clinicians and researchers.[7] However, over the past decade, patient-reported outcomes have gained increasing prominence, emerging as essential components in evaluation and audit processes.[8] Both the National Institutes of Health (NIH) Task Force of low back pain research and the International Consortium on Health Outcomes Monitoring (ICHOM) have emphasized the significance of recognizing and understanding outcomes that are meaningful to patients. The treatment expectations of patients influenced their outcomes significantly, and their active engagement in shared decision-making helps to develop treatment, thereby improving overall outcomes.[5,9] It is now widely recognized that the patient's perspective is not only necessary, but also critical to treatment outcomes, as clinicians often lack a comprehensive understanding of how patient's conditions and suggested treatments impact their lives.[10] Patients often hold unique perspectives on their conditions, experiences, and preferences, which may differ from those of clinicians. These distinct viewpoints provide a supplementary dimension that can enhance clinical assessment and treatment.

Despite growing awareness of these disparities, the similarities and differences in treatment expectations and outcome priorities between patients and doctors in the context of CLBP remain inadequately explored. Previous research has demonstrated differences in disease severity assessments across medical disciplines and between patients and healthcare professionals.[11,12] For example, a study of thoracic surgery revealed that surgeons prioritized the selection of surgical techniques, whereas patients emphasized postoperative physical and psychological recovery, often underestimating the importance of the surgical approach itself.[13]

To date, there is limited research examining how patients and doctors perceive and prioritize treatment outcomes in CLBP. This study seeks to address this gap by investigating the alignment and divergence in treatment outcome expectations between patients and doctors. Understanding the differing perspectives of doctors and patients on outcome is crucial for enhancing doctor-patient communication, optimizing treatment decisions, and promoting personalized care. Patient-reported outcomes (PROs) offer unique insights into patients' subjective experiences, helping clinicians evaluate treatment effectiveness, improve patient satisfaction, and support adherence. For researchers, aligning outcome with patient needs enhances the relevance of clinical studies, while the use of PROs complements traditional metrics, providing a more comprehensive evaluation of interventions.

Methods

Ethics Approval

The study was conducted in accordance with the principles of the Declaration of Helsinki and received approval from the Ethics Committee of Dongzhimen Hospital, Beijing University of Chinese Medicine (Approval Number: DZMEC-KY-2020-60). All participants provided written informed consent prior to participation, which included their agreement to the publication of anonymized responses and direct quotes.

Study Design

This study adopted a mixed-method design. From August 2020 to January 2021, a questionnaire survey and two focus groups were conducted at Beijing University of Chinese Medicine, affiliated with Dongzhimen Hospital in China. To complement the results of the quantitative study, a qualitative approach involving in-depth interviews was employed (refer to Figure 1, Flow chart).

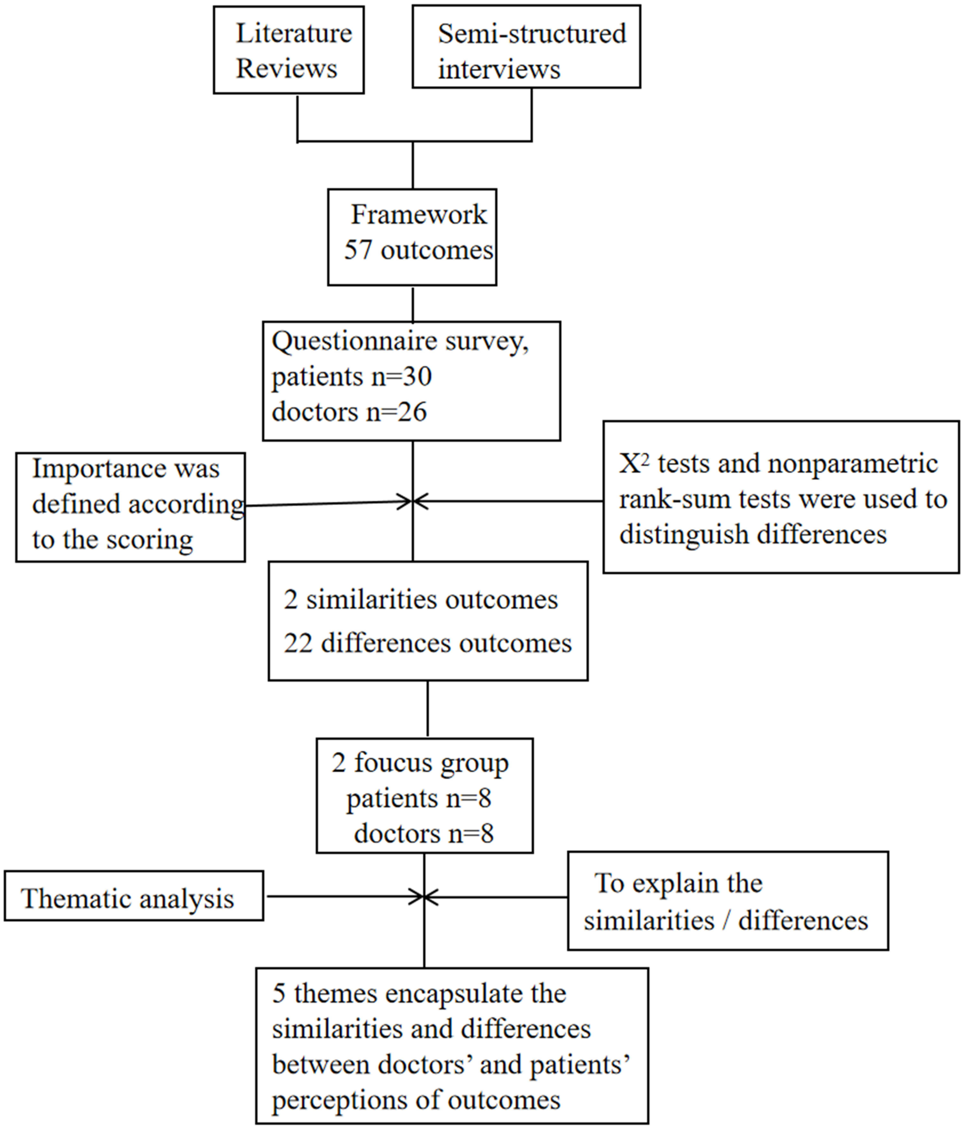

Figure 1 Flow-chart of the study.

Participants

In this study, purposive sampling was employed for participant selection to ensure the inclusion of individuals who could provide the most relevant and insightful information aligned with the research objectives. For the questionnaire survey, purposive sampling facilitated the targeted recruitment of participants representative of the study population,[14] considering factors such as patients' gender, age, diagnosis, and disease duration, as well as doctors' gender, age, specialty, and qualifications. In the qualitative phase, data collection through interviews or focus groups was guided by the principle of data saturation, wherein recruitment and data gathering continued until no new themes or insights emerged. This approach ensured that the sample size was sufficiently comprehensive to address the research questions thoroughly.[15]

Patients

We recruited patients who attended or received treatment in outpatient departments of acupuncture, tuina, rehabilitation, and orthopedics to ensure the comprehensiveness of their opinions and experiences. Eligible participants were adults (≥18 years) with a history of low back pain persisting for at least three months and clinically diagnosed with CLBP (ICD-10 code M54.5) by medical professionals with at least one year of professional experience. They also needed to

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participate willingly with informed consent. The study excluded patients with mental disorders, impaired judgment, history of back surgery, malignant pain, headache, psychosis, severe depression, or illiteracy. The research team actively recruited participants through a variety of tactics, including posting fliers in clinic waiting rooms.

Doctors

This study recruited medical professionals specializing in acupuncture, tuina therapy, rehabilitation, and orthopedics, and had at least one year of professional experience.

Questionnaire

Participants were first asked to complete a brief demographic questionnaire as well as the Chronic Low Back Pain Outcomes Questionnaire (CLBPOQ) in the waiting room. The questionnaire includes 57 outcomes and their corresponding definitions, which were derived from the results of a meta-analysis of qualitative studies of patients with CLBP,[16] a systematic review of clinical trial outcomes of CLBP,[17] and interviews with patients and clinical researchers (the paper will be published). The 57 outcomes were categorized into 17 domains using the Williamson/Clarke outcome framework,[18] a classification method recommended by the Core Outcome Measures in Effective Rate (COMET). Participants were asked to score from 1 (of no importance) to 9 (of high importance) to each outcome, along with its definition and examples. In this rating system, 1 to 3 means "of no importance", 4 to 6 means "of importance but not of critical importance", and 7 to 9 means "of critical importance".[19] The English translation of the questionnaire is shown in Supplementary Table S1.

