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Original Research Article

Attitudes and Beliefs of Indian Physiotherapist about Chronic Nonspecific Low Back Pain and Choices in Treatment Selection: A Questionnaire Based Cross Sectional Study

Abdur Rahman *[1], Ranjeeth Kumar C [2], Snehanjali Sahu [3].

*[1] Master of Physiotherapy, Department of Physiotherapy, Yenepoya School of Allied and Healthcare Professions, Yenepoya (Deemed to be University), Bengaluru, Karnataka, India.

[2] Assistant Professor, Department of Physiotherapy, Yenepoya School of Allied and Healthcare Professions, Yenepoya (Deemed to be University), Bengaluru, Karnataka, India.

[3] Assistant Professor, Department of Occupational Therapy, Yenepoya School of Allied and Healthcare Professions, Yenepoya (Deemed to be University), Bengaluru, Karnataka, India.

ABSTRACT

Chronic low back pain (CLBP) is a leading cause of disability worldwide. While often managed using a biomedical model, current evidence supports the biopsychosocial approach. This study examined the attitudes and beliefs of Indian physiotherapists regarding non-specific CLBP (NSCLBP) using the Pain Attitudes and Beliefs Scale for Physiotherapists (PABS-PT) and explored associations between belief orientation and treatment choices. Ninety-six physiotherapists from Bangalore, India, participated in a questionnaire-based cross-sectional survey. Data were collected via face-to-face interviews and analyzed using descriptive statistics, Pearson correlation, and logistic regression in SPSS v26 ($p<0.05$). Participants demonstrated moderate biomedical and strong biopsychosocial orientations. Stretching was universally practiced; other treatments varied. Higher biomedical scores predicted bed rest prescription, whereas stronger biopsychosocial orientation predicted use of the McKenzie method and cupping therapy. Findings suggest a blend of traditional and modern beliefs, with some reliance on outdated practices. Educational interventions promoting the biopsychosocial model may improve patient outcomes.

KEY WORDS: Attitudes, beliefs, biomedical orientation, biopsychosocial model, low back pain, physiotherapy.

Address for correspondence: Abdur Rahman, Master of Physiotherapy, Department of Physiotherapy, Yenepoya School of Allied and Healthcare Professions, Yenepoya (Deemed to be University), Bengaluru, Karnataka, India. **E-Mail:** rahmank2587774@gmail.com

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INTRODUCTION

Chronic low back pain (CLBP) is a prevalent musculoskeletal condition and one of the leading causes of disability globally. Non-specific CLBP, defined as pain persisting for more than 12 weeks without a specific underlying pathology, imposes substantial personal, social, and economic burdens [1,6]. Traditionally, CLBP management followed a biomedical approach focusing on anatomical and biomechanical causes; however, evidence increasingly supports a *biopsychosocial model* that integrates psychological and social factors alongside physical contributors. Physiotherapists play a crucial role in CLBP management, and their attitudes and beliefs significantly

influence treatment choices and patient outcomes [1].

The Pain Attitudes and Beliefs Scale for Physiotherapists (PABS-PT) measures the extent to which practitioners adoptbiomedical or biopsychosocial orientations, and studies conducted in different countries have demonstrated variability in these orientations, with implications for clinical guideline adherence and recovery outcomes [2,3].

In India, there is limited literature exploring physiotherapists' beliefs regarding CLBP [4]. This study aims to assess the biomedical and biopsychosocial orientations of Indian physiotherapists using the PABS-PT and to investigate the relationship between belief orientation and treatment selection [7,8].

The specific aims are to investigate physiotherapists' attitudes and beliefs regarding pain in the context of non-specific chronic low back pain (NSCLBP) and to identify the most commonly used treatment approaches by physiotherapists for patients with NSCLBP [9]. The objective is to evaluate the knowledge, attitudes, and beliefs of physiotherapists regarding NSCLBP using the PABS-PT [10].

METHODOLOGY

Study Design: This was a questionnaire-based cross-sectional study conducted in Bangalore, India.

