DOI: https://dx.doi.org/10.18203/issn.2455-4510.IntJResOrthop20262015

Original Research Article

Utilization of traditional massage by patients with low back pain

Harcourt S. L.*, Brownson N. E.

Department of Surgery, Division of Orthopaedic Surgery, University of Port Harcourt Teaching Hospital, Port Harcourt, Nigeria

Received: 08 November 2025
Revised: 10 December 2025
Accepted: 24 April 2026

***Correspondence:**
Dr. Harcourt S. L.,
E-mail: luckysomah@yahoo.com

ABSTRACT

Background: Low back pain (LBP) is among the most popular musculoskeletal disorders in present day society and accounts for most health care usage. Patient adopt several strategies as of treatment in our environment including local massage.
Methods: This was a prospective study of all outpatients that presented to the orthopaedic unit with complaints of LBP was undertaken to determine those that have used or were using traditional massage as form of treatment for their LBP. A structured interviewer-administered questionnaire was used to collect all required information from the study participants. Demographic data and medical information were analysed using descriptive statistics and Chi-square test by SPSS 25.
Results: The 63 (31.3%) acknowledged the use of traditional massage out of 201 patients, which was made up of 38 females and 25 males. Those aged between 41-60 years had the highest number of participants that used traditional massage. Hand massage (HM) was the commonest form with 74.6%. Factors such as age, gender, educational level, occupation, cause of the back pain, and duration, did not influence choice of massage. Only 24% experienced good relief after traditional massage, with 43% reported to have been pre-informed before administration of the massage, 35% reported otherwise and 22% remained unresponsive.
Conclusions: This study highlights the high prevalence of the use of traditional massage by back pain sufferers, and shows the need for physicians, health policy makers, and carers for back pain sufferers to be aware of this fact.

Keywords: Low back pain, Traditional massage, Complementary and alternative medicine, Hand massage, Walking on the back

INTRODUCTION

Low back pain (LBP) is among the most popular musculoskeletal disorders in present day society and accounts for most health care usage.[1] It has been estimated that about 80% of the global population has experienced or will yet experience LBP at least once in their lifetime.[2] LBP is a major cause of reduction in work productivity due to lost work hours and has been identified as the 5th leading reason for global hospital admissions, and is ranked 2nd behind common cold as the most popular reason for physician visitations.[2,3] As at 2019, about 223.5 million people had LBP with an estimated 63.7 million years lived with disability.[4] The global burden of disease (GBD) 2019 data also ranked LBP among the top contributors to disability-adjusted life years (DALY), with massive cost implications experienced in the health care industry.[5]

The management of LBP is varied according to the cause of the LBP and the level of available expertise, with treatment usually including application of both pharmacological and non-pharmacological interventions.[6] The treatment of LBP may also involve surgical procedures (such as removing herniated intervertebral discs, decompressing nerve roots and stabilization of

unstable vertebral segments) in addition to conservative measures such as physiotherapy and pharmacotherapy.[7] However, for effective and complete management of LBP, a multimodal and multidisciplinary strategy is usually adopted in order to reduce the pain, tackle cause of the pain, enhance bodily functions and ultimately reduce the chances of recurrence.[8,9]

The past 10 years has witnessed an increased usage of complementary and alternative medicine (CAM) for the treatment of several health disorders, including LBP.[1,10] According to the national centre for CAM, CAM is made up of 5 key areas which are: biologically based methods (such as minerals, vitamins, herbal Medicines and nutritional supplements); mind-body methods (such as meditation); body-based interventions (such as massage); alternative medical therapy (such as Chinese medicine); and energy-based therapy (such as Reiki).[11]