If more than 80% of participants scored 7 to 9, and less than or equal to 15% scored 1 to 3, a preset "critical importance" threshold was reached. If more than 80% of participants scored 1 to 3, and less than or equal to 15% scored 7 to 9, the "not important" threshold was reached. All other outcomes are regarded as having "neutral importance". This threshold approach guarantees that the diverse perspectives of minority stakeholders are represented, preventing them from being dismissed by the larger group of stakeholders.[20]

Focus Group

Two focus group interviews were conducted, one with doctors and the other with patients. The questionnaire findings directed us to develop an interview outline. We focused on investigating the differences of participants' and doctors' perceptions of each outcome item. For example, the survey results suggested that doctors prioritize quality of life over patients, then we asked what they thought about this difference? All questions are presented in Supplementary Table S2.

We randomly selected participants from questionnaire respondents and invited them to the focus group discussion. There were two groups in total, each with 6 to 15 participants. This methodology followed established norms and criteria of qualitative research, ensuring data saturation.[21,22] The Mixed Methods Appraisal Tool (MMAT) is intended to be used as a checklist and has been included in the supplementary materials.

The focus group discussions were conducted by two researchers (YCH and SYN) with expertise in pain management and qualitative research methods. Neither researcher had any prior contact with the participants nor was aware of any preliminary questionnaire survey results before the focus group discussions. The discussions took place in a meeting room at Dongzhimen Hospital in Beijing, with only two researchers and participants present. One researcher explained the objectives of the focus group discussion, set the scene and clarified the researcher's role within the research team. Participants were allowed to ask questions to make sure they understand the research objectives. The research team developed a topic guide to organize discussions based on the quantitative results, covering topics such as the understanding and evaluation of outcomes and the explanation of differences in importance assessments between healthcare professionals and patients. The focus group discussions were audio-recorded and transcribed verbatim.

Data Statistics and Analysis

The data from questionnaires were converted to an Excel spreadsheet, and then the generated quantitative data were imported into IBM SPSS, version 26 (IBM Corp, Armonk, NY, USA). In our study, categorical variables were represented as percentages, while continuous data were represented as standard deviation (SD) for the mean and percentile for the median. To distinguish the differences between categorical and continuous variables, we employed the Chi-square test and the nonparametric rank sum test. After the statistical analysis, we aimed to identify indicators showing differences in importance evaluation between doctors and patients.

The focus group discussions were analyzed using thematic analysis. To enhance the quality and credibility of the research methodology, the following analysis procedures were implemented by the two researchers (ZY and CQJ): (1) independently read the focus group transcripts; (2) independently coded the data segments from the first focus group transcript to form initial themes; (3) discussed the findings and agreed on a series of preliminary themes; and (4) reached a consensus on the final set of themes that fully represented the dataset. Subsequently, participants' quotes were directly applied to the themes. A third researcher (YCH) reviewed the generated themes to verify interpretation. Qualitative data analysis software was deemed unnecessary because of the small amount of transcripts. This research was conducted in accordance with the Consolidated Criteria for Reporting Qualitative Research to promote transparency and maximize methodological quality.[23]

Results

Participants

A total of 30 patients with CLBP completed the questionnaire evaluating the importance of outcomes. Among them, 21 were females (70%) aged from 20 to 72 years old with an average age of 45±11.74 years old, being diagnosed with non-specific low back pain, lumbar disc herniation, spinal stenosis, lumbar spondylolisthesis, or sciatica. The median duration of these conditions was 2 years (ranging from a quarter year to forty years). Eight of these patients participated in patient focus groups. The characteristics of patients are summarized in Supplementary Table S3.

A total of 26 doctors were included in the study, comprising 4 females (15.4%) and 22 males (84.6%) aged 30 to 59 years old (mean±SD: 41.7±6.7). These doctors specialized in acupuncture (n=5), tuina (n=10), rehabilitation medicine (n=3), orthopedics (n=5), and anesthesia (n=3). Their professional experience ranged from 2 to 37 years (mean±SD: 16.3 ±8.5). Eight doctors were randomly recruited to participate in focus group discussions. The characteristics of these doctors are summarized in Supplementary Table S4.

Findings from the Questionnaire

The outcomes were assessed and categorized as critically important, neutral, or not important based on their scores. Among patients, 8 outcomes (14%) were "critically important", including activities of daily living, pain/discomfort, adverse event, surgery-related adverse events, overall satisfaction, posture and gait, therapeutic safety, and difficult weight-bearing. Among doctors, 7 outcomes (12%) were "critically important", including activities of daily living, pain/discomfort, locomotor function, effective rate, impact on quality of life, clinical overall impression, and recurrence rates. The remaining outcomes were categorized as "neutral", and no outcomes were classified as "not important". Detailed information is provided in Table 1

Notably, both doctors and patients rated pain and discomfort as well as activities of daily living with an average score of greater than or equal to 8 points. Moreover, the significance of these two outcomes for doctors and patients are exactly the same.

By comparing the questionnaire results of patients and doctors, the rank sum test showed statistically different scores of 9 outcomes, namely spinal deformity, skeletal-related outcomes, intervertebral disc-related outcomes, difficulty on weight-bearing, sexual life/function, body-image and appearance, quality-adjusted life years (QALYs), healthcare utilization, and analgesic consumption. In addition, by assessing the proportion of doctors and patients at different levels, the chi-square test was employed to supplement statistically significant findings, including analgesic side effects, stigmatization, self-esteem, and adverse events. Furthermore, the classification of surgery-related adverse events, overall satisfaction, posture and gait, therapeutic safety, locomotor function, effective rate, impact on quality of life, clinical overall impression, and recurrence rates differed among doctors and patients, emphasizing the need for further discussion. The count and measurement data for the 22 outcomes that differed between doctors and patients are illustrated in Figure 2.

