

Original Research Article

Factors affecting quality of life after total knee arthroplasty: a prospective observational study

Kouluru Dheeraj Reddy*, Harish K., Pradeep H.

Department of Orthopaedics, Adichunchanagiri Institute of Medical Sciences, Adichunchanagiri University, B.G. Nagara, Mandya, Karnataka, India

Received: 26 August 2026

Accepted: 22 September 2026

*Correspondence:

Dr. Kouluru Dheeraj Reddy,

E-mail: d4dheerajreddy@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Total knee arthroplasty (TKA) is a widely performed procedure for advanced knee osteoarthritis, and contemporary evaluation increasingly emphasizes patient-reported quality of life (QoL) rather than radiographic or implant-survival outcomes alone. This study aimed to assess the clinical, demographic, and psychological factors affecting QoL after TKA.

Methods: A prospective observational study was conducted in the Department of Orthopaedics, Adichunchanagiri Institute of Medical Sciences, from August 2024 to February 2026. One hundred and twenty patients aged over 60 years with Kellgren-Lawrence grade III/IV knee osteoarthritis undergoing primary TKA were enrolled by convenience sampling. Patients were evaluated at baseline and at 6 weeks, 3, 6, and 12 months postoperatively using the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), Knee Society Score (KSS), Visual Analog Scale (VAS) for pain, and the 10-item Center for Epidemiologic Studies Depression Scale (CES-D10). Predictors of 12-month outcomes were identified using multiple linear regression and binary logistic regression; $p < 0.05$ was considered significant.

Results: Sixty-five percent of patients were 60–70 years old and 55% were female. Mean total WOMAC score improved from 62.3 ± 14.8 preoperatively to 10.1 ± 3.9 at 12 months, mean KSS improved from 40.9 ± 13.3 to 89.3 ± 8.1 , and mean VAS pain score fell from 8.7 ± 0.9 to 1.6 ± 0.6 . The proportion of patients with depressive symptoms fell to 7% at 12 months. Baseline WOMAC, VAS, and CES-D10 scores independently predicted 12-month WOMAC score ($R^2 = 0.464$, $p < 0.001$); age, female sex, baseline KSS, and baseline WOMAC predicted 12-month KSS ($R^2 = 0.375$, $p < 0.001$). Diabetes mellitus, baseline WOMAC, VAS, and CES-D10 scores significantly reduced the odds of achieving “good improvement” in QoL (model $\chi^2 = 48.12$, $p < 0.001$).

Conclusions: TKA produces substantial and sustained improvement in pain, function, and psychological well-being over 12 months, with most gains occurring within the first 3–6 months. Greater baseline symptom burden and comorbid diabetes mellitus predict poorer QoL gains, supporting comprehensive preoperative assessment and optimization of modifiable risk factors before surgery.

Keywords: Total knee arthroplasty, Quality of life, WOMAC, Knee society score, Visual analog scale, CES-D10, Osteoarthritis, Predictors of outcome

INTRODUCTION

Total knee arthroplasty (TKA) is one of the most commonly performed and successful orthopedic procedures worldwide, indicated primarily for advanced osteoarthritis, rheumatoid arthritis, and post-traumatic

arthritis of the knee. The procedure aims to relieve pain, correct deformity, and restore function, thereby improving overall quality of life (QoL).¹ With an ageing population and a rising prevalence of degenerative joint disease, the demand for TKA continues to grow. Although advances in implant design, surgical technique, and rehabilitation have

improved implant survival, the success of TKA is no longer judged by radiographic or prosthetic longevity alone; patient-reported outcomes and QoL have emerged as the critical measures of surgical effectiveness.²

QoL after TKA is a multidimensional construct spanning physical function, pain relief, psychological well-being, and overall satisfaction. While most patients experience substantial improvement, a meaningful proportion continue to report residual pain, functional limitation, or dissatisfaction despite a technically successful operation.³ This variability reflects a complex interplay of patient-related factors (age, sex, body mass index, comorbidities), psychological factors (anxiety, depression, catastrophizing, expectations), disease-related factors (symptom duration, baseline severity), and surgical/rehabilitative factors.^{4,5}