Participants: A total of 96 registered physiotherapists were recruited through convenience sampling from clinical and academic settings. Inclusion criteria were: practicing physiotherapists with a minimum of one year of clinical experience, fluent in English, and willing to provide informed consent. Physiotherapists with less than one year of experience or currently enrolled as undergraduate students were excluded.

Ethical Considerations: The study received ethical clearance from the Institutional Ethics Committee of [Yenepoya deemed to be university, Deralakatte, Mangaluru, Karnataka 575018]. Written informed consent was obtained from all participants.

Instrument: The Pain Attitudes and Beliefs Scale for Physiotherapists (PABS-PT) was used. This validated questionnaire contains two subscales:

Biomedical Orientation Subscale (higher scores indicate stronger biomedical beliefs).

Biopsychosocial Orientation Subscale (higher scores indicate stronger biopsychosocial beliefs).

Data Collection: Face-to-face interviews were conducted by the primary investigator. Participants also provided demographic data and reported treatment modalities they commonly used for CLBP.

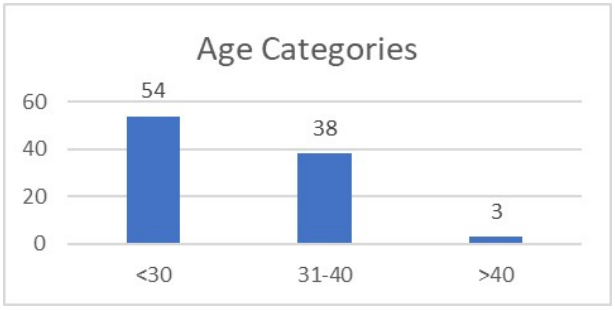
Statistical Analysis

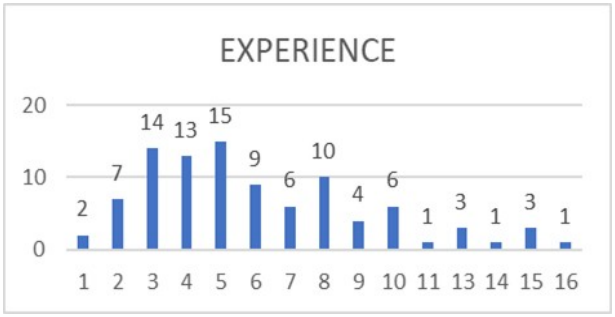
Data analysis was performed using SPSS v26. Descriptive statistics were computed for demographic variables and PABS-PT scores. Pearson correlation was used to examine relationships between belief orientations and treatment choices. Logistic regression was applied to determine predictors of specific treatment selections. A p-value <0.05 was considered statistically significant.

