Supplementary information

Section 1

PRISMA checklist 2020

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	1
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	4
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	4
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	5
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	5
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Supplement
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	6
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	6-7
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Supplement
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	Supplement
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	6-7 & Supplement
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	7
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	7-10
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	7-10
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	7-10
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	7-10
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	None
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	None
Reporting bias	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	None

Section and Topic	Item #	Checklist item	Location where item is reported
assessment			
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	None
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	10-11 & Figure 1
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	11 & Supplement
Study characteristics	17	Cite each included study and present its characteristics.	11-12 & Table 1
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Table 2
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Figure 2
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	12, Figures 2-4
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	12-13
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	None
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	None
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	None
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	None
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	13-14
	23b	Discuss any limitations of the evidence included in the review.	14
	23c	Discuss any limitations of the review processes used.	14
	23d	Discuss implications of the results for practice, policy, and future research.	15
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	5
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	5
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	NA
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	Abstract
Competing interests	26	Declare any competing interests of review authors.	16

Section and Topic	Item #	Checklist item	Location where item is reported
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	7 & 16

Section 2

Search strategy

PubMed

1: (pain) OR (painful)

2: ((neuropathy) OR (neuropathic)) OR (neuralgia)

3: (((dn4) OR ("douleur neuropathique")) OR ("douleur neuropathique 4")) OR ("douleur neuropathique en 4")

4: (lanss) OR ("leeds assessment of neuropathic symptoms and signs")

5: paindetect

6: ((epidemiology) OR (epidemiological)) OR (prevalence)

7: ("2001/01/01"[Date - Publication] : "2023/03/31"[Date - Publication])

8: Review[Publication Type]

9: #1 AND #2

10: #3 OR #4 OR #5

11: #9 AND #10

12: #11 AND #6

13: #12 AND #7

14: #13 NOT #8

15: #14 Filters: Abstract, Humans, English

Scopus

1: TITLE-ABS-KEY (pain OR painful)

2: TITLE-ABS-KEY (neuropathy OR neuropathic OR neuralgia)

3: TITLE-ABS-KEY (dn4 OR {douleur neuropathique} OR {douleur neuropathique 4} OR {douleur neuropathique en 4})

4: TITLE-ABS-KEY (lanss OR {leeds Assessment of neuropathic symptoms and signs})

5: TITLE-ABS-KEY (paindetect)

6: TITLE-ABS-KEY (epidemiology OR epidemiological OR prevalence)

7: #1 AND #2

8: #3 OR #4 OR #5

9: #7 AND #8

10: #9 AND #6

11: #10 AND (EXCLUDE (DOCTYPE , "re")) AND (LIMIT-TO (EXACTKEYWORD , "Human"))

Web of Science

1: (ALL=(pain)) OR ALL=(painful)

2: ((ALL=(neuropathy)) OR ALL=(neuropathic)) OR ALL=(neuralgia)

3: (((ALL=(dn4)) OR ALL=("douleur neuropathique")) OR ALL=("douleur neuropathique 4")) OR ALL=("douleur neuropathique en 4")

4: (ALL=(lanss)) OR ALL=("leeds assessment of neuropathic symptoms and signs")

5: ALL=(paindetect)

6: ((ALL=(epidemiology)) OR ALL=(epidemiological)) OR ALL=(prevalence)

7: #1 AND #2

8: #3 OR #4 OR #5

9: #7 AND #8

10: #9 AND #6 Timespan: 2001-01-01 to 2023-03-31

11: #9 AND #6 and Review Article (Exclude - Document Types) Timespan: 2001-01-01 to 2023-03-31

12: #9 AND #6 and Review Article (Exclude - Document Types) and English (Languages) Timespan: 2001-01-01 to 2023-03-31

Section 3

Data extraction template

(reformatted from the template created in Covidence)

Country in which the study was conducted

Your answer

Region or state in which the study was conducted
If more than one, list

Your answer

Region or state in which the study was conducted
If more than one, list

Your answer

Characteristics of included studies

Aim of the study
Insert text from paper

Your answer

Study design

- ◯ Prevalence study
- ◯ Other: _____

Start date
YYYY-MM-DD

Your answer

End date
YYYY-MM-DD

Your answer

Declaration of conflicts of interest

- ◯ Declared
- ◯ None declared

Screening tool used

- ◯ DN4
- ◯ DN4 - interview
- ◯ LANSS
- ◯ S-LANSS
- ◯ PainDetect

Threshold score used to define the presence of neuropathic pain
List threshold scores if more than one questionnaire is used (e.g., DN4 - interview: ≥ 3, S-LANSS ≥ 12)

Your answer

Minimum pain duration for classification of chronic pain

Your answer

Minimum pain duration for classification of chronic pain

Your answer

Participants

Inclusion criteria
If the information is not reported, write, "Not reported".