Comorbidities such as diabetes mellitus and hypertension are common in the elderly population undergoing TKA and may influence wound healing, inflammatory response, and rehabilitation capacity, thereby modulating the magnitude of postoperative benefit.⁶ Psychological status, in particular depressive symptoms and pain catastrophizing, has also been consistently linked to poorer pain and functional outcomes after arthroplasty, independent of the technical success of surgery.^{4,7} Baseline symptom severity greater preoperative pain and functional impairment has similarly been shown to influence the trajectory and magnitude of postoperative recovery.^{8,9}

Despite growing recognition of these determinants, few prospective studies from South Asian tertiary-care settings have simultaneously evaluated functional, pain, and psychological trajectories over a full 12-month period using validated composite instruments. This prospective study was therefore undertaken to assess the modifiable risk factors pain, knee function, and psychological status and clinical/demographic variables affecting QoL after primary TKA in patients aged over 60 years with advanced knee osteoarthritis, evaluated preoperatively and at 6 weeks, 3, 6, and 12 months postoperatively.

The primary objective was to assess the modifiable risk factors pain, knee function, and psychological status affecting QoL after TKA. The secondary objectives were to assess the influence of clinical variables (baseline QoL scores, age, sex, comorbidity burden) on outcome, and to evaluate the effect of demographic and clinical characteristics on the three domains of QoL pain, physical function, and mental health preoperatively and at 12 months postoperatively.

METHODS

Study design, setting and duration

This prospective observational study was conducted in the Outpatient Department of Orthopaedics at Adichunchanagiri Institute of Medical Sciences (AIMS), B.G. Nagara, Mandya District, Karnataka a tertiary-care

teaching hospital serving a predominantly rural and semi-urban population. The study was conducted over 18 months, from August 2024 to February 2026, encompassing recruitment, baseline assessment, surgery as per standard institutional protocol, and scheduled follow-up.

Participants

Inclusion criteria

Grade III or IV osteoarthritis of the knee; age over 60 years; medically fit for surgery.

Exclusion criteria

Age under 60 years; post-traumatic knee conditions; associated neurovascular injury; low-back pain radiating to the knee.

Consecutive eligible patients attending the outpatient department were enrolled using convenience sampling, which minimized selection bias in a busy clinical setting despite the absence of formal randomization. The sample size of 120 was determined on the basis of feasibility and comparison with similar hospital-based prospective studies. As this was an observational study without a comparator arm, all enrolled patients constituted a single cohort managed per current standard-of-care protocols.

Study procedure and outcome measures

After Institutional Ethics Committee approval and written informed consent, a structured proforma was used to record demographic data, clinical history, and examination findings, along with routine preoperative investigations (haemogram, renal function, blood sugar, serology, chest radiograph, electrocardiogram) and radiographic grading of osteoarthritis. All patients underwent primary TKA as per standard institutional surgical and rehabilitation protocols. Functional, pain, and psychological outcomes were assessed at baseline (day 0) and at 6 weeks, 3, 6, and 12 months postoperatively using four validated instruments: the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), the Knee Society Score (KSS), the Visual Analog Scale (VAS) for pain, and the 10-item Center for Epidemiologic Studies Depression Scale (CES-D10) for depressive symptoms.^{10,11}

Statistical analysis

Data were entered in Microsoft Excel 2016 and analyzed using Epi Info statistical software. Continuous variables were summarized as mean±standard deviation and categorical variables as frequencies and percentages. The unpaired t-test was used to compare continuous variables where applicable. Multiple linear regression was used to identify independent predictors of 12-month WOMAC and KSS scores, and binary logistic regression was used to identify predictors of “good improvement” in QoL.

Pearson correlation was used to examine associations among outcome measures across time points. A $p < 0.05$ was considered statistically significant.

Ethical considerations

The study was approved by the Institutional Ethics Committee of Adichunchanagiri Institute of Medical Sciences and conducted in accordance with the Declaration of Helsinki. Written informed consent was obtained from all participants; confidentiality was maintained throughout, and withdrawal from the study did not affect standard clinical care.

RESULTS

Out of 120 patients enrolled, 78 (65.0%) were aged 60–70 years, 40 (33.3%) were 71–80 years, and 2 (1.7%) were older than 80 years. Sixty-six patients (55.0%) were female and 54 (45.0%) were male. Right-sided TKA was performed in 61 patients (50.8%) and left-sided in 59 (49.2%). Diabetes mellitus was present in 56 patients (46.7%) and hypertension in 56 patients (46.7%) (Table 1).