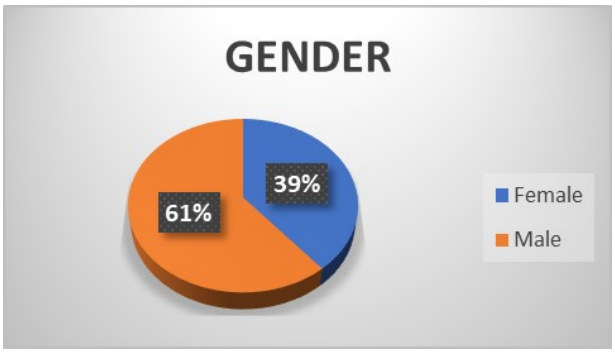
RESULTS

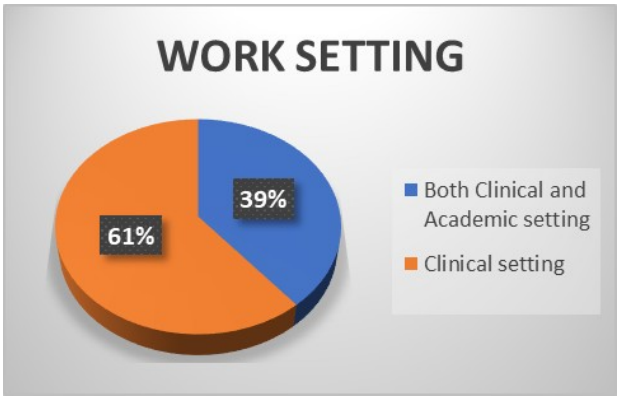
Table 1: Participant Characterstics

	Age Categories	Valid Percent
<30	54	56.8
31-40	38	40
>40	4	3.2
Total	96	100
	EXPERIENCE	Valid Percent
1	2	2.1
2	7	7.4
3	14	14.7
4	13	13.7
5	15	15.8
6	9	9.5
7	6	6.3
8	10	10.5
9	4	4.2
10	6	6.3
11	1	1.1
13	3	3.2
14	1	1.1
15	3	3.2
16	1	1.1
Total	96	100
	QUALIFICATION	Valid Percent
BPT	34	35.8
MPT	56	58.9
PHD	6	5.3
Total	96	100
	GENDER	Valid Percent
Female	38	38.9
Male	58	61.1
Total	96	100
	WORK SETTING	Valid Percent
Both Clinical and Academic setting	38	38.9
Clinical setting	58	61.1
Total	96	100









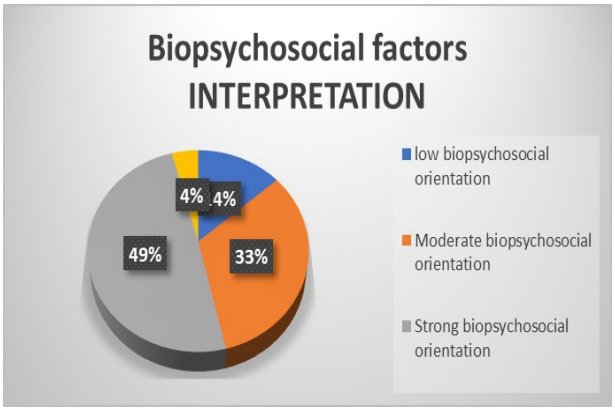
PABS-PT Scores: The mean biomedical orientation score was 34.5 ± 6.2.

The mean biopsychosocial orientation score was 52.8 ± 7.4.

Table 2: Descriptive Analysis For Pain Belief And Biomedical Factor, Treatment Planned By Physiotherapist.

	PAIN IS DETERMINED BY SEVERITY OF TISSUE DAMAGE	Valid Percent
Completely disagree	2	2.1
To some Extent, I Disagree	8	8.4
To a certain extent, I Agree	37	38.9
Mostly agree	22	23.2
Completely agree	27	28.4
Total	96	100
	INCREASED PAIN INDICATED INCREASED DAMAGE	Valid Percent
Strongly Disagree	4	4.2
To some Extent, I Disagree	3	3.1
To a certain extent, I Agree	32	33.7
Mostly agree	39	41.1
Completely agree	18	18.9
Total	96	100
	PAIN IS RESULT OF NOCICEPTIVE STIMULI AND DAMAGE	Valid Percent
Strongly Disagree	2	2.1
To some Extent, I Disagree	4	4.2
To a certain extent, I Agree	20	21.1
Mostly agree	36	37.9
Completely agree	34	35.8
Total	96	100
	THE TREATMENT INTENSITY SHOULD BE MODIFIED IF THE PAIN ESCALATES IN SEVERITY	Valid Percent
Completely disagree	6	6.3
Strongly Disagree	2	2.2
To some Extent, I Disagree	6	6.3
To a certain extent, I Agree	20	21.1
Mostly agree	22	23.2
Completely agree	40	42.1
Total	96	100
	IF PATIENT REPORTS PAIN DURING EXERCISE IT IS WORRIED THAT IS DUE TO EXERCISE	Valid Percent
Completely disagree	11	11.5
Strongly Disagree	10	10.5
To some Extent, I Disagree	22	23.2
To a certain extent, I Agree	25	26.3
Mostly agree	14	14.7
Completely agree	14	14.7
To a certain extent, I Agree	25	26.3
Mostly agree	14	14.7
Completely agree	14	14.7
Total	96	100
	ONLY PAIN FREE MOVEMENT SHOULD BE DONE DURING BACK PAIN. NORMAL FUNCTIONING WILL HAPPEN ONLY AFTER PAIN REDUCTION	Valid Percent
Completely disagree	5	5.2
Strongly Disagree	2	2.1
To some Extent, I Disagree	7	7.4
To a certain extent, I Agree	38	40
Mostly agree	31	32.6
Completely agree	13	13.7
Total	96	100
	NORMAL FUNCTIONING WILL HAPPEN ONLY AFTER PAIN REDUCTION	Valid Percent
Completely disagree	6	6.3
Strongly Disagree	1	1.1
To some Extent, I Disagree	14	14.7
To a certain extent, I Agree	36	37.9
Mostly agree	22	23.2
Completely agree	17	17.9
Total	96	100
	HIGH RISK OF LONG TERM RESTRICTION AVAILS WHEN BACK PAIN IS NOT REDUCED BY THERAPY	Valid Percent
Completely disagree	4	4.2
Strongly Disagree	2	2.1
To some Extent, I Disagree	17	17.9
To a certain extent, I Agree	26	27.4
Mostly agree	37	38.9
Completely agree	10	10.5
Total	96	100
	BACK PAIN ALWAYS INDICATES ORGANIC INJURY	Valid Percent
Completely disagree	14	14.7
Strongly Disagree	16	16.8
To some Extent, I Disagree	26	27.4
To a certain extent, I Agree	23	24.2
Mostly agree	17	17.9
Total	96	100

