INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Guideline adherence in physiotherapy – protocol for a systematic review

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Review question / Objective: **The objective of this systematic review is to summarise different approaches reported in studies to evaluate guideline adherence in physiotherapy care. Further, we aim to identify clinical and methodological factors that may explain the assumed heterogeneity of guideline adherence among physiotherapists.**
Condition being studied: **Clinical practice guidelines are systematically developed statements that summarise the current state of knowledge from research and practice. They are intended to support clinicians and patients to make decisions about appropriate health care for specific clinical circumstances (2). Various studies show that evidence-based physiotherapy care can lead to improved patient outcomes (e.g. pain, function, quality of life) and at the same time contribute to a lower utilisation of medical services and a reduction in health care costs. The degree of agreement between medical or therapeutic care and the recommendations made in guidelines is often described in studies with the term "guideline adherence". However, the heterogeneous use of the term guideline adherence and the lack of a standardised research methods or operationalisation lead to limited comparability of the study results.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 May 2022 and was last updated on 12 May 2022 (registration number INPLASY202250081).

INTRODUCTION

Review question / Objective: **The objective of this systematic review is to summarise different approaches reported in studies to evaluate guideline adherence in physiotherapy care. Further, we aim to identify clinical and methodological factors that may explain the assumed**

heterogeneity of guideline adherence among physiotherapists.

Rationale: In 2012, Kolman (1) conducted a systematic review to summarise different approaches for evaluating physiotherapists' adherence to guidelines and non-evidence-based protocols. With adherence rates ranging from 1% to 100%, the studies varied widely, e.g. in terms of the research method (e.g. questionnaires, observations, analysis of medical records), the way adherence was assessed and classified, and the aspects of care considered (e.g. number of items). To date, however, there is still no standardised approach to assessing guideline adherence. As the interest in guideline-based care in physiotherapy has increased, especially in the last 10 years, and the number of studies published on this topic has risen, an update of the review seems necessary. In addition, the systematic review by Kolman (1) has limitations with regard to methodological quality. For example, the full text screening was carried out by only one author, and an assessment of the methodological quality of the included studies was not carried out. Furthermore, it remains unclear which factors can explain the heterogeneity with regard to the reported guideline adherence of the included studies.

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METHODS

Search strategy: The search strategy will combine Medical Subject Headings (MeSH) and key words describing the concepts "physiotherapy", "guidelines" and "adherence". The search string will be modified for each database accordingly.
Search string for MEDLINE (via Ovid):
#1 exp physical therapy modalities/ or physical therapy specialty/ or physical therapist assistants/ or physical therapists/ or physical therapy department, hospital/ or (physiotherapy* or physical therap*).ti,ab.
#2 Guideline adherence/
#3 Practice Guidelines as Topic/ or (CPG or (guideline* adj3 (clinical or consensus or practice or evidence-based or evidence based or evidence-informed or evidence informed or recommendation* or management))).ti,ab.
#4 (adhere* or complian* or comply* or accordan* or concordan* or conform* or appropriate* or utili#ation or "in line").ti,ab.
#5 #3 and #4
#6 #2 or #5
#7 #1 and #6.

Participant or population: Physiotherapists or patients undergoing physiotherapy treatment.

Intervention: Not applicable.

Comparator: Not applicable.

Study designs to be included: Cross-sectional studies, prospective or retrospective cohort studies and controlled clinical trials.

Eligibility criteria: Cross-sectional studies, cohort studies and controlled clinical trials investigating guideline adherence in physiotherapy care will be eligible for inclusion. Adherence must be assessed against clinical practice guidelines developed by government agencies at any level, institutions, organizations such as

professional societies or governing boards, or by the convening of expert panels. Studies that assess adherence to clinical pathways or local guidelines will be excluded.

Information sources: A systematic literature search will be conducted in the following electronic databases: MEDLINE (via Ovid), EMBASE (via Ovid), PEDro and CENTRAL (Cochrane Central Register of Controlled Trials). In addition, the reference lists of included studies, related key articles and reviews will be reviewed manually to supplement the electronic search. Furthermore, we will use the "citation tracking function" by Web of Science for key studies for identifying additional studies.

Main outcome(s): Methods and operationalisations in the evaluation of guideline adherence; Rates/frequencies of guideline adherence.

Additional outcome(s): None.

Data management: All identified references will be imported into a citation management programme (e.g. Endnote) and duplicates will be removed automatically and manually. The remaining articles will be screened for eligibility by two reviewers independently in a stepwise process (title/abstract and full text screening) based on the predefined inclusion/exclusion criteria. Any disagreement will be resolved through discussion or, if necessary, by consulting a third reviewer. For excluded full text reports, the reason for exclusion will be recorded. Relevant information of the included articles (e.g. first author, country, year of publication, study design and method, guideline, care setting, definitions and/or operationalisations of guideline adherence, level of guideline adherence (overall guideline, domain, recommendation level), reported guideline adherence) will be entered into a predefined data extraction form.

Quality assessment / Risk of bias analysis: The Mixed Methods Appraisal Tool (MMAT) (3) will be used to evaluate the methodological quality of each study included in this systematic review.

Strategy of data synthesis: The extracted data from the included studies will be illustrated and summarised descriptively. The level of agreement between the reviewers will be quantified using Cohen's kappa coefficient. In order to determine the variance within the studies, the data on guideline adherence will first be analysed in a meta-analysis (random-effects model) and a log odds transformation will be performed to stabilise the data. Only studies that report the rate of guideline-adherent care in absolute numbers can be considered in the meta-analysis. This pooled estimate will be interpreted as the proportion of adherent study participants. The heterogeneity of the studies will be interpreted using the I^2. If at least ten studies are available for meta-analysis, a meta-regression of the data is sought to determine the influence of individual study characteristics on the outcome. In a univariate meta-regression analysis, predefined variables (e.g. study design, level of guideline adherence, country, setting of care, study participant (patient or physiotherapist)) will be examined with regard to their explanatory influence on guideline adherence. Differences within subgroups will be reported as odds ratios and variability between studies as R^2 (4). The statistical analyses will be conducted with the latest version of the statistical software R (Foundation for Statistical Computing, Vienna, Austria).

Subgroup analysis: None.

Sensitivity analysis: None.

Language: Only studies published in English or German language will be considered for inclusion.

Country(ies) involved: Germany.

Keywords: "Physiotherapy", "Systematic Review", "Guideline Adherence", "Guideline".

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