One of the most widely used CAM interventions for treatment of LBP is massage.[10] Massage is the systematic manipulation of soft tissues of the body by applying strokes and rhythmical pressure with the aim of maintaining or getting improved health conditions.[12] The mechanism of pain relief following massage had been reported to occur in various pathways, including the release of endorphins to boost pain threshold and closing the pain gate at the spinal areas.[12] The massage process is often regarded as a safe therapy without any major side effects, and some types of massage include Swedish massage, myofascial release, Shiatsu, Thai massage, and reflexology.[1] In our environment, however, traditional bone setters often administer massage for several ailments including LBP. A review by Melka et Al reported that the most prominent management techniques for LBP in Africa is the use of CAM which included massage, herbal therapy, spinal manipulation, traditional bone setting, use of heat, and traditional herbal concoctions.[13] Mbada et al had reported that as high as 80% of rural farmers in South west Nigeria utilized traditional massage due to its availability for the management of musculoskeletal pain,[14] while Igwesi-Chidobe et al on the coping strategies employed by individuals with chronic LBP in Nigeria and Zambia, had documented the use of traditional massage therapy such as stepping on the back, and HM with ointment, to cope with the chronic pain.[15]

The deleterious effect of traditional bone setters on the care of fractures in our environment has been extensively reported. In separate studies OlaOlorun et al and Dada et al reported complications such as gangrene, tetanus infection, chronic osteomyelitis, compartmental syndrome, Volkmann ischemic contractures, non-union, mal-union, amputations and even death, amongst patients that patronized traditional bone setters.[16,17] Similarly, Onyemachi et al reported a 60% complications rate amongst patients that patronized traditional bone setters, while 66.7% of the sampled patients' population expressed dissatisfaction regarding the outcomes of traditional bone setting.[18] These complications arise because traditional bone setters lack basic understanding of anatomy, physiology, radiology, infection prevention and control, as well as soft tissue care.[19] Since it is about the same bone setters who administer massage for LBP in our environment, are there actual or potential complications of this form of treatment for LBP? What are the forms of massage utilized by our traditional bone setters for LBP?

Therefore, in this study, we sought to investigate the usage of traditional massage for the treatment of LBP in a population of patients presenting to the orthopaedic clinic of a Teaching Hospital in South South Nigeria as well as patient reported outcomes.

METHODS

Study area

The study was carried out at the University of Port Harcourt Teaching Hospital (UPTH) which is located at Port Harcourt, River state.

Study design

A prospective study of all patients that presented to the Orthopaedic Outpatient clinic with complaints of LBP and also those that were admitted at the Orthopaedic unit of UPTH for management of LBP.

Sampling size

The sample size for the study was determined using the formula

$N=Z^2 p (1-p)/d^2$

Where:

N=sample size for group;

Z=1.96, which is standard normal deviation at 95% confidence interval;

p=0.15 or 15%, which is estimated prevalence of massage utilization in LBP which was used to maximise sample size and precision;

d=0.05 or 5%, which is desired precision level

$N=Z^2 p (1-p)/d^2=(1.96)^2 (0.15) (1-0.85)/ (0.05)^2=196$

Inclusion criteria

All out-patients irrespective of age who presented with LBP were included in the study.

Exclusion criteria

All admitted patients of the orthopaedic unit were excluded, out patients that were acutely ill, patients that

had previous spine surgery, patients with neurological deficits, patients with past radiation therapy and patients with known malignant diseases were also excluded.

Study duration

The study was a 24 months study which started from January 2022 and terminated on December 2023.

Data collection

A structured pro forma data sheet was used as interviewer-administered questionnaire by medical personnel to collect demographic information, medical history, previous management history of LBP using massage, and other history from the study participants.

Data analysis

The data collected were entered into a spreadsheet (MS excel). Data were analyzed using statistical package for social sciences (SPSS) version 25. Demographic data and medical information was summarized using descriptive statistics (mean, median, frequency percentage and standard deviation), and Chi-square test, as appropriate.

Ethical approval

The study proposal, recruitment materials and all participant materials was submitted to the University of Port Teaching Hospital ethics committee (HEC) for review and approval. The study was approved and given ethical approval number "UPTH/ADM/90/S.11/VOL.XI/2045".