Table 1 Importance Assessment of the Outcomes

Outcome	Participants	Important	Neutral	Not Important	P	Mean (SD)	Median (q1, q3)	P
Effective rate	Doctor	88.5%	11.5%	0.0%	0.517	7.9(1.1)	8(7.75,9)	0.764
	Patient	78.6%	24.1%	0.0%		7.9(1.4)	8(7,9)	
TCM patterns changes	Doctor	60.0%	32.0%	8.0%	0.767	6.4(1.9)	7(5,8)	0.46
	Patient	64.0%	32.0%	4.0%		6.8(2.1)	7(5,9)	
General signs and symptoms	Doctor	53.8%	30.8%	15.4%	0.821	6.1(2.1)	7(5,7.25)	0.665
	Patient	53.3%	30.0%	16.7%		6.2(2.5)	7(4.75,8)	
Clinical overall impression	Doctor	80.8%	19.2%	0.0%	0.755	7.7(1.3)	8(7,9)	0.923
	Patient	75.9%	24.1%	0.0%		7.6(1.5)	8(6.5,9)	
Surgery-related outcomes	Doctor	64.0%	24.0%	12.0%	0.188	6.7(2.2)	8(5,8)	0.236
	Patient	50.0%	18.2%	31.8%		5.6(3.0)	6.5(2,8)	
Recurrence rates	Doctor	65.4%	34.6%	0.0%	0.501	7.2(1.5)	7(6,9)	0.589
	Patient	65.5%	27.6%	6.9%		6.8(1.9)	7(5.5,8)	
Disease course	Doctor	76.0%	24.0%	0.0%	1	7.5(1.5)	8(6.5,8.5)	0.856
	Patient	75.9%	24.1%	0.0%		7.5(1.6)	8(6.5,9)	
Attack frequency	Doctor	80.8%	19.2%	0.0%	1	7.6(1.3)	8(7,9)	0.819
	Patient	76.7%	20.0%	3.3%		7.5(1.5)	8(6.75,9)	
Laboratory examination	Doctor	19.2%	46.2%	34.6%	0.089	4.7(1.9)	5(3,6)	0.563
	Patient	39.3%	21.4%	39.3%		5.0(2.7)	5.5(3,7)	
Spinal nerve function	Doctor	53.8%	30.8%	15.4%	0.226	6.4(1.9)	7(5,8)	0.084
	Patient	70.0%	26.7%	3.3%		7.2(1.6)	8(6,8)	
Spinal deformity	Doctor	50.0%	42.3%	7.7%	0.236	6.3(1.7)	6.5(5,8)	0.033
	Patient	73.3%	20.0%	6.7%		7.2(2.0)	8(6,9)	
Muscle-related outcomes	Doctor	73.1%	19.2%	7.7%	0.893	7.3(1.9)	7.5(6,9)	0.953
	Patient	76.7%	20.0%	3.3%		7.4(1.4)	8(6.75,8.25)	
Skeletal-related outcomes	Doctor	34.6%	42.3%	23.1%	0.007	5.3(2.1)	5(3.75,7)	0.001
	Patient	75.0%	17.9%	7.1%		7.2(1.8)	8(6.25,8)	
Intervertebral disc-related outcomes	Doctor	34.6%	42.3%	23.1%	0.006	5.5(1.7)	5.5(4.75,7)	<0.001
	Patient	73.3%	23.3%	3.3%		7.4(1.6)	8(6,9)	
Pain/discomfort	Doctor	92.3%	7.7%	0.0%	0.675	8.1(1.1)	8(7.75,9)	0.338
	Patient	86.7%	13.3%	0.0%		8.2(1.3)	9(8,9)	
Posture and gait	Doctor	65.4%	30.8%	3.8%	0.284	6.8(1.8)	7(5,8.25)	0.107
	Patient	80.0%	20.0%	0.0%		7.6(1.4)	8(7,9)	
Difficult weight-bearing	Doctor	53.8%	42.3%	3.8%	0.048	6.5(1.6)	7(5,8)	0.009
	Patient	80.0%	13.3%	6.7%		7.5(1.8)	8(7,9)	
Opioid withdrawal syndrome	Doctor	44.0%	24.0%	32.0%	0.254	5.4(2.8)	6(3,8)	0.716
	Patient	30.4%	47.8%	21.7%		5.3(2.5)	5(4,7)	

Locomotor function	Doctor	92.3%	3.8%	3.9%	0.029	7.7(1.3)	8(7,9)	0.146
	Patient	73.3%	26.7%	0.0%		7.4(1.2)	7(6,8)	
Activities of daily living	Doctor	92.3%	7.7%	0.0%	1	8(0.91)	8(7,9)	0.775
	Patient	93.1%	6.9%	0.0%		8.1(1.1)	8(7,9)	
Balanced capacity	Doctor	50.0%	42.3%	7.7%	0.83	6.2(1.6)	6.5(5,7)	0.292
	Patient	53.3%	43.3%	3.3%		6.7(1.7)	7(5,8)	
Lumbar dysfunction	Doctor	57.7%	38.5%	3.8%	0.62	6.7(1.6)	7(5,8)	0.118
	Patient	72.4%	24.1%	3.4%		7.3(1.6)	8(6,8.5)	
Self-care ability	Doctor	73.1%	23.1%	3.8%	1	7.2(2.0)	7.5(6,9)	0.385
	Patient	73.3%	20.0%	6.7%		7.4(2.1)	8(6,9)	
Health behavior management	Doctor	65.4%	30.8%	3.8%	0.775	6.9(1.6)	7(6,8)	0.513
	Patient	72.4%	24.1%	3.4%		7.2(1.6)	7(6,8.5)	
Sexual life/function	Doctor	38.5%	53.5%	7.7%	0.113	5.8(1.8)	6(5,7)	0.026
	Patient	62.1%	27.6%	10.3%		6.8(2.3)	8(6,8.5)	
Social activity	Doctor	46.2%	38.5%	15.4%	0.869	5.9(1.9)	6(5,7)	0.357
	Patient	46.7%	43.3%	10.0%		6.4(2.2)	6(5,8)	
Social and family relationships	Doctor	42.3%	50.0%	7.7%	0.216	5.8(1.8)	5.5(4.75,7)	0.921
	Patient	43.3%	33.3%	23.3%		5.6(2.8)	6(3.75,8)	
Social isolation	Doctor	26.9%	38.5%	34.6%	0.84	4.9(2.2)	5(3,7)	0.679
	Patient	30.0%	30.0%	40.0%		4.6(2.7)	5(1.75,7.25)	
Social Dysfunction	Doctor	19.2%	38.5%	15.4%	0.062	4.3(2.3)	4(2,6)	0.845
	Patient	34.5%	20.7%	44.8%		4.6(3.1)	5(1,8)	
Social role	Doctor	38.5%	34.6%	26.9%	0.891	5.5(2.1)	5.5(3,7.25)	0.856
	Patient	36.7%	30.0%	33.3%		5.2(2.9)	6(2,8)	
Working status	Doctor	61.5%	34.6%	3.8%	0.688	7.1(1.8)	8(6,9)	0.561
	Patient	73.3%	23.3%	3.3%		7.3(1.8)	8(6,9)	
Positive/negative emotion	Doctor	57.7%	38.5%	3.8%	0.382	6.6(1.5)	7(6,8)	0.117
	Patient	73.3%	20.0%	6.7%		7(2.1)	7.5(6,9)	
Self-efficacy	Doctor	53.8%	42.3%	3.8%	0.697	6.5(1.5)	7(5,8)	0.623
	Patient	66.7%	30.0%	3.3%		6.6(1.6)	7(6,8)	
Coping capacity	Doctor	50.0%	38.5%	11.5%	0.931	6.2(1.7)	6.5(5,7.25)	0.653
	Patient	53.3%	33.3%	13.3%		6.4(2.0)	7(5,8)	
Body-image and appearance	Doctor	15.4%	65.4%	19.2%	0.009	5(1.3)	5(4,6)	0.008
	Patient	53.3%	30.0%	16.7%		6.3(2.3)	7(5,8)	
Life satisfaction	Doctor	76.9%	23.1%	0.0%	1	7.3(1.4)	7(6.75,8.25)	0.959
	Patient	75.9%	24.1%	0.0%		7.3(1.4)	8(6.5,8)	
Stigmatization	Doctor	4.0%	36.0%	60.0%	0.001	3.3(1.7)	3(2,5)	0.098
	Patient	46.4%	7.1%	46.4%		4.9(3.2)	5(2,8)	

(*Continued*)

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Table 1 (Continued).