	There is no definitive treatment to eliminate backpain	Valid percent
Completely disagree	21	22.1
Strongly disagree	20	21
To some Extent, I Disagree	16	16.8
To a certain extent, I Agree	17	17.9
Mostly agree	19	20
Completely agree	3	3.2
Total	96	100
	Mental stress can lead to back pain in the absence of tissue damage	Valid percent
Completely disagree	10	10.5
Strongly disagree	6	6.3
To some Extent, I Disagree	13	13.7
To a certain extent, I Agree	19	20
Mostly agree	26	27.4
Completely agree	21	22.1
Total	96	100
	Biopsychosocial factors INTERPRETATION	Valid Percent
Low biopsychosocial orientation	13	13.7
Moderate biopsychosocial orientation	31	32.6
Strong biopsychosocial orientation	47	49.5
Very strong biopsychosocial orientation	5	5.2
Total	96	100



Treatment Practices: The most frequently reported interventions for chronic non-specific low back pain were:

· Stretching exercises: **100% (n = 96)**

· McKenzie method: **73.9% (n = 71)**

· Cupping therapy: **67.7% (n = 65)**

· Manual therapy: **62.5% (n = 60)**

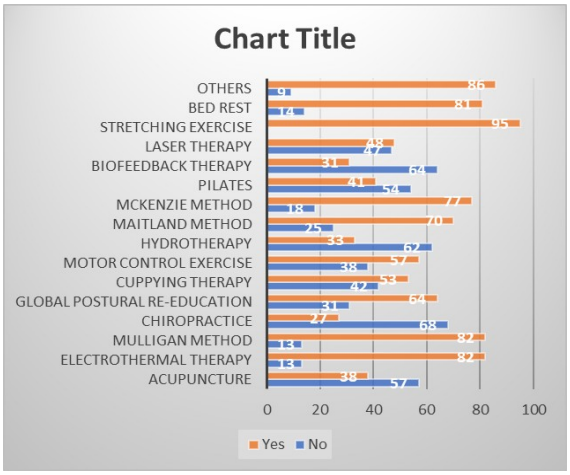
· Electrotherapy: **54.2% (n = 52)**

· Bed rest recommendation: **36.5% (n = 35)**

Table 4: Descriptive Statistics For Treatment Selection For Back Pain Management.

	Section:3 treatment selection	
System	96	
	Acupuncture	Valid percent
No	58	60
Yes	38	40
Total	96	100
	Electrothermal therapy	Valid percent
No	14	13.7
Yes	82	86.3
Total	95	100
	Mulligan method	Valid percent
No	14	13.7
Yes	82	86.3
Total	96	100
	Chiropractic	Valid percent
No	68	71.6
Yes	28	28.4
Total	96	100