RESULTS

The demographic characteristics of the patients in our study are presented in Table 1. This showed that out of the enlisted 201 patients who presented with LBP, 63 (31.3%) acknowledged the use of traditional massage. The highest number of participants having used traditional massage was observed among age group 41-50 and 51-60 years, with 17 persons each respectively. Furthermore, 38 females and 25 males had used traditional massage, while patients having secondary level of education (25) used traditional massage the most. Traditional massage was also seen to be most patronized by self-employed patients. Those who hail from Rivers state showed a greater propensity for using traditional massage (39%) compared to 26% for non-indigenes (Table 1).

The forms of traditional massage received by patients in this study are presented in Table 2. 74.6% of the patients acknowledged the usage of HM, 11.1% had the masseur walk on their backs (WB), while 9.5% and 4.8% of the study population had confirmed the usage of standing on the back (SB) only, and the combination of SB and HM respectively (Table 2). The factors influencing patients' choice of massage is presented in Table 3. Demographic characteristics such as age, gender, educational level, occupation as well as the cause of the back pain and duration did not influence the choice of HM massage as the predominant form of massage in the study population.

The various sources of conviction for massage use for the patients are presented in Table 4. Friends (48%) accounted for the highest, followed by family member (22%), while advertisements on social media accounted for only 3% (Table 4). Patients reported effectiveness of traditional massage is presented in Table 5. This showed that only 24% of patients experienced very good or good relief.

In this study 43% of the patient reported to have been pre-informed prior to the administration of the massage, while 35% reported otherwise and 22% remained unresponsive (Table 6). The test of patients' knowledge of possible adverse results of traditional massage is shown in Table 7. This revealed that 65.1% were not aware of any possible danger in this massage, 60.3% would deny consent if aware of the risk of fracture in massage, while 25% were either undecided or would go on to have massage with the knowledge of possible fracture (Table 7).

Table 1: Demographic characteristics of patients that used massage.

Variables	Traditional massage				Chi-square	P value
	No		Yes			
	N	%	N	%		
Age group (in years)						
<10	2	100.0	0	0	5.93	0.547
11-20	5	100.0	0	0		
21-30	8	61.5	5	38.5		
31-40	19	67.9	9	32.1		
41-50	28	62.2	17	37.8		
51-60	38	69.1	17	30.9		
61-70	29	76.3	9	23.7		
>70	9	60.0	6	40.0		
Gender						
Female	87	69.6	38	30.4	0.13	0.712
Male	51	67.1	25	32.9		

Continued.

Variables	Traditional massage				Chi-square	P value
	No		Yes			
	N	%	N	%		
Education level						
No formal education	7	70.0	3	30.0	3.67	0.452
Primary	20	69.0	9	31.0		
Secondary	37	59.7	25	40.3		
Tertiary	56	73.7	20	26.3		
Post graduate	18	75.0	6	25.0		
State						
Non-Rivers	88	73.9	31	26.1	3.78	0.051
Rivers	50	61.0	32	39.0		
Occupation						
Applicant	1	33.3	2	66.7	2.56	0.766
C/servant	45	71.4	18	28.6		
Farming	15	75.0	5	25.0		
Retiree	11	68.8	5	31.3		
Self employed	57	66.3	29	33.7		
Student	9	69.2	4	30.8		
Total	138	68.7	63	31.3		

Table 2: Forms of traditional massage.

Forms of massage	Percentage distribution (%)
HM	74.6
Walking on the back (WB)	11.1
Standing on the back (SB)	9.5
Standing on the back (SB) + HM	4.8

Table 3: Factors influencing patients' choice of massage.

