

A Study Evaluating Attitudes toward Treatment of Low Back Pain among Indian Physiotherapists

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Abstract

Introduction: One of the most common musculoskeletal conditions that physiotherapists treat globally is low back pain (LBP) which is a serious health issue and has a significant financial burden. Approximately half of the physiotherapists' workload consists of treating various LBP patients. In addition to traditional physiotherapy, evidence-based treatment for LBP involves painkillers, counseling, educational sessions, and exercises done under supervision. Furthermore, a practitioner's attitudes and beliefs influence the management and outcomes of LBP. Therefore, the purpose of the current study examined the attitudes and beliefs of Indian physiotherapists regarding the treatment of LBP. **Methodology:** A cross-sectional survey was conducted across four zones (North, South, East, and West) of India on practicing and qualified Indian physiotherapists. Based on the selection criteria, physiotherapists with a minimum work experience of 1 year after completing their base professional degree were recruited and the attitudes to back pain scale in musculoskeletal practitioners (ABS-mp) survey/questionnaire was distributed. The survey was completed online as well as offline at workshops and conferences across India. **Results:** From all the four zones of India, 309 valid responses were received. The Indian physiotherapists included in the study had an overall ABS-mp scale mean score of 95.12 ± 12.12 , a subdomain mean of 63 ± 8.4 for personal interaction, and a mean of 31.7 ± 5.06 for treatment orientation. Physiotherapists' attitudes and beliefs varied significantly depending on their gender, patient care setups, and educational qualifications in every sector. **Conclusion:** The study concluded that regardless of the expertise, Indian physiotherapists who treat LBP and are active in the field scored moderately high. In addition, according to the results of the current study, Indian physiotherapists are inclined to employ a psychological approach, and are open to sending patients to other professionals for guidance, and prefer to continue therapy for a longer duration. Furthermore, it seems that biomedical physiotherapists advise their patients to avoid specific circumstances by advising them to minimize physical activity and postpone returning to work.

Keywords: Biomedical approach, biopsychosocial approach, low back pain, personal interaction, physiotherapist's attitudes and beliefs, treatment orientation

INTRODUCTION

Pain is a common symptom and is widespread and universal, however, till today, it has not been very well understood. It can be treated effectively consequently proving beneficial for the patient, once the practitioner has diagnosed the issue.^[1] To ensure that the patient's quality of life is maintained at the highest level, the patient and consultant physiotherapist or other clinician collaborate for the provision of the treatment.^[2] Low back pain (LBP) continues to be a serious and challenging health issue, but it is especially prevalent in emerging nations

including India.^[1] Studies report that the prevalence among the Indian population range from 6.2% to 92%.^[1,2] Moreover, it is a condition that has a major financial burden to both the patient and the country. Since LBP is the most prevalent musculoskeletal problem addressed by physical therapists in developed nations, physiotherapists are at the forefront

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of addressing this challenge.^[1,2] The term LBP refers to the symptoms that result from trauma to the muscles, ligaments, intervertebral discs, and other connective tissues located in the lower back area. These injuries may result from abnormal loading and tension on tissues brought on by modern lifestyles that involve inactivity, manual labor, repetitive motions, and/or prolonged inappropriate postures.^[3]

In addition, the lower back area is adversely affected by psychological elements such as pre-existing fear avoidance behavior, anxiety, depression, social factors including workplace environment, and inadequate coping mechanisms.^[4] It is now well established that chronicity of LBP and its disability is not comprehensively explained exclusively by physical or biological factors, but also influenced to a large extent by psychosocial constructs. Thus, its management should include not only treating physical/biological parameters but also in addressing this challenge.^[5] The LBP treatment approach is rapidly changing from biomedical approach to biopsychological approach. Evidence based treatment for nonspecific LBP not only include conventional physiotherapy management but also inculcate educational interventions, pain relieving medications, graded and supervised exercises and counseling.^[6]

Decision on patient's management should be determined by the evaluation of biopsychological factors which should be performed as recommended by the clinical practice guidelines.^[7,8] Although numerous risk factors for the emergence and persistence of chronic pain have been discovered by multiple systematic reviews, the relative contributions of these risk factors to pain are negligible.^[7,8] Furthermore, almost all the guidelines indicate early intervention, advise practitioners to recognize risk factors, and consider pain management when minimizing them. However, they provide very little concrete advice on how to deal with these risk factors in clinical practice. As a result, implementing these guidelines into practice has proven challenging, and when commenced, the influence on practice was found to be minimal.^[9]

Numerous research have suggested that instead of concentrating only on risk factors and variations in patient symptoms and how they are treated, factors attributable to the clinician should be investigated.^[10,11] It has been noted that the attitudes and beliefs of practitioners result in either over- or under-treatment of LBP, failing to make the right referrals and eventually reinforcing the perception of illness through recommendations for total bed rest, extreme caution when performing daily activities, and lowering activity levels. Accordingly, this further reinforces the pain behavior of LBP patients.^[11,12] It is interesting to note that reliable evidence suggests that while some therapists recommend mobility, others think that uncomfortable motions should be avoided, which promotes fear avoidance over protected mobility.^[11] Thus, attitudes and beliefs of healthcare professionals has an impact not only on the clinical decision-making, but also on the attitude and belief of patients toward their particular condition acting like a two-way sword.