Outcome	Participants	Important	Neutral	Not Important	P	Mean (SD)	Median (q1, q3)	P
Self-esteem	Doctor	7.7%	57.7%	34.6%	0.005	4.3(1.5)	4.5(3,5.25)	0.791
	Patient	36.7%	20.0%	43.3%		4.7(2.8)	4.5(2,7)	
Self-beliefs	Doctor	12.0%	44.0%	44.0%	0.109	4.1(2.0)	5(2,6)	0.288
	Patient	21.4%	17.9%	60.7%		3.5(2.5)	3(1,6)	
Attention	Doctor	26.9%	38.5%	34.6%	0.482	5(2.1)	5(3,7)	0.086
	Patient	24.1%	51.7%	24.1%		5.2(2.5)	6(3,7)	
Quality of life	Doctor	84.6%	11.5%	3.8%	0.737	7.5(1.4)	8(7,9)	0.986
	Patient	76.7%	20.0%	3.3%		7.4(1.6)	8(6.75,9)	
Overall perceived effect	Doctor	50.0%	46.2%	3.8%	0.756	6.8(1.6)	6.5(6,8)	0.925
	Patient	55.2%	37.9%	6.9%		6.6(2.1)	7(5,8.5)	
Overall satisfaction	Doctor	69.2%	30.8%	0.0%	0.053	7.3(1.2)	7.5(6,8)	0.519
	Patient	82.8%	10.3%	6.9%		7.3(1.7)	8(7,8)	
Compliance	Doctor	56.0%	40.0%	4.0%	0.382	7.0(1.6)	7(6,8)	0.379
	Patient	74.1%	18.5%	7.4%		7.2(1.9)	8(6,9)	
Appropriate medical care	Doctor	68.0%	28.0%	4.0%	0.257	6.8(1.9)	7(5,8)	0.359
	Patient	73.3%	13.3%	13.3%		7.2(2.1)	8(6,9)	
Economic cost	Doctor	61.5%	26.9%	11.5%	0.72	6.5(1.8)	7(5.75,8)	0.106
	Patient	70.0%	16.7%	13.3%		7(2.4)	8(6,9)	
Quality-adjusted life year	Doctor	27.3%	50.0%	22.7%	0.049	5(2.1)	5(3.75,7)	0.01
	Patient	58.6%	27.6%	13.8%		6.6(2.6)	8(5,9)	
Healthcare Utilization	Doctor	26.9%	53.8%	19.2%	0.001	5.3(2.1)	5(4,7)	0.002
	Patient	72.4%	24.1%	3.4%		7.0(1.6)	7(6,8)	
Time cost	Doctor	53.8%	34.6%	11.5%	0.191	6.5(1.9)	7(5,8)	0.111
	Patient	76.7%	16.7%	6.7%		7.1(1.8)	8(6.75,8)	
Re-operation rate	Doctor	65.4%	34.6%	0.0%	0.076	6.9(1.6)	7.5(5,8)	0.667
	Patient	62.5%	20.8%	16.7%		6.2(2.6)	7(4.25,8)	
Analgesic consumption	Doctor	76.9%	19.2%	3.8%	0.005	7.5(1.8)	8(6.75,9)	0.001
	Patient	39.3%	28.6%	32.1%		5.3(2.6)	6(3,8)	
Chronic risk	Doctor	38.5%	53.8%	7.7%	0.056	6.0(1.8)	6(5,7)	0.063
	Patient	66.7%	22.2%	11.1%		6.8(1.8)	7(6,8)	
Social/care-giver burden	Doctor	38.5%	53.8%	7.7%	0.217	5.8(1.9)	5.5(5,7)	0.254
	Patient	56.7%	30.0%	13.3%		6.3(2.1)	7(5,8)	
Therapeutic safety	Doctor	73.1%	23.1%	3.8%	0.313	7.2(1.9)	8(5.75,9)	0.218
	Patient	80.0%	10.0%	100.0%		7.6(2.2)	8.5(7,9)	
Analgesic side effects	Doctor	53.8%	46.2%	0.0%	0.007	6.7(1.6)	7(5,8)	0.562
	Patient	60.7%	17.9%	21.4%		6.0(2.7)	7(4,8)	
Surgery-related adverse events	Doctor	69.2%	30.8%	0.0%	0.092	7.4(1.5)	8(6,9)	0.063
	Patient	84.6%	11.5%	3.8%		7.9(1.9)	9(7.75,9)	
Adverse event	Doctor	73.1%	26.9%	0.0%	0.038	7.5(1.5)	8(6,9)	0.832
	Patient	85.2%	7.4%	7.4%		7.4(2.1)	8(7,9)	

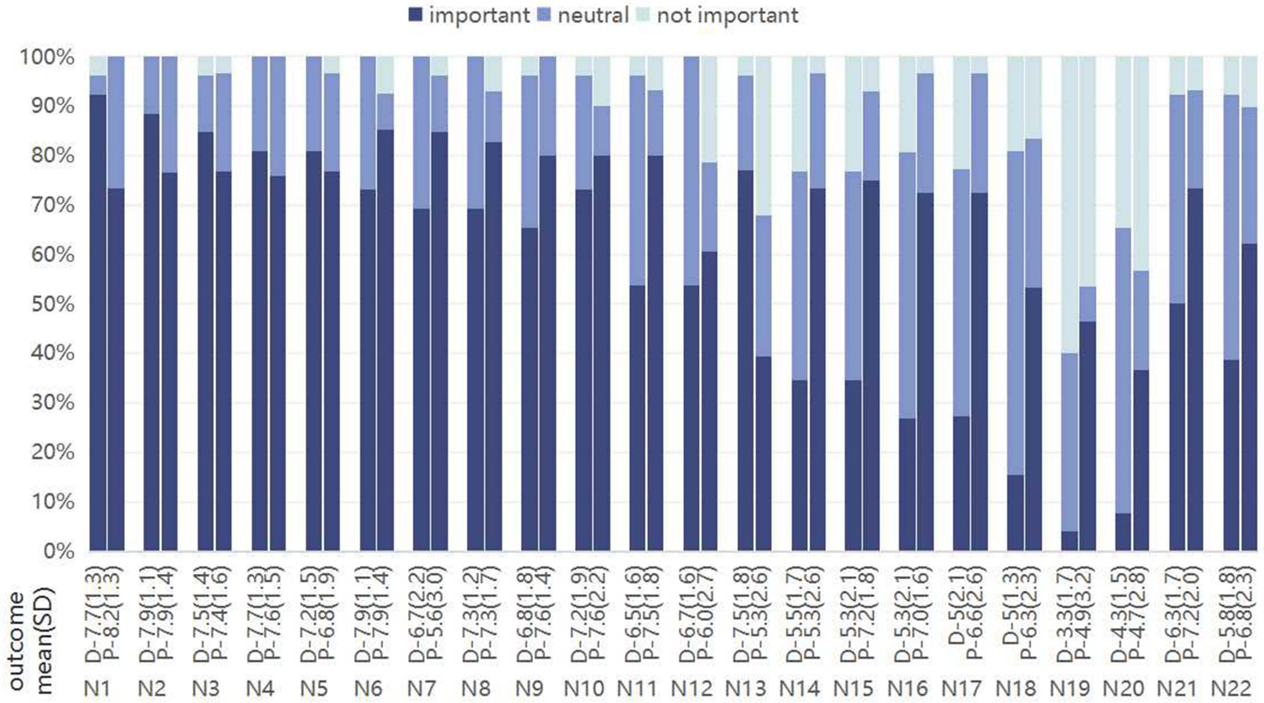

Figure 2 Comparison of Count and Measurement Data for 22 Outcomes Between Doctors and Patients.

Notes: D, doctors; P, patients; N1, Locomotor function; N2, Effective rate; N3, Impact on quality of life; N4, Clinical overall impression; N5, Recurrence rates; N6, Adverse event; N7, Surgery-related adverse events; N8, Overall satisfaction; N9, Posture and gait; N10, Therapeutic safety; N11, Difficult Weight-bearing; N12, Analgesic side effects; N13, Analgesic consumption; N14, Intervertebral disc problems; N15, Skeletal-related issues; N16, Healthcare Utilization; N17, Quality-adjusted life year; N18, Body-image and appearance; N19, Stigmatization; N20, Self-esteem; N21, Spinal deformity; N22, Sexual life/function.

Findings from the Focus Group

Thematic analyses were performed on 2 consistent outcomes from 9 sub-domains of COMET: general outcomes, quality of life, musculoskeletal and connective tissue outcomes, locomotor function, emotional functioning/well-being, adverse events, further nursing services, further intervention, and economic index. Based on the focus group discussion, a total of five themes were identified: 1) Doctors' prioritization on treating the patient as a whole person; 2) Patients' emphasize on cost-effective rate/satisfaction; 3) Patients' value body image and physical function; 4) shared priority goes beyond just pains; 5) shared concerns on adverse events. The findings from qualitative (quotes) data are presented in Table 2.