Variables	Type of massage								Chi-square	P value
	HM		SB		SB and HM		WB			
	N	%	N	%	N	%	N	%		
Age group (in years)										
21-30	3	60.0	1	20.0	1	20.0	0	0	5.93	0.547
31-40	6	66.7	2	22.2	0	.0	1	11.1		
41-50	14	82.4	2	11.8	0	.0	1	5.9		
51-60	11	64.7	0	0	2	11.8	4	23.5		
61-70	8	88.9	0	0	0	.0	1	11.1		
>70	5	83.3	1	16.7	0	.0	0	0		
Gender										
Female	29	76.3	4	10.5	1	2.6	4	10.5	0.13	0.712
Male	18	72.0	2	8.0	2	8.0	3	12.0		
Education level										
No formal education	3	100.0	0	0	0	0	0	0	3.67	0.452
Primary	7	77.8	2	22.2	0	0	0	0		
Secondary	17	68.0	3	12.0	1	4.0	4	16.0		
Tertiary	16	80.0	1	5.0	1	5.0	2	10.0		
Post graduate	4	66.7	0	0	1	16.7	1	16.7		
State										
Non-Rivers	23	74.2	3	9.7	1	3.2	4	12.9	3.78	0.051
Rivers	24	75.0	3	9.4	2	6.3	3	9.4		
Occupation										
Applicant	2	100.0	0	0	0	.0	0	0	2.56	0.766
C/servant	12	66.7	2	11.1	1	5.6	3	16.7		
Farming	4	80.0	0	0	0	0	1	20.0		
Retiree	5	100.0	0	0	0	0	0	0		
Self employed	22	75.9	3	10.3	1	3.4	3	10.3		
Student	2	50.0	1	25.0	1	25.0	0	0		

Continued.

Variables	Type of massage								Chi-square	P value
	HM		SB		SB and HM		WB			
	N	%	N	%	N	%	N	%		
Cause of back pain										
Non-trauma	41	71.9	6	10.5	3	5.3	7	12.3	-	-
Trauma	6	100.0	0	0	0	0	0	0		
Period										
<4 weeks	4	66.7	1	16.7	0	0	1	16.7	-	-
>6 months	31	72.1	5	11.6	3	7.0	4	9.3		
12 wks-6 months	5	83.3	0	0	0	0	1	16.7		
4-12 weeks	7	87.5	0	0	0	0	1	12.5		
Total	47	74.6	6	9.5	3	4.8	7	11.1		

Table 4: Source of conviction for massage use.

Source	N	Percentage distribution (%)
Friends	30	48
Family	14	22
Previous personal experience	11	17
No response	6	10
Advertisement on social media	2	3
Total	63	100.0

Table 5: Patients reported effectiveness of massage use.

Reported effectiveness	N	Percentage distribution (%)
None	17	27
Minimal	16	25
Fair	15	24
Good	11	18
Very good	4	6
Total	63	100.0

Table 6: Pre-information about form of massage before administration.

Pre-information	N	Percentage distribution (%)
Yes	27	43
No	22	35
No response	14	22
Total	63	100.0

Table 7: Patients' knowledge of possible adverse results of traditional massage.

Parameters	N	Percentage (%)
Aware of any danger of this massage		
No	41	65.1
Yes	14	22.2
No response	8	12.7
If aware of possible fracture, will you consent		
No	38	60.3
Yes	9	14.3
Undecided	10	15.9
No response	6	9.5
Total	63	100.0

DISCUSSION

The demographic characteristics of the patients in our study showed that the occurrence of LBP was more prominent in the older generations, specifically age groups of 51-60 years, and 41-50 years. Evidently, both age groups also had the highest number of participants that had used traditional massage as a therapeutic cure for LBP.