Many factors, such as the absence or overuse of pain management or reactivation techniques, the type and intensity of treatment, the recommendation of increased spinal care, the reinforcement of patients' false beliefs about their illness, and the restriction or limitation of normal activities, all have an important impact in the development of LBP and disability. The attitudes and beliefs of healthcare professionals affect their adherence to treating LBP. Specifically, a healthcare professional with a biomedical treatment orientation (TO) and strong beliefs about fear avoidance is more likely to exhibit poor adherence. Moreover, lack of concordance between the biomedical approach and guidelines; lack of knowledge; and under-prepared to adopt a biopsychosocial approach or poorly trained are associated with poor adherence. Thus, the goal of this study was to evaluate the attitudes and beliefs of Indian physiotherapists regarding the management of LBP and to examine the association between attitudes and beliefs with respect to gender, education, geography, application of guidelines, therapist expertise, types of interventions, and patient care setups as it will influence the skills or expertise of physiotherapists in clinical decision making, more effective implementation of existing guidelines and intervention strategies, patient-centered outcomes, and effective education.

METHODOLOGY

A cross-sectional survey, a nonprobability, convenience sampling type of observational study was performed for 11 months after approval from the institutional ethical committee. It was conducted on qualified and practicing Indian physiotherapists across four zones (North, South, East, and West) of India. Physiotherapists working with patients of LBP in private clinics, both government and private hospitals, and academic institutions with a minimum of 1 year of experience following degree completion were included in the present study. Whereas, nonpracticing clinical physiotherapists were excluded from the study. The instrument involved two components Part A presenting a self-administered questionnaire consisting of demographics and professional details and Part B including questions and the attitudes to back pain scale in musculoskeletal practitioners (ABS-mp) questionnaire based on the questions related to attitudes and beliefs in managing LBP was used.^[7] The 19 items in the ABS-mp questionnaire were divided into two sections: personal interaction (PI) and TO. The PI section involved a total of 13 question from which four were on limitations on sessions, four were psychological, four were connected to healthcare, and two were on confidence and concern. In addition, the TO section involved six question overall in which three questions were on re-activation, and three were on biomedical aspect. All the 19 items were scored on seven points Likert scale.

Both electronically and in person during conferences and workshops, survey responses were filled and received by the physiotherapists. The physiotherapists who had a minimum experience of 1 year were identified and requested to complete the research questionnaire/survey. With the assistance of SurveyMonkey® (www.surveymonkey.com), an online survey

tool, the measurement instrument(s) was developed in an online format. For the online version, there were two reminders sent out at regular intervals.

Statistical analysis

Microsoft Excel was used to compile the data, and statistical package for social sciences (SPSS) version 16 was used to analyze the data. The maximum score along with the mean and standard deviations of the ABS-mp total score, were calculated. In addition, the overall ABS-mp score and the subdimensions involving TO and PI across gender and educational qualifications were evaluated through mean rank, and Mann–Whitney “U” test score.

RESULTS

A total of 309 Indian physiotherapists from all four zones of India with a wide variety of demographics participated in the present study who were representatives of physiotherapy profession. There was a 58% return rate, with the north zone having the largest group and the second zone involving the west. The majority of physiotherapists, almost 80%, were in the age range of 21–40 years old, and 70% of them had completed graduate-level coursework in the discipline of physiotherapy, earning a master’s or doctor of philosophy (PhD) degree. Furthermore, therapists were employed in a variety of settings; 55% worked in outpatient and inpatient settings, and 63.7% of responding therapists managed six or more patients with musculoskeletal issues. In addition, 59.9% of them treated patients using a combination of manual therapy and electrotherapy, adhering to worldwide guidelines for the treatment of LBP.

As demonstrated in Table 1, there was a significant difference in attitude and belief of physiotherapists across gender and the female physiotherapists scored significantly more in

comparison to male therapists with statistically significant results ($P < 0.05$).