Theme 1 Doctors' Prioritization on Treating the Patient as a Whole Person

Impact on quality of life, clinical overall impression, effectiveness, and seizure frequency were four outcomes that doctors considered more than patients. These outcomes were multidimensional and might have influenced lifespan, so they were indispensable when considering impact on life and physiological/clinical domains. The aims of medical treatment extended beyond the preservation of specific functions or physiological activities; instead, the emphasis was on treating and enhancing the overall health of patients. Doctors assessed patients' conditions in multiple dimensions and predicted improvements in overall clinical impression to enhance their quality of life:

> *We can make a comprehensive judgment based on the changes in the patient's condition, taking into consideration various aspects like their physical and mental well-being, work and family situations, social interactions, etc.(D1)*

However, patients may not have understood the doctors' choice of treatment from a holistic perspective due to a lack of medical training. Patients had expressed a limited understanding of certain medical terminology, emphasizing a preference for focusing on their own personal circumstances:

Table 2 Results from Survey and Focus Groups

Outcomes	Participants	Proportion of "important"	Scores Mean (SD)	COMET Sub-Domains	COMET Domains	Theme	Quotes
Effective rate	Doctors*	88.50%	7.9(1.1)	General outcomes	Physical function	Doctors' prioritization on treating the patient as a whole person	*Doctor:* *The effective rate, recurrence rate, and overall clinical judgment are helpful in guiding clinical practice. We can make a comprehensive judgment based on the changes in the patient's condition, taking into consideration various aspects like their physical and mental well-being, work and family situations, social interactions,* etc. *However, it is important to base the treatment on fundamental principles so that we can arrive at a comprehensive assessment of the final outcome. This assessment is easy to determine; for example, patients often ask questions like* "Doctor, am I seriously ill? Will your treatment be effective? Can I be cured?" *These inquiries reflect their overall evaluation of the disease. During each visit, patients also mention how much better they feel after receiving treatment. But when asked about what has improved specifically - whether it's pain levels or mobility or sleep quality - these details are part of a comprehensive evaluation.(D1)* *I think the Patients also feel that this is really important, but there's still a gap. The main reason might be that the Patients' demands can change. Patients always want a cure for everything, but some diseases are untreatable It's good to relieve symptoms and improve quality of life, so sometimes the doctor will say it's okay, but then patients will have other questions. Another factor is the complexity of the disease, especially when it comes to low back pain with pathological or sensitivity issues or combined with psychiatric problems. These patients are more sensitive, so certain approaches may not be suitable for them.(D6)* *P:* *I think all of these things are important, but I just do not know what they are. What matters to me is finding relief from pain, getting a good night's sleep, and being able to take my kids to and from school. When it comes to relapse, I have experienced pain before; as for the overall clinical impression, that's something the doctor determines - they are professionals who usually let me know how serious it is and what steps to take for treatment. Quality of life is definitely important, but I feel like there's not enough clarity on its different aspects (physical, psychological, social) and it makes life inconvenient. If we had more specific details about these indicators, we might find them even more crucial.(P7)*
	Patients	78.60%	7.9(1.4)				
Clinical overall impression	Doctors*	80.80%	7.7(1.3)	General outcomes			
	Patients	75.90%	7.6(1.5)				
Recurrence rates	Doctors*	80.80%	7.2(1.5)	General outcomes			
	Patients	76.70%	6.8(1.9)				
Impact on quality of life	Doctors*	84.60%	7.5(1.4)	Quality of life	The impact on life		
	Patients	76.70%	7.4(1.6)				
Overall satisfaction	Doctors	69.20%	7.3(1.2)	Further intervention	Resource usage	Patients' emphasis on cost-effective rate/satisfaction	*D:* *I do not think this is a problem, we are following the usual diagnosis and treatment guidelines. We will only consider the cost if the patient brings it up, but even if some patients ask for expensive options, it's mainly because they have better results. Maybe some patients still want to be budget-conscious and practical, mentioning that returning from a trip is not easy after all.(D7)* *The thing is, we always try our best to provide treatment with limited resources, but sometimes it backfires. We are constantly trying to strike a balance between affordability for patients and effectiveness.(D21)* *Regarding medical resources, they vary depending on the individual. The level of treatment in top-tier hospitals and community clinics, as well as between urban and rural areas, is totally different. Plus, pain can keep coming back over and over again. It's not practical for local patients to always go to big fancy hospitals for treatment. The evaluation of the hospital generally depends on how satisfied patients are with their treatment, which is a complicated measure that takes into account various factors including the care provided. (D11)* *P:* *We want to treat as soon as we come, as soon as possible, I have to pick up the children after treatment. (P10)* *The insurance coverage is so minimal that I have to pay for medications and other expenses, which means the treatment cost is not sufficient. It's definitely making me think about financial issues. (P27)* *The doctors must be trying to cure me, but they just treat me, they do not ask too much about it. They are not easy, seeing so many Patients in a day, I just want to be able to treat as soon as possible, the waiting time is too long. (P8)*
	Patients*	82.80%	7.3(1.7)				
Healthcare Utilization	Doctors	26.90%	5.3(2.1)	Economic index			
	Patients*	72.40%	7.0(1.6)				
Quality-adjusted life year	Doctors	27.30%	5(2.1)	Economic index			
	Patients*	58.60%	6.6(2.6)				

Locomotor function	Doctors	92.30%	7.7(1.3)	Physical function	The impact on life	Patients prioritization on body image and physical function	D: The Patient's ideas are great, but apart from surgery to fix spine, intervertebral disc, and other problems, most conservative treatments mainly aim to ease the Patient's symptoms and signs by adjusting force alignment and muscle strength. The Patient's expectations are valid, but it is crucial for us to help them develop realistic expectations before treatment; otherwise, it may affect the effectiveness of the treatment.(D24) Female patients are more concerned about their body shape and want to address issues like spinal curvature, pelvic alignment, and sacroiliac joint problems through treatment in order to feel better about themselves.(D1) In clinical practice, Patients' interpersonal communication is often overlooked. Usually, we ask about their job, but some patients might not feel comfortable sharing all the details about their work. It's only when we identify a significant psychological burden that we start exploring the social aspects of their lives. For these individuals, it's really important to give them milder chemotherapy treatments and encourage them to seek help from psychological clinics.(D38) P: When you have back pain, you always feel helpless or not in the mood for it (sex life). The way I see it, at my age, I do not really need that (sex life).(P27) The regular weight will not do, it's just not gonna work. We gotta go with a backpack.(P3) Hopefully it will be completely cured, of course. It's not bothering me at all, and it feels the same as before - no numbness or pain in the corridor. So that's great.(P7) If the herniated disc can heal itself, that's definitely the best outcome - getting back to normal is always the goal.(P15) My posture got all messed up because of scoliosis, so whenever I check myself out in the mirror, I always see that I am standing all wonky. It also messes with how I walk and makes me super self-conscious about how I look.(P19) The back pain is really getting on my nerves. I mean, seriously, I am only 30! It's not like I can just take time off whenever I feel like seeing a doctor. People will think I am making it up or something, always whining about this ache and that ache and rushing off to the hospital.(P28) Every time I go to the doctor, I always feel like people are talking smack about me, which really stresses me out.(P10)
	Patients#	73.30%	7.4(1.2)				
Sexual life/ function	Doctors	38.50%	5.8(1.8)	Physical function			
	Patients*	62.10%	6.8 (2.3)				
Body-image and appearance	Doctors	15.40%	5(1.3)	Emotional functioning/well-being			
	Patients*	53.30%	6.3(2.3)				
Stigmatization	Doctors	4%	3.3(1.7)	Emotional functioning/well-being			
	Patients*	46.40%	4.9(3.2)				
Self-esteem	Doctors	7.70%	4.3(1.5)	Emotional functioning/well-being			
	Patients*	36.70%	4.7(2.8)				
Posture and gait	Doctors	65.40%	6.8(1.8)	Physical function	Physiological/ clinical		
	Patients*	80%	7.6(1.4)				
Difficult Weight-bearing	Doctors	53.80%	6.5(1.6)	Physical function			
	Patients*	80%	7.5(1.8)				
Skeletal-related issues	Doctors	34.60%	5.3(2.1)	Musculoskeletal and connective tissue outcomes			
	Patients*	75%	7.2(1.8)				
Intervertebral disc problems	Doctors	34.60%	5.5(1.7)	Musculoskeletal and connective tissue outcomes			
	Patients*	73.30%	7.4(1.6)				
Spinal deformity	Doctors	50%	6.3(1.7)	Musculoskeletal and connective tissue outcomes			
	Patients*	73.30%	7.2(2.0)				
Pain/ discomfort	Doctors#	92.30%	8.1(1.1)	Musculoskeletal and connective tissue outcomes		Shared priority goes beyond just pain	D: This is nothing to say, (low back pain) Patients come for pain or discomfort, so doctors and Patients must be concerned about this problem. Most of the Patients are affected by daily activities before coming to the doctor, and some Patients said that they would not come to the doctor if they did not have the pain to that point.(D7) P: I came to see the doctor because the pain is unbearable, sometimes it makes me feel like giving up on life. The doctor understood that I sought treatment for pain and a better quality of life, so our main goal was aligned.(P10) I have got this lower back pain, and even though it's not super painful, it's seriously annoying. Shuffling around a bit kinda helps, but honestly, lying down is where it's at. The thing is, after a while, the pain creeps back in.(P8) I am not too fussed about skipping workouts. It just means I am not as quick on the draw when it comes to house chores and keeping up with the kiddos.(P7)
	Patients#	86.70%	8.2(1.3)				
Activities of daily living	Doctors#	92.30%	8(0.91)	Physical function			
	Patients#	93.10%	8.1(1.1)				

(*Continued*)

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Table 2 (Continued).