The occurrence of LBP among older population has been previously documented in studies by Emorinken et al and Eromon et al in Nigeria, and also with that of Katembo et al in Tanzania.[6,20,21] Similarly, more women suffered LBP than men as shown in our study, hence resulted in more women engaging in traditional massage for cure of LBP. However, there was no significant association between the demographic characteristics such as age group, gender, occupation, educational level, and state of origin, with the use of traditional massage. This implies that none of these demographic characteristics influences the use of traditional massage for the treatment of LBP. These findings is also in agreement with the findings of Olatubi et al who also reported that there was no significant relationship between demographic variables like age, occupation, and marital status, with the occurrence of LBP.[22]

In our study 31.3% of the patients confirmed to have used traditional massage for the management of LBP. Olatubi et al reported that as much as 78.3% of health care workers self-massaged their backs for LBP.[22] Furthermore, a study by Adams showed that 85% of the study participants received massage therapy for chronic LBP, and 54% out of these patients reported clinically significant pain reduction.[23] Additionally, comparative study by Cherkin et al between massage therapy and usual care showed that 32.9% and 33.9% received structural and relaxation massage respectively, for the treatment of chronic LBP.[24] However, Harcourt and Raphael reported as low as 1% usage of massage therapy for LBP management among medical consultants in a Teaching hospital in Southern Nigeria.[2] It is obvious that usage of massage in our study population is significant and comparable to some of the other reports.

Three main forms of traditional massage were identified according to the information provided by the participants, with HM identified as the most frequently used. In this study, 74.6% of the participants all reported to have used HM in management of LBP, irrespective of the type of LBP (acute or chronic) and the etiological cause of the LBP. This overwhelming use of HM by the study participants might be due to the perceived effectiveness of this form of massage, and the relative safety associated with it in comparison with other traditional massage forms such as SB and WB, as described in this study. The prominent usage of HM was also reported by Furlan et al in which out of 25 randomized control trials reported, 22 used HM and only 3 used mechanical devices.[25]

In our study 24% of the participants reported at least good relief of their back pain while 52% had either minimal or no relief after the administration of traditional massage. This would suggest that the efficacy of traditional massage for the management of LBP may not be as high as imagined by those who opt for it. This result is in agreement with other previous studies by Cherkin et al and Wilk et al regarding the reduction of pain through massage.[7,24] The study by Cherkin et al reported that massage therapy out performed administered usual care, and was able to reduce pain and improve functions for 10 weeks, in patients with chronic LBP.[24] Similarly Wilk et al also reported the reduction of pain and pain perception, in older patients that underwent massage therapy for their back pain.[7] However, the efficacy of massage therapy for the management of LBP is still a subject of controversy, as revealed by a comprehensive review conducted by Kumar et al while van Middelkoop et al reported that there are insufficient data to back up the effectiveness of massage therapy in the treatment of chronic LBP.[1,30] Factors such as the professional delivery of the massage, duration of massage sessions, and adherence to counsel provided by the massage therapist might be responsible for the ineffective action of the administered massage therapy in general but these could not be determined in our study population.

The most influence on utilizing traditional massage for treatment of LBP in our study were friends and family members. This is in agreement with several previous studies who also reported that these were the main sources of advertisement for traditional massage patronage.[16,26-31] This highlights the overriding influence of family and friends in the health seeking habits of our population and further emphasizes the need for family education and counselling by medical practitioners regarding treatment of any health condition.

Interestingly, 34.9% were not pre-informed by the traditional bone setter about the nature of massage to be administered. This reinforces the high level of lack of informed consent in most local bone setter interventions. Several previous studies on traditional massage had not investigated the counseling of patients and obtaining of informed consent by the traditional massage therapist, before the massage procedure commenced. However, a study by Akpa-Inyang and Chima on traditional health care practitioners in Cross River state showed that while 100% agreed on the need to educate patients on risks and benefits before starting a procedure, only 36% of them practice this act to their patients before starting their traditional procedures.[29]

Limitations

Our study was limited because all the respondents were drawn from only out-patients of the unit. Furthermore, in our environment not all the patients with LBP present to our facility for care, thereby our study only accessed patients that were available.