Your answer

Exclusion criteria
If the information is not reported, write, "Not reported".

Your answer

Sample frame
If the information is not reported, write, "Not reported".

Your answer

Method of recruitment of participants

Choose all that are appropriate.

- [ ] Phone
- [ ] Mail
- [ ] Door-to-door
- [ ] Other: _____

Results

Total number of people contacted

Your answer

Total number of people recruited

Your answer

Baseline Population Characteristics

- If the information is not reported, write, "Not reported".
- If Age (years): add units of measure (e.g., mean = 34, SD = 4)
- If Age (counts): Add counts per category (e.g., 18-25 years = 250)

	Overall	**Acute pain** (any type)	**Chronic pain** (any type)	**Chronic neuropathic pain**	**No pain**
Age (years)					
Age (categories)					
Sex (% female)					

Prevalence of pain

Per cent is the percentage of the total sample. If the information is not reported, write, "Not reported".

	Count (n)	**Per cent** (%)	**95% confidence interval for the percentage**
Respondents with acute pain (any type)			
Respondents with chronic pain (any type)			
Respondents with chronic neuropathic pain			
Respondents with no pain			

Intensity of pain

Convert 0-10 NRS to 0-100 VAS

	Intensity (VAS)	**Intensity** (mild/moderate/severe)
Respondents with acute pain (any type)		
Respondents with chronic pain (any type)		
Respondents with chronic neuropathic pain		

Section 4

Quality assessment template

(reformatted from the template created in Covidence)

Was the sample frame appropriate to address the target population?

- ◯ Yes
- ◯ No
- ◯ Unclear

Were study participants sampled in an appropriate way?

- ◯ Yes
- ◯ No
- ◯ Unclear

Was the sample size adequate?

- ◯ Yes
- ◯ No
- ◯ Unclear

Were the study subjects and the setting described in detail?

- ◯ Yes
- ◯ No
- ◯ Unclear

Was the data analysis conducted with sufficient coverage of the identified sample?

- ◯ Yes
- ◯ No
- ◯ Unclear

Were valid methods used for the identification of the condition?

- ◯ Yes
- ◯ No
- ◯ Unclear

Was the condition measured in a standard, reliable way for all participants?

- ◯ Yes
- ◯ No
- ◯ Unclear

Was there appropriate statistical analysis?

- ◯ Yes
- ◯ No
- ◯ Unclear

Was the response rate adequate, and if not, was the low response rate managed appropriately?

- ◯ Yes
- ◯ No
- ◯ Unclear

Section 5

Excluded studies

STUDIES EXCLUDED DURING FULL-TEXT SCREENING (N = 12)

1. Adoukonou T, Gnonlonfoun D, Kpozehouen A, Adjien C, Tchaou B, Tognon-Tchegnonsi F, Adechina H, Covi R, Houinato D. Prévalence et caractéristiques des douleurs chroniques avec caractère neuropathique en population générale à Parakou au nord du Bénin en 2012. Rev. Neurol. (Paris) 2014;170:703–711. doi:10.1016/j.neurol.2014.07.013.

   Reason for exclusion: Published in French and a single city (Parakou, Benin)

2. Attal N, Lanteri-Minet M, Laurent B, Fermanian J, Bouhassira D. The specific disease burden of neuropathic pain: results of a French nationwide survey. Pain 2011;152:2836–2843. doi:10.1016/j.pain.2011.09.014.

   Reason for exclusion: Sub-study of the publication included in the systematic review and meta-analysis (Bouhassira D, et al. Pain 2008;136:380–387. doi:10.1016/j.pain.2007.08.013), with no additional information being presented on the prevalence of neuropathic pain in the surveyed population.

3. Durán J, Tejos-Bravo M, Cid V, Ferreccio C, Calvo M. Chronic pain in Chile: first prevalence report of noncancer chronic pain, fibromyalgia, and neuropathic pain and its associated factors. Pain 2023;164:1852–1859. doi:10.1097/j.pain.0000000000002886.

   Reason for exclusion: Survey of a single city (Molina, Chile).

4. Elzahaf RA, Johnson MI, Tashani OA. The epidemiology of chronic pain in Libya: a cross-sectional telephone survey. BMC Public Health 2016;16:776. doi:10.1186/s12889-016-3349-6.