Table 2 summarizes the trajectory of functional, pain, and psychological outcome scores from baseline through 12 months. All four measures showed continuous, statistically significant improvement across the follow-up period. The

mean total WOMAC score fell from 62.3 ± 14.8 at baseline to 10.1 ± 3.9 at 12 months, the mean KSS knee score rose from 40.9 ± 13.3 to 89.3 ± 8.1 , mean VAS pain score fell from 8.7 ± 0.9 to 1.6 ± 0.6 , and mean CES-D10 score fell from 14.3 ± 5.1 at baseline to a 12-month depressive-symptom prevalence of only 7%. The greatest absolute

gains occurred between 6 weeks and 3 months, after which the rate of improvement progressively slowed, with outcomes largely stabilizing by 6–12 months.

On multiple linear regression, baseline WOMAC score ($B = 0.324$, $p < 0.001$), baseline VAS pain score ($B = 1.128$, $p = 0.043$), and baseline CES-D10 score ($B = 0.674$, $p = 0.002$) were independent predictors of the 12-month WOMAC score, with the model explaining 46.4% of the variance ($R^2 = 0.464$, $p < 0.001$) (Table 3). For 12-month KSS, age group ($B = -0.381$, $p = 0.032$), female sex ($B = -2.415$, $p = 0.037$), baseline KSS ($B = 0.511$, $p < 0.001$), and baseline WOMAC ($B = -0.128$, $p = 0.047$) were significant independent predictors, explaining 37.5% of the variance ($R^2 = 0.375$, $p < 0.001$) (Table 4).

Binary logistic regression identified diabetes mellitus ($OR = 0.373$, 95% CI 0.175–0.795, $p = 0.007$), baseline WOMAC ($OR = 0.940$, 95% CI 0.900–0.980, $p = 0.005$), baseline VAS ($OR = 0.639$, 95% CI 0.449–0.911, $p = 0.018$), and baseline CES-D10 ($OR = 0.827$, 95% CI 0.693–0.986, $p = 0.039$) as significant independent predictors of “good improvement” in QoL. The model was statistically significant ($\chi^2 = 48.12$, $p < 0.001$), explained approximately 41% of the variance, and correctly classified 78.3% of cases (Table 5).

Correlation analysis showed that baseline WOMAC correlated positively with baseline CES-D10 ($r = 0.330$, $p < 0.01$) and baseline VAS ($r = 0.215$, $p < 0.05$), while baseline KSS correlated negatively with baseline VAS ($r = -0.461$, $p < 0.01$). Baseline and 6-week WOMAC scores were strongly correlated ($r = 0.709$, $p < 0.01$), reflecting consistency of functional impairment in the early postoperative period.

Table 1: Baseline demographic and clinical characteristics (n=120).

Variables	Category	N	%
Age group (years)	60–70	78	65.0
	71–80	40	33.3
	>80	2	1.7
Sex	Female	66	55.0
	Male	54	45.0
Side of surgery	Right	61	50.8
	Left	59	49.2
Diabetes mellitus	Present	56	46.7
	Absent	64	53.3
Hypertension	Present	56	46.7
	Absent	63	52.5

Table 2: Trend of outcome measures from baseline to 12 months postoperatively (mean±SD).

Time point	WOMAC score	KSS (knee)	VAS pain	CES-D10
Baseline (Day 0)	62.3±14.8	40.9±13.3	8.7±0.9	14.3±5.1
6 weeks	58.2±13.5	48.5±10.2	6.7±1.3	11.2±4.4
3 months	34.5±11.1	72.3±12.5	3.4±1.2	6.8±3.6
6 months	19.8±7.6	82.1±10.4	2.3±1.0	3.2±2.4
12 months	10.1±3.9	89.3±8.1	1.6±0.6	7% depressed*

*At 12 months the CES-D10 is reported as the percentage of patients meeting the depressive-symptom threshold rather than a continuous mean.

Table 3: Multiple linear regression predicting 12-month WOMAC score.