Furthermore, there was a significant difference in attitude and belief of physiotherapists across educational qualification in total score and PI subdomain but no significant difference in TO subdomain. The results demonstrated that the under-graduate physiotherapists had significantly better attitude and belief than postgraduate physiotherapists as demonstrated in Table 2. However, the results were insignificant with regards to the management of musculoskeletal conditions across the four zones.

Indian physiotherapists received generally moderately high scores on the ABS-mp scale, including its subdomains as demonstrated in Table 3.

DISCUSSION

LBP and its associated disabilities tend to be more prevalent and place an enormous financial burden on the patients.^[13] It is evident that a physiotherapist’s professional abilities are the most important factor in managing LBP, but therapists’ attitudes and beliefs also play a significant role. Hence, the present study was performed to examine variables related to Indian physiotherapists’ attitudes and beliefs on the treatment of LBP. Data from this study provide significant insights into the mode of practice of Indian physiotherapist with regards to the course and type of approach and longevity of treatment and their views on when patients should return to work.

Therapists from all the four zones in India with a wide variety of demographics were representatives of physiotherapy profession who participated in this cross-sectional study. The largest number of participants was from north zone, and were between 21 and 40 years of age group. Moreover, 65.7% of the physiotherapists had achieved higher education in the field of physiotherapy. In addition, males scored lesser than females across all attitude dimensions, suggesting that female therapists were more likely to use a psychological approach, and recommend more treatment sessions. Overall, it was observed that Indian physiotherapists scored moderately high on the ABS-mp scale, including its subdomains. This suggests that Indian physiotherapists rely to a great extent on their willingness to engage patients in the management of their LBP. This inclusion extended to their willingness to address the psychological problems suffered by their patients, the limitation of number of treatments, referrals to other specialties/experts, the use of the biomedical approach and their views and focus on the patients return to activity.^[14]

Table 1: Gender-wise attitude and belief of physiotherapists

Domain	Gender	Frequency (n)	Mean rank	U	P
TO	Male	139	143.65±164.28	1.02	0.043*
	Female	170			
PI	Male	139	141.67±165.90	9.96	0.018*
	Female	170			
Total score	Male	139	139.42±16774	9649	0.006*
	Female	170			

*Significant difference in attitude and belief of physiotherapists across gender. PI: Personal interaction, TO: Treatment orientation

Table 2: Attitudes to back pain scale in musculoskeletal practitioners score along with subdimensions across educational qualifications

Qualification	Total score			TO			PI		
	Mean rank	U	P	Mean rank	U	P	Mean rank	U	P
Under graduated (n=106)	166.46	8164	0.023*	161.79	8.61	0.104	165.34	8.27	0.035*
Postgraduated (n=203)	142.22			144.4			142.75		

*Statistically significant results with $P < 0.05$. PI: Personal interaction, TO: Treatment orientation

Table 3: Attitudes to back pain scale in musculoskeletal practitioners questionnaire scores

Domain/sub-domain	Maximum score	Mean \pm SD	Minimum	Maximum
PI	91	63.41 \pm 8.41	13.00	79.00
Limitation on session	28	20.84 \pm 3.65	4.00	28.00
Psychological approach	28	17.48 \pm 4.29	4.00	28.00
Connection to healthcare system	21	14.87 \pm 2.60	3.00	21.00
Confidence and concern	14	10.21 \pm 2.05	2.00	14.00
TI	42	31.71 \pm 5.06	6.00	42.00
Re-activation	21	17.56 \pm 3.00	3.00	21.00
Biomedical	21	14.15 \pm 2.93	3.00	21.00
Total ABS - mp	133	95.12 \pm 12.12	19.00	121.00

ABS-mp: Attitudes to back pain scale in musculoskeletal practitioners, SD: Standard deviation, PI: Personal interaction, TO: Treatment orientation

A previous study given by Springer *et al.* stated that students likely support a biopsychosocial approach that promotes patients developing an active strategy to cope with various musculoskeletal pain conditions.^[15] According to a study presented by Ryan *et al.*, 4th-year physiotherapy students demonstrated more positive attitudes in comparison to 1st-year students toward the potential of people with back pain to function. The study further concluded that physiotherapy education based on the bio-psycho-social model leads to positive student attitudes toward functioning in individuals with chronic pain, more than any single module about pain does.^[16] Similarly, in context of the present study, physiotherapists with undergraduate degrees were significantly better than therapists with regards to their attitude and beliefs in managing patients with LBP. This suggests that younger therapists were more willing to listen to their patients, while therapists with postgraduate degrees assumed that they were more knowledgeable and thus, were less likely to consider the opinion of their patients.