Outcomes	**Participants**	**Proportion of "important"**	**Scores Mean (SD)**	**COMET Sub-Domains**	**COMET Domains**	**Theme**	**Quotes**
Adverse event	Doctors	73.10%	7.9(1.1)	Adverse events/ effects	Adverse events/ effects	Shared concerns on adverse events.	*D:* *We also pay attention to adverse events and reactions, but we did not expect patients to be more concerned about them than us. Maybe it's because patients have a better understanding of pain medication or surgery. They learn about some of these adverse events from other patients, family members, or the media, which naturally makes them worried and unwilling to experience such things themselves. However, there are times when pain medication or surgery is necessary. Therefore, doctors should guide patients properly and prevent any resistance from arising.(D7)* *P:* *Doctors do not really care about safety as much as we do, you know? I mean, I do not want to end up with not just a bad waist but also other issues. Especially because people always say that painkillers are super addictive and can mess up your stomach. (P27).* *Fear of surgery, especially fear on the stage, the doctor said those complications are too scary. And I heard that this disease will also recur after surgery, so what do I take this risk for? (P7)* *I do not take painkillers, I do not really pay much attention to the whole medicine thing, like who even bothers taking meds when they are feeling better.(P15)*
	Patients*	85.20%	7.9(1.4)				
Surgery-related adverse events	Doctors	69.20%	6.7(2.2)	Adverse events/ effects			
	Patients*	84.60%	5.6(3.0)				
Therapeutic safety	Doctors	73.10%	7.2(1.9)	Adverse events/ effects			
	Patients*	80%	7.6(2.2)				
Analgesic side effects	Doctors	53.80%	6.7(1.6)	Adverse events/ effects			
	Patients*	60.70%	6.0(2.7)				
Analgesic consumption	Doctors*	76.90%	7.5(1.8)	Provide nursing services			
	Patients	39.30%	5.3(2.6)				

> *I think all of these things are important, but I just don't know what they are. What matters to me is finding relief from pain, getting a good night's sleep, and being able to take my kids to and from school.(P7)*

Theme 2 Patients' Emphasis on Cost-Effective Rate/Satisfaction

Patients valued cost and effective rate/satisfaction more than doctors, including overall satisfaction, healthcare utilization, and quality-adjusted life years. The financial burden of treatment costs might have led some patients to expect better outcomes. Patients expressed that they were more concerned about time and economic costs, and these costs directly affected satisfaction:

> *We want to treat as soon as we come, as soon as possible, I have to pick up the children after treatment. Well, the truth is, sometimes I have to wait for a really long time, until I lose my patience. (P10)*

> *The insurance coverage is so minimal that I have to pay for medications and other expenses, which means the treatment cost is not sufficient. I spent quite a bit of money on treatment, but I'm still not very satisfied with the effectiveness. (P27)*

Although doctors strove to balance costs and efficacy, the equitable distribution of medical resources remained beyond their control:

> *The thing is, we always try our best to provide treatment with limited resources, but sometimes it backfires. We're constantly trying to strike a balance between affordability for patients and effectiveness. (D21)*

Theme 3 Patients' Prioritization on Body Image and Physical Function

Patients paid more attention than doctors to locomotor function, posture and gait, difficult weight-bearing, skeletal-related outcomes, disk-related outcomes, spinal deformity, impact on sexual life/function, stigmatization, and self-esteem, which were classified as physical function, musculoskeletal and connective tissue outcomes, and emotional function/well-being. Patients minded those aspects of their lives that were affected by their medical condition, such as limitations in certain activities, including sexual life, and the unusual changes in appearance. They explained that these aspects usually set them apart from the general population. Young patients were often psychologically burdened by absence from work, so they are eager to get back to normal:

> *The back pain is really getting on my nerves. I mean, seriously, I'm only 30! It's not like I can just take time off whenever I feel like seeing a doctor. People will think I'm making it up or something, always whining about this ache and that ache and rushing off to the hospital.(P28)*

The concepts of body image and physical function can exert significant psychological pressure on patients. Doctors believed it was essential to guide patients to have realistic expectations to alleviate their psychological burden:

> *It's only when we identify a significant psychological burden that we start exploring the social aspects of their lives. For these individuals, it's really important to give them milder chemotherapy treatments and encourage them to seek help from psychological clinics.(D38)*

Theme 4 Shared Priority Goes Beyond Just Pain

This theme included pain/discomfort associated with musculoskeletal and connective tissue outcomes, as well as the individual's ability to perform activities of daily living. The primary reason a patient visited a doctor was frequently their chief problem.

> *I came to see the doctor because the pain is unbearable, sometimes it makes me feel like giving up on life. The doctor understood that I sought treatment for pain and a better quality of life, so our main goal was aligned.(P10)*

Pain or discomfort that interfered with daily activities was the most common symptom experienced by individuals with CLBP and was a matter of great concern for both patients and doctors:

> *This is nothing to say, (low back pain) Patients come for pain or discomfort, so doctors and Patients must be concerned about this problem. Most of the Patients are affected by daily activities before coming to the doctor, and some Patients said that they would not come to the doctor if they did not have the pain to that point.(D7)*

Theme 5 Shared Concerns on Adverse Events

Both doctors and patients valued treatment safety, focusing on surgery-related adverse events and other complications. Patients expressed high concern about these outcomes, choosing conservative treatments to minimize surgery-related risks, especially when they had easy access to various traditional Chinese medicine (TCM) therapies. In response to patients' anxieties about adverse events, doctors explained potential complications associated with each treatment option, which is completely important. Furthermore, patients' apprehension about surgical procedures may be influenced by a large amount of negative information:

> *Fear of surgery, especially fear on the stage, the doctor said those complications are too scary. And I heard that this disease will also recur after surgery, so what do I take this risk for? (P7)*

The use of analgesics is a primary concern for doctors, involving the dosage administered and potential side effects. Due to patients' limited knowledge of analgesics, two extreme situations often appear in clinical practice: some patients refuse to use all analgesics, and other patients excessively relied on analgesics regardless of medical guidance or consideration of possible side effects. Consequently, doctors frequently discussed with patients the appropriate usage of analgesics.

> *They learn about some of these adverse events from other patients, family members, or the media, which naturally makes them worried and unwilling to experience such things themselves. So, we often advise patients during outpatient visits that it's okay to take pain relievers occasionally when needed.(D7)*

Discussion

Main Finding

This study provides novel insights into the comparative perspectives of doctors and patients regarding treatment outcomes for CLBP. The findings highlight both alignments and divergences in outcome priorities between the two groups. Patients emphasized subjective factors such as pain severity, stigmatization, and quality of life, whereas doctors prioritized objective clinical indicators, including overall clinical impression, locomotor function, and quality of life. This discrepancy aligns with previous studies[24–27] For example, in a study conducted by Mancuso,[24] a group of patients undergoing lumbar spine surgery had expected complete relief from spine-related disability after surgery. However, surgeon's expectations for treatment were more cautious, ranging from "some improvement in disability" to "significant improvement", with no expectation of complete relief. In other words, doctors and patients having different expectations leads to divergent focuses on outcomes.