Predictors	B	SE	β	t	P
Constant	18.452	4.120	—	4.47	<0.001
Age group	0.284	0.198	0.091	1.43	0.156
Sex (female = 1)	-1.872	1.025	-0.122	-1.83	0.070
Diabetes (yes = 1)	2.145	1.094	0.138	1.96	0.052
Hypertension (yes = 1)	1.648	1.032	0.112	1.59	0.115
Baseline WOMAC	0.324	0.073	0.389	4.43	<0.001
Baseline VAS	1.128	0.552	0.148	2.04	0.043
Baseline CES-D10	0.674	0.214	0.228	3.15	0.002

$R^2 = 0.464$; model $p < 0.001$.

Table 4: Multiple linear regression predicting 12-month Knee Society Score (functional outcome).

Predictor	B	SE	β	t	P
Constant	9.211	4.982	—	1.85	0.067
Age group	-0.381	0.176	-0.162	-2.16	0.032
Sex (female = 1)	-2.415	1.144	-0.168	-2.11	0.037
Diabetes (yes = 1)	-1.689	1.221	-0.115	-1.38	0.171
Hypertension (yes = 1)	-1.784	1.140	-0.125	-1.56	0.121
Baseline KSS	0.511	0.083	0.541	6.15	<0.001
Baseline WOMAC	-0.128	0.064	-0.144	-2.01	0.047
Baseline VAS	-0.584	0.448	-0.085	-1.30	0.196
Baseline CES-D10	-0.331	0.195	-0.108	-1.69	0.094

$R^2 = 0.375$; model $p < 0.001$.

Table 5: Binary logistic regression predicting “good improvement” in quality of life.

Predictor	B	SE	Wald	p	OR (95% CI)
Constant	-4.212	1.448	8.46	0.004	—
Age group	-0.124	0.071	3.04	0.081	0.883 (0.762–1.024)
Sex (female = 1)	-0.432	0.318	1.85	0.172	0.649 (0.347–1.216)
Diabetes (yes = 1)	-0.986	0.366	7.27	0.007	0.373 (0.175–0.795)
Hypertension (yes = 1)	-0.518	0.339	2.33	0.127	0.596 (0.307–1.155)
Baseline WOMAC	-0.062	0.022	7.89	0.005	0.940 (0.900–0.980)
Baseline VAS	-0.447	0.189	5.63	0.018	0.639 (0.449–0.911)
Baseline CES-D10	-0.189	0.091	4.28	0.039	0.827 (0.693–0.986)

$\chi^2 = 48.12$, $p < 0.001$; Nagelkerke $R^2 \approx 0.41$; overall correct classification 78.3%.

DISCUSSION

This prospective study evaluated the trajectory of pain, functional, and psychological recovery after primary TKA and identified baseline predictors of 12-month outcomes in patients over 60 years of age with advanced knee osteoarthritis. Consistent with the existing literature, TKA produced substantial and sustained improvement across all outcome domains, with the greatest gains occurring between 6 weeks and 3 months and outcomes stabilizing by 6–12 months.

The predominance of patients in the 60–70-year age group and the slight female preponderance (55%) observed in

this cohort mirror earlier prospective studies. Brander et al reported a mean age of 66 years with 55.2% female patients in their cohort evaluating predictors of postoperative pain after TKA, while Papakostidou et al documented a similar female predominance (162 of 204 patients) in their prospective QoL study.^{10,13} The higher burden of knee osteoarthritis in women has been attributed to hormonal, biomechanical, and longevity-related factors. In the present study, sex was not a significant predictor of 12-month WOMAC score but emerged as a significant negative predictor of 12-month KSS ($B = -2.415$, $p = 0.037$), a pattern also reported by Judge et al., who found female sex associated with poorer functional but not pain outcomes after TKA.¹⁴

Baseline symptom severity was the most consistent predictor of 12-month outcome in this study: higher baseline WOMAC, VAS, and CES-D10 scores each independently predicted worse residual WOMAC scores at 12 months, together explaining 46.4% of the outcome variance. This finding is concordant with Brander et al who found that greater preoperative pain predicted higher postoperative pain, and that preoperative depression and anxiety were associated with heightened pain at one year.¹⁰ Papakostidou et al similarly reported strong, consistent positive correlations between CES-D10 and both WOMAC and VAS pain scores at every postoperative time point, underscoring the close interdependence between psychological distress and symptom perception after TKA.¹³ These observations support incorporating routine psychological screening not only radiographic severity into preoperative risk stratification.