In addition, Alshehri *et al.* used the pain attitudes and beliefs scale for physiotherapists (PABS-PT) to examine pain attitudes and beliefs toward non-specific chronic LBP (NSCLBP). Based on PABS-PT scores, the study found that physiotherapists' treatment inclinations toward biological and biopsychosocial approaches were comparatively low. In addition, the results of the study demonstrated a significant association between the physiotherapists PABS-PT scores and their selection of treatment. In correspondence, physiotherapists depicting more focus on biopsychosocial treatment reported less frequent use of lumbar supports and were more likely to utilize cognitive functional therapy. Whereas, physiotherapists emphasizing on biomedical treatment were more likely to perform therapies such as electrotherapy, soft-tissue release, acupuncture, massage, particular back exercises, hydrotherapy, and lumbar supports. This demonstrates that for selection of treatment for individuals with NSCLBP, physiotherapists' pain attitudes, and beliefs are important factors.^[17] Furthermore, there was no correlation found between biomedical and biopsychosocial orientations and the demographic data consisting of age, sex, or years of experience. Meanwhile, on the biopsychosocial subscale, physiotherapists who had undergone specialized training in LBP were more likely to have higher scores in

comparison to their counterparts. However, not all studies reported similar results.^[17] For example, Innes *et al.* did not find significant associations between demographic variables and PABS-PT subscales (biomedical and biopsychosocial).^[5]

Several studies examined the relationship between the attitudes and beliefs of physiotherapists regarding pain and the application of LBP guidelines regarding bed rest, activity, and work; however, no research has examined the association with the choice of treatment involving electrotherapy, cognitive functional therapy, manual therapy, and exercises. Bishop *et al.* reported that physiotherapists in the United Kingdom with high biomedical and low biopsychosocial scores were less likely to follow guideline recommendations for LBP management (such as advice to remain off work) than were those with high biopsychosocial and low biomedical scores.^[10] Similarly, Simmonds *et al.* found that physiotherapists in Canada with stronger biomedical TO toward LBP and those who had received special training in manual therapy were likely to be more restricted in terms of encouraging patients with LBP to return to work and advising them to perform their normal activities than their counterparts who had stronger biopsychosocial TO and/or who had received special training in chronic pain management.^[18] Hendrick *et al.* found that the practice of manipulative and sports physiotherapists in New Zealand who had lower biomedical TO toward LBP, those who had seen many LBP cases and those who had postprofessional qualifications were more likely (in line with guideline recommendations) to inform clinical decisions for managing individuals with LBP.^[19] According to a systematic review conducted by Gardner *et al.*, the higher the biomedical orientation, the higher the belief that a return to work or normal life activities is a threat to patients with LBP, leading those therapists to avoid advising an early return to work and normal life activities.^[14]

It is surprising that there was no significant difference in attitudes and beliefs across patient care setups. It is possible that these nonsignificant differences were because most of our sample worked in both outpatient department and inpatient department settings. Thus, they are exposed to more equitable and open environment where other healthcare professionals work alongside to manage the patient. This definitely influences the attitude and belief of the therapists in a positive

way. Apart from the addition to current literature available on this domain, it can be beneficial to the stakeholders like policy makers, other healthcare professionals involved in managing LBP. This can be used to build up strong team to manage the LBP effectively. Furthermore, policy makers can utilize this knowledge about attitude and belief of Indian physiotherapists to create new nationwide policies to manage LBP efficiently.

Limitations

One of the drawbacks is the possibility of sampling bias as a result of convenience sampling, which may not accurately represent all the physiotherapists employed in India. To reduce the sampling bias, a significant number of physiotherapists working in clinical and academic settings considering physiotherapists of all nationalities as well as all major geographical regions of India received the survey. Another limitation was the completion of the survey with the inclusion of a small percentage of physiotherapists and few were eliminated from the analysis because of the availability of only the demographic data. Meanwhile, another limitation encountered was that, despite being regarded as a reliable and valid technique for assessing beliefs and attitudes, the use of a self-report survey reduces the data's accuracy.

CONCLUSION

The study concluded that the Indian physiotherapists has good attitude toward management of LBP and in comparison to males; the female therapists have better attitude toward the management of LBP. Moreover, the level of qualification has impact on the attitude of physiotherapists, with undergraduate therapists scoring more than postgraduate therapists on the ABS-mp scale. Furthermore, geographical variation did not influence attitudes and beliefs of therapists in managing LBP. Hence, the results demonstrated that regardless of the expertise, Indian physiotherapists who treat LBP and are active in the field scored moderately high on the ABS-mp scale which is essential in clinical decision-making, more effective implementation of existing guidelines and intervention strategies, positive patient-centered outcomes, and education. In addition, the outcomes of the present study can be considered as the baseline data for making new policies by government and institutional authorities.

Ethical statement

The study was ethically approved.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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