What the Same

Doctors and patients unanimously agreed that pain/discomfort (perceived importance by doctors: 92.3%, by patients: 86.7%) and activities of daily life (doctors: 92.3%, patients: 93.1%) were the most important outcomes. Pain is the most common complaint among patients and is often the main reason for medical consultations. Both patients and doctors emphasized that CLBP places a significant burden on patients' activities of daily living. These findings align seamlessly with the established Core Outcome Sets (COS) for CLBP.[28]

A systematic review[29] also identified pain and activities of daily life as the most important. Another review showed that in 60% of studies of elderly individuals with low back pain, functional disability, difficulties in activities of daily living, and physical ability were the main issues.[30] It also indicated a high prevalence of elderly individuals having low back pain (LBP) and functional disability that have a significant impacts on independence.[30] Most LBP patients complained that pain affects their daily life ability, such as self-care ability, independence, walking and standing ability, and mobility.[16]

What the Difference

From a holistic perspective, doctors placed more emphasis on overall clinical impression (doctor 80.8%, patient 75.9%), impact on quality of life (doctor 84.6%, patient 76.7%), and locomotor function (doctor 92.3%, patient 73.3%) than patients. The analysis of questionnaire scores reveals that patients do concerns a lot, although the scores did not reach the preset critical threshold. This outcome is consistent with the established Core Outcome Sets (COS) for CLBP.[28]

Patients expressed greater concern about specific outcomes such as skeletal-related issues, spinal deformity, sexual function, posture and gait, and difficulty in weight-bearing. These outcomes are influenced by a variety of complex factors, including the duration of the patient visit, medical conditions, and psychosocial factors.[31] Patients desired to totally recover from their illness. Doctors can manage and adjust patient expectations by learning the differences that result from information asymmetry between doctors and patients.[32] This approach, often known as “patient education”, has been approved for its effectiveness in promoting sustained patient engagement throughout the treatment process while lowering the risk of patient dissatisfaction.[32] Education is a valuable tool for doctors who want to take a biopsychosocial and patient-centered approach, according to the study.[33,34]

Patients are particularly concerned with stigmatization, self-esteem, and body image perception since they are directly affected by the disease. A parallel qualitative study[35] found that individuals with CLBP experienced both covert and overt stigmatization from friends, family, the community, and the workplace. Patients often feel that their experiences and emotions were misunderstood, leading to a damaged sense of self-worth. Health care providers who followed the ‘sickness versus wellness’ model also contributed to the stigmatization. Given their lack of firsthand experience coping with these emotions, physicians may not fully comprehend the severity of these perceived outcomes for patients, who, in turn, regard these aspects as critical.

As recipients of treatment, patients placed a higher value on overall satisfaction, healthcare utilization, and quality-adjusted life year (QALY), including potential adverse events than doctors. Patient satisfaction can reflect subjective experience and emotions, and the distribution of medical resources may influence overall satisfaction.[36] An increasing number of studies shows that doctors are becoming increasingly interested in this subject. A QALY is one year of life that has been adjusted for its quality or health-based value. Quality of life is assessed across a patient’s physical, social, and psychological domains, with QALY weights empirically assigned to each category.[37] Patients with LBP can become dissatisfied when clinicians place more emphasis on clinical symptoms or medical imaging rather than the impact on the quality of life. The uneven distribution of healthcare resources appears to be a potential determinant of differences in outcome priorities between patients and healthcare providers. Healthcare utilization depends primarily on the need for services (ie, levels of illness and disability), the availability of services, and the resources available to provide and pay for services.[38] Studies indicate that healthcare utilization is not always closely related to health status and need as one would expect, and that both individual and structural factors have an impact on it.[39] In addition, several studies demonstrate that there are inequities in the utilization of healthcare services.[40]

Adverse events are getting more attention. Patients are frequently concerned about the safety of treatments, including surgery. The majority prefer conservative treatment if it could avoid the negative effects of surgery. However, doctors are more prone to consider analgesic dosage and adverse effects. Medication adherence varies greatly between individuals.

Implication for Clinical Practices and Researchers

This research highlights critical implications for clinical practice and research. Comparing the perspectives of doctors and patients on outcome enhances understanding of patient needs and fosters improved communication, ultimately aiding in better treatment decisions and personalized care. PROs provide valuable insights into treatment effectiveness and quality of life from the patient’s perspective, promoting patient satisfaction and adherence.Strengthening doctor-patient communication not only addresses patient anxieties but also helps clinicians tailor treatments to individual expectations. Additionally, these findings can guide the design of clinical studies by aligning outcome measures with patient experiences, improving the relevance and reliability of research results.

Advantages and Limitation

Our study provides a comprehensive analysis that integrates both quantitative and qualitative research data, enhancing the robustness of our findings. Moreover, we employed the COMET framework analysis to precisely explain the observed differences in outcomes. The findings of this study will substantially influence how doctors and professionals in related fields deal with the pain experienced by patients with CLBP. A fundamental strength of this study is its comparative analysis, which reveals commonalities and differences between physicians and patients, providing pioneering insights into the concept of "outcome of chronic low back pain." The quantitative survey results were confirmed by in-depth interviews using qualitative methods, further strengthening the validity of the findings.

However, it is critical to acknowledge the current investigation's limitations. Participants were initially recruited from a specific area, which may restrict the generalizability of our findings. Additionally, the perspectives of patients and doctors from other geographical or cultural backgrounds may not be fully represented. The variability in participant characteristics and disease severity also introduced complexity in analyzing and interpreting outcomes, potentially diluting nuanced insights. These factors emphasize the importance of caution in extrapolating the results to a broader population. Nevertheless, the inclusion of patients and physicians with various characteristics through the sampling procedure enhanced the professional and academic rigor of the study, mitigating some of the limitations and ensuring a degree of generalizability. Furthermore, the varying severity of patients' pre-interview conditions resulted in a wide range of chronic low back pain levels among participants, making more nuanced interviews focused on specific phases of their disease impractical. Future research addressing these limitations, such as incorporating diverse populations and conducting longitudinal studies, could help provide a deeper understanding of this subject.

Conclusion

This study explored the differences in treatment outcome expectations between patients with chronic low back pain (CLBP) and doctors, comparing the relative importance of 57 outcomes. The results revealed that 3.5% of the outcomes were consistent between both groups, while 38.6% showed significant differences. Qualitative focus group interviews helped to explain these disparities, identifying five key themes: 1) doctors' prioritization of holistic patient care; 2) patients' emphasis on cost-effectiveness and satisfaction; 3) patients' focus on body image and physical function; 4) shared importance of pain relief beyond other outcomes; and 5) shared concerns regarding adverse events. Despite the differences, both groups prioritized pain relief and treatment safety. These findings underscore the importance of understanding patient expectations, highlighting the need for shared decision-making and patient-centered care. By improving communication and aligning treatment priorities, healthcare providers can tailor treatment plans more effectively, leading to higher patient satisfaction, better adherence, and improved outcomes.

Ethics Approval and Consent to Participate

This study was approved by the Ethics Committee of the local health unit (Ethics Review Number: DZMEC-KY-2020-60), and written informed consent was obtained from all participants before starting data collection.

Author Contributions

All authors made a significant contribution to the work reported, whether in the conception, study design, execution, acquisition of data, analysis, and interpretation, or in all these areas; took part in drafting, revising, or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors declare that they have no competing interests.