Diabetes mellitus, present in 46.7% of the cohort, did not independently predict absolute 12-month WOMAC or KSS scores but significantly reduced the odds of achieving “good improvement” in QoL (OR=0.373, $p=0.007$). This suggests diabetes primarily attenuates the magnitude of perceived benefit from surgery rather than the final outcome score. Comparable findings have been reported by da Silva et al in a systematic review identifying comorbidities as determinants of poorer QoL outcomes despite overall improvement in pain and function and by González-Sáenz-de-Tejada et al who found that comorbid conditions were associated with smaller long-term health-related QoL gains and a lower probability of exceeding the minimal clinically important difference.^{16,17} Plausible mechanisms include impaired wound healing, chronic low-grade inflammation, and altered pain processing in diabetic patients, reinforcing the value of perioperative glycaemic optimisation and realistic preoperative counselling in this subgroup. Hypertension, by contrast, was not a significant predictor of any outcome measure in this study, suggesting that well-controlled cardiovascular comorbidity does not materially limit functional recovery after TKA.

The temporal pattern of recovery observed here modest gains at 6 weeks, marked improvement by 3 months, and consolidation by 6–12 months closely parallels the trajectory reported by Papakostidou et al who found early postoperative recovery limited at 6 weeks with major gains evident by 3 months.¹³ Similarly, Brander et al reported that postoperative pain fell by roughly half within the first 3 months, a pattern replicated in the present cohort (VAS pain falling from 8.7 to 3.4 over the same interval).¹⁰ The low prevalence of depressive symptoms at 12 months (7%) is comparable to the 7–9% rate of severe residual pain and functional limitation reported by Wylde et al. at one year and reinforces that while most patients achieve excellent outcomes, a small subset continues to experience residual physical or psychological symptoms warranting closer follow-up.⁹ Gandhi et al similarly demonstrated that lower preoperative mental-health scores independently predicted dissatisfaction at one year even when objective functional gains were achieved, further reinforcing the prognostic

weight of baseline psychological status identified in this cohort.¹²

These findings collectively support a holistic, patient-centred model of arthroplasty care in which baseline functional impairment, pain intensity, depressive symptoms, and glycaemic status are assessed alongside conventional radiographic and surgical parameters. Preoperative optimisation of modifiable factors psychological preparedness and diabetic control in particular combined with individualised rehabilitation for older and female patients, may enhance the likelihood of achieving optimal long-term QoL after TKA.

Strengths and limitations

Strengths of this study include its prospective design, standardized follow-up at five predefined time points, use of four validated composite instruments spanning physical, pain, and psychological domains, and multivariable analysis enabling identification of independent predictors. Limitations include the single-centre design, which may limit generalisability; the 12-month follow-up, which does not capture very long-term implant survivorship or late functional decline; the absence of body mass index, radiographic alignment, and self-efficacy measures from the analytic model; reliance on a depression screening instrument rather than formal psychiatric evaluation; and the observational design, which precludes causal inference.

CONCLUSION

Total knee arthroplasty results in substantial and sustained improvement in pain, functional capacity, and psychological well-being over a 12-month period, with the majority of gains occurring within the first three to six months. Baseline functional impairment, pain severity, and depressive symptoms are independent predictors of 12-month WOMAC outcome, while age, female sex, and baseline function independently predict 12-month functional (KSS) recovery. Diabetes mellitus significantly reduces the likelihood of achieving good QoL improvement, whereas well-controlled hypertension does not appear to impair recovery. These findings support comprehensive preoperative assessment encompassing pain, function, psychological status, and glycaemic control and individualised perioperative optimisation to maximise long-term quality of life after total knee arthroplasty.

