

STROBE Statement—checklist of items that should be included in reports of observational studies manuscript 18106.

	Item No.	Recommendation	Page No.	Relevant text from manuscript
Title and abstract	1	(a) Indicate the study’s design with a commonly used term in the title or the abstract	1	Nationwide cross-sectional matched study
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	1	
Introduction				
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	1	
Objectives	3	State specific objectives, including any prespecified hypotheses	1	Therefore, our primary aim was to compare patient-reported outcomes between 1 and 4 years after PPKFs with a matched control group of uncomplicated primary TKAs in a cross-sectional study. Secondly, we aimed to present patient-reported outcomes after a PPKF according to fracture site and operative vs nonoperative treatment.
Methods				
Study design	4	Present key elements of study design early in the paper	1 and 2	This retrospective nationwide cross-sectional matched study was conducted and reported in accordance with STROBE. It compares PROs following PPKF in patients with primary TKA with PROs of a matched control group of uncomplicated TKA patients through questionnaires.
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	2	Under “Participants” and “Data Collection and Management”
Participants	6	(a) <i>Cohort study</i> —Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up <i>Case-control study</i> —Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls	2	Under “Participants”

		<i>Cross-sectional study</i> —Give the eligibility criteria, and the sources and methods of selection of participants		
		(b) <i>Cohort study</i> —For matched studies, give matching criteria and number of exposed and unexposed	2	Under “Participants”
		<i>Case-control study</i> —For matched studies, give matching criteria and the number of controls per case		
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	2-3	Under “Participants”, “Outcomes”, and “Statistics”
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	3	Under “Participants”, “Data sources”, and “Outcomes”
Bias	9	Describe any efforts to address potential sources of bias	2 & 3	Patients with bilateral TKAs were excluded from the control population, as we could not ensure which knee they would refer to when responding to the questionnaires
Study size	10	Explain how the study size was arrived at	2 & 3	Under “Participants” and “Figure 1”

Continued on next page

Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	3	Baseline characteristics for responders in both groups are presented as means with standard deviations (SD) or as numbers with percentages. The questionnaire responses were non-normally distributed and skewed due to floor or ceiling effects. However, given the large group sizes, the central limit theorem was applied [25]. Data was presented as crude means and adjusted means with SDs.
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	3	Adjusted means were adjusted for osteoporosis and CCI and calculated using ordinary least squares (OLS) regression for continuous variables, a generalized linear model (GLM) for categorical variables, and logistic regression for binary variables.
		(b) Describe any methods used to examine subgroups and interactions	3	In an additional analysis, PPKF patients were divided into those who completed PROMs 1 to 2 years after their PPKF and those who completed them 3 to 4 years later.
		(c) Explain how missing data were addressed	3	Missing data for each PROM was handled as recommended by the developers [15,18,21].
		(d) <i>Case-control study</i> —If applicable, explain how matching of cases and controls was addressed	3	Patients with PPKF were matched by age, time with TKA, and sex to uncomplicated TKA patients
		(e) Describe any sensitivity analyses		None
Results				
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	4	First section in “Results”
		(b) Give reasons for non-participation at each stage	4	First section in “Results”
		(c) Consider use of a flow diagram	3	“Figure 1”
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	4	“Table 1”
		(b) Indicate number of participants with missing data for each variable of interest	4-6	“Table 2-4”

Outcome data	15*	<i>Case-control study</i> —Report numbers in each exposure category, or summary measures of exposure		
		<i>Cross-sectional study</i> —Report numbers of outcome events or summary measures	4-6	
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	4-6	Adjusted presented in the text, and crude and adjusted in tables.
		(b) Report category boundaries when continuous variables were categorized	3 & 5	CKRS is a patient-reported estimate of the range of motion of a knee from a 2-item scale. Item 1 estimates the extension of the knee with 5 illustrations and a score of 0–5, 5 representing full extension and 0–3 an extension deficit with passive extension worse than 10°. Item 2 similarly estimates the flexion of the knee with 6 illustrations and a score of 0–6 with 6 being full flexion and 0–4 representing a flexion deficiency with passive flexion less than 100°.
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	-	-

Continued on next page

Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	6	Patients who experienced a PPKF within 2 years before completing the PROMs had worse scores across all parameters compared with those experiencing a PPKF 2 to 4 years before completing the PROMs (Table 6 and Figures 2–4). To determine whether the difference was attributable to fracture sites and treatment, we tested these factors and found that they were evenly distributed between 2 time periods (Table 6).
Discussion				
Key results	18	Summarise key results with reference to study objectives	6-7	We showed that the PPKF group reported significantly lower knee scores, experienced more pain, and had lower satisfaction.
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	7	
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	7	
Generalisability	21	Discuss the generalisability (external validity) of the study results	7	The nationwide setting provides a large sample reflecting the population suffering from PPKFs. However, the 48% response rate and missing data introduce uncertainty about how accurately the true PPKF population is represented.
Other information				
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	3	The study was funded by the Danish Rheumatism Association, Odense University Hospital, and Rigshospitalet.

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.