CONCLUSION

A significant proportion of back pain sufferers go for traditional massage before presenting to the hospital. The patient reported benefit from such massage is less than 25%. HM is the commonest form of massage utilized in our traditional setting. This study provides insights into key issues relating to the use of traditional massage by

back pain sufferers and as thus shows the need for physicians and others caring for back pain sufferers and health policy makers to be aware of the prevalence of traditional massage use as well as the different types of massage in use and factors influencing decision making on their use.

ACKNOWLEDGEMENTS

Authors would like to thank to Orthopaedic unit and also services of Mr. Nwalewachi Livingson Chibike.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Kumar S, Beaton K, Hughes T. The effectiveness of massage therapy for the treatment of nonspecific low back pain: a systematic review of systematic reviews. Int J Gen Med. 2013;6:733-41.
2. Harcourt LS, Raphael JE. Prevalence of Low Back Pain Among Specialist Medical Consultants at the University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State. Niger Med J 2023;64(3):408-14.
3. Kahere M, Ginindza T. A cross-sectional hospital-based study of correlates of disability in patients with chronic low back pain in KwaZulu-Natal, South Africa. BMC Musculoskelet Disord. 2022;23:438.
4. Wang L, Ye H, Li Z, Lu C, Ye J, Liao M, et al. Epidemiological trends of low back pain at the global, regional, and national levels. Eur Spine J. 2022;31(4):953-62.
5. GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet 2020;396:1204-22.
6. Emorinken A, Erameh CO, Akpasubi BO, Dic-Ijiewere MO, Ugheoke AJ. Epidemiology of low back pain: frequency, risk factors, and patterns in South-South Nigeria. Reumatologia. 2023;61(5):360-7.
7. Wilk I, Kowalczyk K, Nowak B, Andrzejewski W, Kassolik K. Effectiveness of massage therapy in reducing back pain in older adults. Med Sci Pulse. 2022;16(2):15-21.
8. Nicol V, Verdaguer C, Daste C, Bisseriex H, Lapeyre E, Marie-Martine LC, et al. Chronic low back pain: a narrative review of recent international guidelines for diagnosis and conservative treatment. J Clin Med. 2023;12(4):1685.
9. Baroncini A, Maffulli N, Al Zyoud H, Andreas B, Aleksandar S, Filippo M. Nonopioid pharmacological management of acute low back pain: a level I of evidence systematic review. J Orthop Res. 2023;41(8):1781-91.
10. Furlan AD, Yazdi F, Tsertsvadze A, Gross A, Van Tuder M, Lina S, et al. A systematic review and meta-analysis of efficacy, cost-effectiveness, and safety of selected complementary and alternative medicine for neck and low-back pain. Evid Based Complement Alternat Med. 2012;2012:953139.
11. National Centre for Complementary and Alternative Medicine (NCCAM). What is complementary and alternative medicine? 2007. Available at: http://nccam.nih.gov/health/whatiscam/. Accessed on 15 January 2026.
12. Netchanok S, Wendy M, Marie C, Siobhan O. The effectiveness of Swedish massage and traditional Thai massage in treating chronic low back pain: a review of the literature. Complement Ther Clin Pract. 2012;18(4):227-34.
13. Melka HA, Khorsan R, Whedon J, Russell R, Haldeman S. Treatment Approaches Utilized in Africa for the Management of Low Back Pain: A Scoping Review. J Manipulative Physiol Ther. 2023;46(5-9):366-76.
14. Mbada CE, Adeyemi TL, Adedoyin RA, Hakeem DB, Taofeek OA, Olujide OA. Prevalence and modes of complementary and alternative medicine use among peasant farmers with musculoskeletal pain in a rural community in South-Western Nigeria. BMC Complement Altern Med. 2015;15(164):1-7.
15. Igwesi-Chidobe CN, Nkhata, LA, Ozumba, B. The coping strategies employed by individuals with chronic low back pain: secondary qualitative analysis of data from diverse adult populations in two sub-Saharan African countries. Front. Rehabil. Sci. 2024;5(1442789):1-16.
16. OlaOlorun DA, Oladiran IO, Adeniran A. Complications of fracture treatment by traditional bonesetters in southwest Nigeria. Fam Pract 2001;18:635-7.
17. Dada A, Yinusa W, Giwa SO. Review of the practice of traditional bone setting in Nigeria. African Health Sciences. 2011;11(2):262-5.
18. Onyemaechi NO, Lasebikan OA, Elachi IC, Sunday OP, Kehinde SO. Patronage of traditional bonesetters in Makurdi, north-central Nigeria. Patient Prefer Adherence. 2015;9:275-9.
19. Omololu AB, Ogunlade SO, Gopaldasani VK. The practice of traditional bonesetting, Clin Orthop Relat Res 2008;466:2392-8.
20. Eromon PE, Awunor NS, Enobakhare E, Neba F. Prevalence of low back pain among adult patients attending family medicine clinics in Irrua Specialist Teaching Hospital, Edo State, Nigeria. Islam Univ Multidiscip J. 2020;7:310-6.
21. Katembo A, Msaki EB, Akaro I, Ngoya PS. Clinical patterns and associated factors of chronic low back pain at Bugando Medical Centre, Mwanza, Tanzania. EAS J Orthop Physiother. 2021;3:56-62,
22. Olatubi M, Alabi B, Ademuyiwa G, Ojo I. Prevalence and Management of Low Back Pain Among Health Workers in a Privately Owned Teaching Hospital in Nigeria. Open Public Health J. 2022;15:1-9.