	GLOBAL POSTURAL RE-EDUCATION	Valid Percent
No	31	32.6
Yes	64	67.4
Total	95	100
	CUPPYING THERAPY	Valid Percent
No	42	44.2
Yes	53	55.8
Total	95	100
	MOTOR CONTROL EXERCISE	Valid Percent
No	38	40
Yes	57	60
Total	95	100
	HYDROTHERAPY	Valid Percent
No	62	65.3
Yes	33	34.7
Total	95	100
	MAITLAND METHOD	Valid Percent
No	25	26.3
Yes	70	73.7
Total	95	100
	MCKENZIE METHOD	Valid Percent
No	18	18.9
Yes	77	81.1
Total	95	100
	STRETCHING EXERCISE	Valid Percent
Yes	95	100
	BED REST	Valid Percent
No	14	14.7
Yes	81	85.3
Total	95	100
	OTHERS	Valid Percent
No	9	9.5
Yes	86	90.5
Total	95	100
	Treatment Selection	Valid Percent
4	1	1.1
5	4	4.2
6	1	1.1
7	3	3.2
8	9	9.5
9	10	10.5
10	26	27.4
11	16	16.8
12	15	15.8
13	5	5.3
14	4	4.2
15	1	1.1
Total	95	100



Correlational Analysis: Pearson correlation analysis showed:

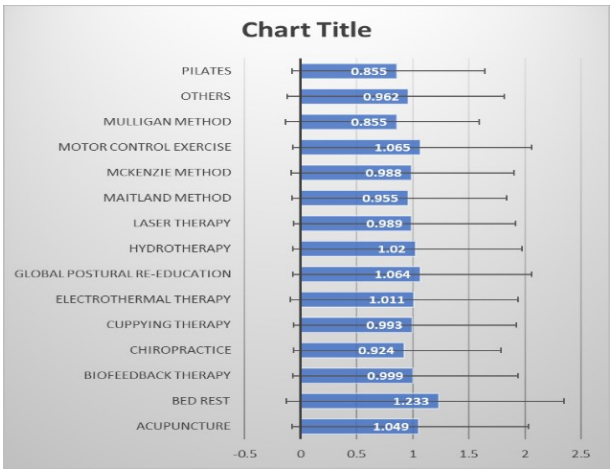
Biomedical orientation was positively correlated with recommendation of bed rest (**r = 0.295, p = 0.004**).

Biopsychosocial orientation was positively correlated with use of the McKenzie method (**r = 0.254, p = 0.012**) and cupping therapy (**r = 0.298, p = 0.003**).

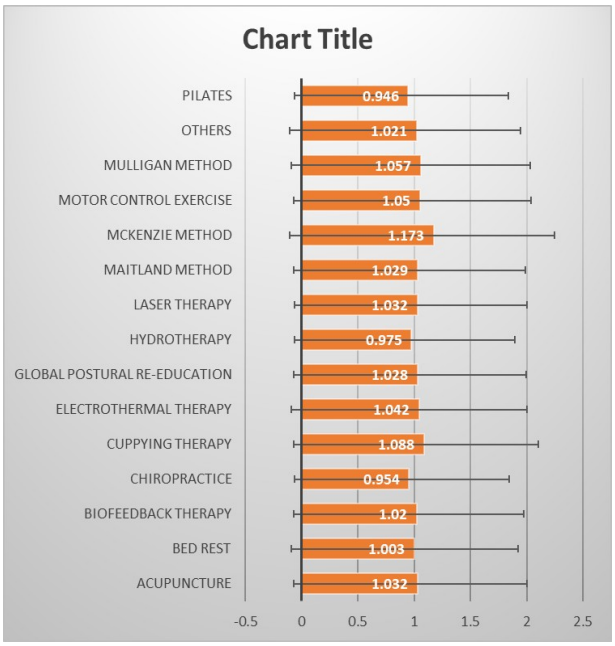
Table 5: Associations Between Belief Orientation And Treatment Selection.