References

1. Murray CJ, Vos T, Lozano R, et al. Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990-2010: a systematic analysis for the global burden of disease study 2010. *Lancet*. 2012;380:2197–2223. doi:10.1016/S0140-6736(12)61689-4
2. Hoy D, Bain C, Williams G, et al. A systematic review of the global prevalence of low back pain. *Arthritis Rheum*. 2012;64:2028–2037. doi:10.1002/art.34347
3. Artus M, van der Windt DA, Jordan KP, Hay EM. Low back pain symptoms show a similar pattern of improvement following a wide range of primary care treatments: a systematic review of randomized clinical trials. *Rheumatology*. 2010;49:2346–2356. doi:10.1093/rheumatology/keq245
4. Knezevic NN, Candido KD, Vlaeyen JWS, Van Zundert J, Cohen SP. Low back pain. *Lancet*. 2021;398:78–92. doi:10.1016/S0140-6736(21)00733-9
5. Clement RC, Welander A, Stowell C, et al. A proposed set of metrics for standardized outcome reporting in the management of low back pain. *Acta Orthopaedica*. 2015;86:523–533. doi:10.3109/17453674.2015.1036696
6. Added MAN, Costa LOP, Fukuda TY. Efficacy of adding the kinesio taping method to guideline-endorsed conventional physiotherapy in patients with chronic nonspecific low back pain: a randomised controlled trial. *BMC Musculoskelet Disord*. 2013;14:301. doi:10.1186/1471-2474-14-301
7. *The COMET Handbook: Version 1.0* -. PubMed. https://pubmed.ncbi.nlm.nih.gov/28681707/.
8. Beale M, Cella M, C A. Comparing patients' and clinician-researchers' outcome choice for psychological treatment of chronic pain. *Pain*. 2011;152:2283–2286. doi:10.1016/j.pain.2011.06.007
9. Deyo RA, Dworkin SF, Amtmann D, et al. Report of the NIH task force on research standards for chronic low back pain. *J Pain*. 2014;15:569–585. doi:10.1016/j.jpain.2014.03.005
10. Casarett D, Karlawish J, Sankar P, Hirschman K, Asch DA. Designing pain research from the patient's perspective: what trial end points are important to patients with chronic pain? *Pain Med*. 2001;2:309–316. doi:10.1046/j.1526-4637.2001.01041.x
11. Alberti P, Rossi E, Cornblath DR, et al. Physician-assessed and patient-reported outcome measures in chemotherapy-induced sensory peripheral neurotoxicity: two sides of the same coin. *Ann Oncol*. 2014;25:257–264. doi:10.1093/annonc/mdt409
12. Lieberman JR, Dorey F, Shekelle P, et al. Differences between patients' and physicians' evaluations of outcome after total Hip arthroplasty. *J Bone Joint Surg Am*. 1996;78:835–838. doi:10.2106/00004623-199606000-00005
13. Schwartz RM, Gorbenko K, Kerath SM, et al. Thoracic surgeon and patient focus groups on decision-making in early-stage lung cancer surgery. *Future Oncol*. 2018;14:151–163. doi:10.2217/fon-2017-0254
14. Kishore K, Jaswal V, Kulkarni V, De D. Practical guidelines to develop and evaluate a questionnaire. *Indian Dermatol Online J*. 2021;12:266–275. doi:10.4103/idoj.IDOJ_674_20
15. Palinkas LA, Horwitz SM, Green CA, et al. Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Adm Policy Ment Health*. 2015;42:533–544. doi:10.1007/s10488-013-0528-y
16. Zhang Y, et al. Qualitative study of chronic low back pain patients' experiences based on the outcome indicators framework. *Chin Med Herald*. 2021;18:179–184.
17. Wu Y, Wan Y, Hu C, Sun Y, Yu C. Comparison of outcome indicators and measurement tools for treating low back pain with traditional Chinese and Western medicine in clinical trials. *Chinese General Practice*. 2022;25:4433–4442.
18. Dodd S, Clarke M, Becker L, et al. A taxonomy has been developed for outcomes in medical research to help improve knowledge discovery. *J Clin Epidemiol*. 2018;96:84–92. doi:10.1016/j.jclinepi.2017.12.020
19. Guyatt GH, Oxman AD, Kunz R, et al. GRADE guidelines: 2. Framing the question and deciding on important outcomes. *J Clin Epidemiol*. 2011;64:395–400. doi:10.1016/j.jclinepi.2010.09.012
20. Marson BA, Manning JC, James M, et al. Development of the CORE-Kids core set of outcome domains for studies of childhood limb fractures. *Bone Joint J*. 2021;103:1821–1830. doi:10.1302/0301-620X.103B.BJJ-2020-2321.R2
21. Avery L, Exley C, McPherson S, et al. Lifestyle behavior change in patients with nonalcoholic fatty liver disease: a qualitative study of clinical practice. *Clin Gastroenterol Hepatol*. 2017;15:1968–1971. doi:10.1016/j.cgh.2017.06.011
22. Saunders B, Sim J, Kingstone T, et.al.Saturation in qualitative research: exploring its conceptualization and operationalization. *Qual Quantity*. 52;2018.
23. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19:349–357. doi:10.1093/intqhc/mzm042
24. Mancuso CA, Duculan R, Cammisa FP, et al. Concordance between patients' and surgeons' expectations of lumbar surgery. *Spine*. 2021;46:249–258. doi:10.1097/BRS.0000000000003775
25. Weekes D, Campbell RE, Shi WJ, et al. Are patient and surgeon expectations after ACL reconstruction realistic? *Clin Orthop Relat Res*. 2020;478:619–628. doi:10.1097/CORR.0000000000001082
26. Bess S, Line B, Ames C, et al. Would you do it again? Discrepancies between patient and surgeon perceptions following adult spine deformity surgery. *Spine J*. 2023;23:1115–1126. doi:10.1016/j.spinee.2023.04.018
27. Lattig F, Fekete TF, O'Riordan D, et al. A comparison of patient and surgeon preoperative expectations of spinal surgery. *Spine*. 2013;38:1040–1048. doi:10.1097/BRS.0b013e318269c100
28. Wan Y. *Construction of a Core Outcome Set for Clinical Research on Chronic Low Back Pain in Traditional Chinese Medicine*. Beijing University of Chinese Medicine; 2021; doi:10.26973/d.cnki.gbjzu.2021.000702
29. Chapman JR, Norvell DC, Hermsmeyer JT, et al. Evaluating common outcomes for measuring treatment success for chronic low back pain. *Spine*. 2011;36:S54–S68. doi:10.1097/BRS.0b013e31822ef74d
30. de Souza IMB, Sakaguchi TF, Yuan SLK, et al. Prevalence of low back pain in the elderly population: a systematic review. *Clinics*. 2019;74:e789. doi:10.6061/clinics/2019/e789
31. Papadimitriou G. The 'biopsychosocial model': 40 years of application in psychiatry. *Psychiatriki*. 2017;28:107–110. doi:10.22365/jpsych.2017.282.107
32. Schafer LM, Hsu C, Eaves ER, et al. Complementary and alternative medicine (CAM) providers' views of chronic low back pain patients' expectations of CAM therapies: a qualitative study. *BMC Complement Altern Med*. 2012;12:234. doi:10.1186/1472-6882-12-234
33. Jones KC, Tocco EC, Marshall AN, Valovich McLeod TC, Welch Bacon CE. Pain education with therapeutic exercise in chronic nonspecific low back pain rehabilitation: a critically appraised topic. *J Sport Rehabil*. 2020;29:1204–1209. doi:10.1123/jsr.2019-0345

34. Kalauokalani D, Cherkin DC, Sherman KJ, Koepsell TD, Deyo RA. Lessons from a trial of acupuncture and massage for low back pain: patient expectations and treatment effects. *Spine*. 2001;26:1418–1424. doi:10.1097/00007632-200107010-00005
35. Slade SC, Molloy E, Keating JL. Stigma experienced by people with nonspecific chronic low back pain: a qualitative study. *Pain Med*. 2009;10:143–154. doi:10.1111/j.1526-4637.2008.00540.x
36. Owili PO, Hsu Y-HE, Chern J-Y, et al. Perceptions and attitudes of health professionals in Kenya on national health care resource allocation mechanisms: a structural equation modeling. *PLoS One*. 2015;10:e0127160. doi:10.1371/journal.pone.0127160
37. Kaplan RM, Hays RD. Health-related quality of life measurement in public health. *Annu Rev Public Health*. 2022;43:355–373. doi:10.1146/annurev-publhealth-052120-012811
38. Watts AS, Crimmins EM. Populations at special health risk: the elderly. In: Heggenhougen HK, editor. *International Encyclopedia of Public Health*. Oxford: Academic Press; 2008:254–260. doi:10.1016/B978-012373960-5.00094-0
39. Burström B. Market-oriented, demand-driven health care reforms and equity in health and health care utilization in Sweden. *Int J Health Serv*. 2009;39:271–285. doi:10.2190/HS.39.2.c
40. Morris S, Sutton M, Gravelle H. Inequity and inequality in the use of health care in England: an empirical investigation. *Soc Sci Med*. 2005;60:1251–1266. doi:10.1016/j.socscimed.2004.07.016