ACKNOWLEDGEMENTS

The authors thank the patients who participated in this study and the staff of the Department of Orthopaedics, Adichunchanagiri Institute of Medical Sciences, for their support during data collection.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Lingard EA, Katz JN, Wright RJ, Sledge CB. Predicting the outcome of total knee arthroplasty: a prospective study of patient expectations and satisfaction. *J Bone Joint Surg Am*. 2009;91(9):2179–86.
2. Scott CEH, Howie CR, MacDonald D, Biant LC. Predicting dissatisfaction following total knee replacement: a prospective study of 1217 patients. *J Bone Joint Surg Br*. 2010;92(9):1253–8.
3. Singh JA, Lewallen DG. Predictors of activity limitation and dependence after total knee arthroplasty. *Arthritis Care Res (Hoboken)*. 2010;62(6):1533–1541.
4. Riddle DL, Wade JB, Jiranek WA, Kong X. Preoperative pain catastrophizing predicts pain outcome after knee arthroplasty. *Clin Orthop Relat Res*. 2010;468(3):798–806.
5. Wylde V, Dixon S, Blom AW. The role of preoperative self-efficacy in predicting outcome after total knee replacement. *Musculoskelet Care*. 2012;10(2):110–8.
6. Hawker GA, Guan J, Croxford R, Coyte PC, Glazier RH, Harvey BJ, et al. A prospective population-based study of the predictors of undergoing total joint arthroplasty. *Arthritis Rheum*. 2006;54(10):3212–20.
7. Canovas F, Dagneaux L. Quality of life after total knee arthroplasty. *Orthop Traumatol Surg Res*. 2018 Feb;104(1S):S41–6.
8. Wylde V, Blom AW. Persistent pain and reduced quality of life after total knee arthroplasty. *Bone Joint J*. 2018;100-B(1):102–107.
9. Watabe T, Sengoku T, Muramatsu R, Kubota M, Sakurai G, Yoshida S, et al. Preoperative factors associated with failure to achieve the minimal clinically important difference in quality of life following total knee arthroplasty. *BMC Geriatr*. 2025;25(1):476.
10. Brander VA, Stulberg SD, Adams AD, Harden RN, Bruehl S, Stanos SP, et al. Predicting total knee replacement pain: a prospective, observational study. *Clin Orthop Relat Res*. 2003;(416):27–36.
11. Bellamy N, Buchanan WW, Goldsmith CH, Campbell J, Stitt LW. Validation study of WOMAC: a health status instrument for measuring clinically important patient relevant outcomes to antirheumatic drug therapy in patients with osteoarthritis of the hip or knee. *J Rheumatol*. 1988;15(12):1833–40.
12. Gandhi R, Davey JR, Mahomed NN. Predicting patient dissatisfaction following joint replacement surgery. *J Rheumatol*. 2008;35(12):2415–8.
13. Papakostidou I, Dailiana ZH, Papapolychroniou T, Liaropoulos L, Zintzaras E, Karachalios TS. Factors affecting quality of life after total knee arthroplasty: a prospective study. *BMC Musculoskelet Disord*. 2012;13:116.
14. Judge A, Arden NK, Cooper C, Javaid MK, Carr AJ, Field RE, et al. Predictors of outcomes of total knee replacement surgery. *Rheumatology (Oxford)*. 2012;51(10):1804–13.
15. González P, Nuñez A, Merz E, Brintz C, Weitzman O, Navas EL, et al. Measurement properties of the Center for Epidemiologic Studies Depression Scale (CES-D 10): findings from HCHS/SOL. *Psychol Assess*. 2017;29(4):372–81.
16. Hirschmann MT, Testa E, Amsler F, Friederich NF. The unhappy total knee arthroplasty (TKA) patient: higher WOMAC and lower KSS in depressed patients prior and after TKA. *Knee Surg Sports Traumatol Arthrosc*. 2013;21(10):2405–11.
17. da Silva RR, Santos AAM, de Sampaio Carvalho Júnior J, Matos MA. Quality of life after total knee arthroplasty: systematic review. *Rev Bras Ortop*. 2014;49(5):520–7.
18. González-Sáenz-de-Tejada M, Quintana JM, Arenaza JC, Azcarate-Garitano JR, Esnaola-Guisasola PM, García-Sánchez I, et al. Long-term health related quality of life in total knee arthroplasty. *BMC Musculoskelet Disord*. 2023;24(1):327.

Cite this article as: Reddy KD, Harish K, Pradeep H. Factors affecting quality of life after total knee arthroplasty: a prospective observational study *Int J Res Orthop* 2026;12:1946-51.