		No(n=57)	Yes(n=38)	t	P
		Mean ± SD	Mean ± SD		VALUE
Acupuncture	Biomedical factor	42.74±6.88	44.61±5.71	-1.385	0.169
	Biopsychosocial factors	34.65±5.93	36±7.72	-0.963	0.338
Bed rest	Biomedical factor	35.43±7.35	44.88±5.21	-4.616	<0.001
	Biopsychosocial factors	35.07±4.32	35.21±7.05	-0.099	0.922
Biofeedback therapy	Biomedical factor	43.5±6.03	43.45±7.41	0.034	0.973
	Biopsychosocial factors	34.91±7.36	35.77±5.14	-0.666	0.507
Chiropractic	Biomedical factor	44.46±5.69	41.04±7.7	2.091	0.043
	Biopsychosocial factors	35.79±6.55	33.67±6.96	1.404	0.164
Cupping therapy	Biomedical factor	43.64±5.91	43.36±6.94	0.212	0.833
	Biopsychosocial factors	33.21±7.82	36.75±5.22	-2.523	0.014
Electrothermal therapy	Biomedical factor	43.08±6.9	43.55±6.45	-0.243	0.809
	Biopsychosocial factors	33.54±5.93	35.45±6.81	-0.956	0.341
Global postural re-education	Biomedical factor	41.71±7.76	44.34±5.61	-1.687	0.098
	Biopsychosocial factors	34.35±6.62	35.59±6.75	-0.844	0.401
Hydrotherapy	Biomedical factor	43.21±7.23	44±4.79	-0.637	0.526
	Biopsychosocial factors	35.58±7.23	34.45±5.59	0.779	0.438
Laser therapy	Biomedical factor	43.72±5.36	43.25±7.45	0.356	0.723
	Biopsychosocial factors	34.49±7.02	35.88±6.36	-1.008	0.316
Maitland method	Biomedical factor	44.76±4.99	43.03±6.9	1.15	0.253
	Biopsychosocial factors	34.24±7.66	35.53±6.35	-0.824	0.412
Mckenzie method	Biomedical factor	43.89±5.29	43.39±6.75	0.293	0.77
	Biopsychosocial factors	29.61±7.55	36.49±5.8	-4.27	<0.001
Motor control exercise	Biomedical factor	41.92±8.22	44.53±4.79	-1.764	0.083
	Biopsychosocial factors	33.89±7.72	36.05±5.83	-1.55	0.125
Mulligan method	Biomedical factor	47.08±4.86	42.91±6.54	2.198	0.03
	Biopsychosocial factors	32.92±7.81	35.55±6.49	-1.318	0.191
Others	Biomedical factor	44.78±5.31	43.35±6.59	0.628	0.531
	Biopsychosocial factors	34.33±5.43	35.28±6.84	-0.401	0.689
Pilates	Biomedical factor	45.8±4.22	40.44±7.63	4.052	<0.001
	Biopsychosocial factors	36.24±7.05	33.8±6.01	1.776	0.079

BIO MEDICAL FACTOR



BIOPSYCHOSOCIAL FACTOR



Participant Characteristics: A total of 96 physiotherapists participated in the study. The mean age was **26.2 ± 4.3 years**, with **54.2% (n = 52)** males and **45.8% (n = 44)** females. The average clinical experience was **3.2 ± 2.5 years**. Most participants worked in private clinical settings (**46.9%**), followed by hospitals (**31.3%**) and academic institutions (**21.9%**).

DISCUSSION

This study found that Indian physiotherapists display moderate biomedical and strong biopsychosocial orientations when managing CLBP [11]. Similar patterns have been observed in studies from [Country], suggesting a global shift towards incorporating psychosocial factors in CLBP management [12].

The strong biopsychosocial orientation aligns

with current clinical guidelines, which emphasize active management, patient education, and minimizing reliance on passive modalities or extended rest [13]. However, the persistence of outdated practices such as bed rest highlights the need for ongoing professional education [14].

Barriers to implementing the biopsychosocial model may include limited training, patient expectations, and systemic healthcare constraints. Interventions targeting these barriers could improve adherence to evidence-based practice [15].

CONCLUSION

Indian physiotherapists adopt both traditional and modern approaches to CLBP management. Strengthening the emphasis on biopsychosocial principles in physiotherapy education and continuing professional development may improve patient outcomes and reduce disability.

Ethics Approval & Consent: Approved by Yenepoya Institutional Ethics Committee. Written informed consent obtained.

Competing Interests: None declared.

Funding: None.

Availability of Data: Available on request from the corresponding author.

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