23. Adam, E. Study underscores benefits of clinical massage therapy for chronic lower back pain. 2014. Retrieved Available at: https://medicalxpress.com/news/2014-05-underscores-benefits-clinical-massage-therapy.html. Accessed on 03 March 2026.
24. Cherkin DC, Sherman KJ, Kahn J, Robert W, Andrea JC, Eric J, et al. A comparison of the effects of 2 types of massage and usual care on chronic low back pain: a randomized, controlled trial. Ann Intern Med. 2011;155(1):1-9.
25. Furlan AD, Giraldo M, Baskwill A, Irvin E, Imamura M. Massage for low-back pain. Cochrane Database Syst Rev. 2015;2015(9):CD001929.
26. Alegbeleye JB. Traditional bonesetting practices in the Northwest Region of Cameroon. East Cent Afr J Surg. 2019;24(1):47-60.
27. Aderibigbe SA, Agaja SR, Bamidele JO. Determinants of utilization of traditional bone setter in Ilorin, North Central Nigeria. J Prev Med Hyg. 2013;54:35-40.
28. Card EB, Obayemi JE, Shirima O. Practices and Perspectives of Traditional Bone Setters in Northern Tanzania. Ann Global Health. 2020;86(1):1-8.
29. Akpa-Inyang F, Chima SC. Traditional Health Care Practitioners' Perspectives on Applying Informed Consent During African Traditional Medical Practice in Akwa Ibom State, Nigeria: A Cross-Sectional Qualitative Study. J Integr Complement Med. 2023;29(6-7):361-71.
30. Van Middelkoop M, Rubinstein SM, Kuijpers T, Arianne PV, Raymond O, Bart WK, et al. A systematic review on the effectiveness of physical and rehabilitation interventions for chronic non-specific low back pain. Eur Spine J. 2011;20(1):19-39.
31. Murthy V, Sibbritt DW, Adams J. An integrative review of complementary and alternative medicine use for back pain: a focus on prevalence, reasons for use, influential factors, self-perceived effectiveness, and communication. Spine J. 2015;15(8):1870-83.

Cite this article as: Harcourt SL, Brownson NE. Utilization of traditional massage by patients with low back pain. Int J Res Orthop 2026;12:901-8.