   Reason for exclusion: Survey of three cities (Tripoli, Benghazi, and Sabha; Libya)

5. Elzahaf RA, Tashani OA, Johnson MI. Prevalence of chronic pain among Libyan adults in Derna City: a pilot study to assess the reliability, linguistic validity, and feasibility of using an Arabic version of the structured telephone interviews questionnaire on chronic pain. Pain Pract. 2013;13:380–389. doi:10.1111/j.1533-2500.2012.00594.x.

   Reason for exclusion: Survey of a single city (Derna City, Libya).

6. Hamdan A, Luna JD, Del Pozo E, Gálvez R. Diagnostic accuracy of two questionnaires for the detection of neuropathic pain in the Spanish population: Comparison of neuropathic pain questionnaires. Eur. J. Pain 2014;18:101–109. doi:10.1002/j.1532-2149.2013.00350.x.

   Reason for exclusion: Assessed a patient population at two chronic pain clinics.

7. Hébert HL, Veluchamy A, Baskozos G, Fardo F, Van Ryckeghem D, Pearson ER, Colvin LA, Crombez G, Bennett DLH, Meng W, Palmer CNA, Smith BH. Development and external validation of multivariable risk models to predict incident and resolved neuropathic pain: a DOLORisk Dundee study. J. Neurol. 2023;270:1076–1094. doi:10.1007/s00415-022-11478-0.

   Reason for exclusion: French language publication

8. de Moraes Vieira EB, Garcia JBS, da Silva AAM, Mualem Araújo RLT, Jansen RCS. Prevalence, characteristics, and factors associated with chronic pain with and without neuropathic characteristics in são Luís, Brazil. J. Pain Symptom Manage. 2012;44:239–251. doi:10.1016/j.jpainsymman.2011.08.014.

   Reason for exclusion: Survey of a single municipality (São Luís, Brazil)

9. Smith BH, Torrance N, Bennett MI, Lee AJ. Health and quality of life associated with chronic pain of predominantly neuropathic origin in the community. Clin. J. Pain 2007;23:143–149. doi:10.1097/01.ajp.0000210956.31997.89.

   Reason for exclusion: Not a prevalence study; reported on the impact of neuropathic pain using data published in Torrance N, et al. The epidemiology of chronic pain of predominantly neuropathic origin. Results from a general population survey. J Pain. 2006;7:281–289. doi:10.1016/j.jpain.2005.11.008 (see paper 11 below).
10. Torrance N, Ferguson JA, Afolabi E, Bennett MI, Serpell MG, Dunn KM, Smith BH. Neuropathic pain in the community: more under-treated than refractory? Pain 2013;154:690–699. doi:10.1016/j.pain.2012.12.022.

    Reason for exclusion: Survey of 10 GP practices in 5 UK locations. Three cities in England: Leeds, Lancaster, and Stafford; one city in Scotland: Glasgow; and one region in Scotland: Grampian. Regional Grampian data were not reported separately.

11. Torrance N, Smith BH, Bennett MI, Lee AJ. The epidemiology of chronic pain of predominantly neuropathic origin. Results from a general population survey. J. Pain 2006;7:281–289. doi:10.1016/j.jpain.2005.11.008.

    Reason for exclusion: Survey of two cities (Leeds and London, England) and one region (Grampian, Scotland). Regional Grampian data were not reported separately.

12. Torrance N, Smith BH, Watson MC, Bennett MI. Medication and treatment use in primary care patients with chronic pain of predominantly neuropathic origin. Fam. Pract. 2007;24:481–485. doi:10.1093/fampra/cmm042.

    Reason for exclusion: Not a prevalence study; reported on the management of neuropathic pain using data published in Torrance N, et al. The epidemiology of chronic pain of predominantly neuropathic origin. Results from a general population survey. J Pain. 2006;7:281–289. doi:10.1016/j.jpain.2005.11.008 (see paper 11 above).

STUDY EXCLUDED DURING DATA EXTRACTION (N = 1)

1. Inoue S, Taguchi T, Yamashita T, Nakamura M, Ushida T. The prevalence and impact of chronic neuropathic pain on daily and social life: A nationwide study in a Japanese population. Eur. J. Pain 2017;21:727–737. doi:10.1002/ejp.977.

    Reason for exclusion: Data on the sensitivity and specificity of the Japanese version of painDETECT, when using a threshold score of ≥ 13, were not available. The authors were approached via email, but only information on the specificity was forthcoming.