

INPLASY PROTOCOL

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None declared.

The Development of Reflective Skills in Physical Education Teacher Education: a systematic review

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Review question / Objective: The purpose of this systematic review is to examine what is known about physical education teachers' reflective skills, how they have been studied and how such strategies can be further developed and refined in Physical Education Teacher Education to guide future research and practice.

Condition being studied: The development of physical education teachers' reflective skills.

Information sources: A comprehensive computerized search of the following seven electronic databases will be performed: Scopus, Web of Science, Academic Search Ultimate, APA PsycInfo, ERIC, Education Source and Teacher Reference Center. Boolean operators will be applied into search the article title, keywords and abstract: ("reflect* OR reflex*") AND ("teacher") AND ("physical education"). In addition, authors will also perform a manual search of studies' references included in the automatized search to find other articles not identified in the computerized search. To increase the trustworthiness of the review findings by removing personal bias and to minimize the potential for error, this review will be conducted by two researchers and any disagreements about inclusion will be resolved through discussion until consensus reached. Additionally, a library expert will be consulted for support and guidance in developing keywords, identifying appropriate databases, and designing the search strategy.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 March 2021 and was last updated on 23 March 2021 (registration number INPLASY202130079).

INTRODUCTION

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what is known about physical education teachers' reflective skills, how they have been studied and how such strategies can be further developed and refined in

Physical Education Teacher Education to guide future research and practice.

Condition being studied: The development of physical education teachers' reflective skills.

METHODS

Participant or population: Physical education teachers with no restrictions regarding sex, age, experience or context of intervention (university, primary, elementary, etc.).

Intervention: Interventions focused on the development of teachers' reflective skills.

Comparator: Comparators are not required.

Study designs to be included: No limitations imposed on study design.

Eligibility criteria: The present systematic review will be conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA; Moher et al. 2009). In particular, empirical articles will be eligible for inclusion if published in peer-reviewed international journals with an impact factor indexed in Journal Citation Reports (JCR) or Scimago Journal & Country Rank (SJR). In addition, only articles published between January 2000 and March 2021 will be included. The search will be limited to this date range since the interest in this topic has increased significantly since 2000. Participants, interventions, comparators, outcomes, and study design (PICOS) will be defined as followed: (i) physical education teachers with no restrictions regarding sex, age, experience or context of intervention (university, primary, elementary, etc.); (ii) interventions focused on the development of teachers' reflection skills; (iii) comparators not required (iv) demonstrated how reflection was analysed, developed, and/or identified; (v) no limitations imposed on study design. Using these criteria, this review will consider studies that focus on qualitative and quantitative data, including but not limited to designs such as phenomenology,

grounded theory, ethnography, action research, and feminist research. In addition, papers using mixed methods will be also considered. Studies will be excluded if: (i) not published in peer-reviewed international journals with impact factor; (ii) published before 2000; (iii) not focused on the development of physical education teachers' reflective skills; (v) not empirical studies, such as opinion articles, review articles, editorials, conference proceedings, chapters in books, and narrative articles; (vi) not published in English, Portuguese or Spanish.

Information sources: A comprehensive computerized search of the following seven electronic databases will be performed: Scopus, Web of Science, Academic Search Ultimate, APA PsycInfo, ERIC, Education Source and Teacher Reference Center. Boolean operators will be applied into search the article title, keywords and abstract: ("reflect* OR reflex*") AND ("teacher") AND ("physical education"). In addition, authors will also perform a manual search of studies' references included in the automatized search to find other articles not identified in the computerized search. To increase the trustworthiness of the review findings by removing personal bias and to minimize the potential for error, this review will be conducted by two researchers and any disagreements about inclusion will be resolved through discussion until consensus reached. Additionally, a library expert will be consulted for support and guidance in developing keywords, identifying appropriate databases, and designing the search strategy.

Main outcome(s): Analysis of the development of physical education teachers' reflection skills.

Quality assessment / Risk of bias analysis: Given the methodological focus, it will be critical to assess the quality of the studies reviewed. The framework for this assessment will be created by two reviewers (first and second author) to ensure the quality of data extraction. Differences between the two authors will

be discussed and agreed upon. A third author will be consulted when differences could not be resolved. The criteria used to access the quality of the studies will be adapted from the Standards for Reporting Qualitative Research scale (Wells et al., 2015) and the Mixed Methods Appraisal Tool (MMAT; Hong et al., 2018). This scale has a total of 15 items (the items differ according to the methods of the studies, i.e., quantitative, qualitative, or mixed) and is flexible enough to accommodate different paradigms, approaches, and methods presented in this review. Each study will be given a score from 0 to 15 and coded as being of low (score of 0-5), medium (score of 6-10) or high quality (score of 11-15).

Strategy of data synthesis: The initial searching of databases will be exported to reference manager software (EndNote™ X9, Clarivate Analytics, Philadelphia, PA, USA). Duplicates will be then removed. The remaining articles will be then screened (title, abstract, keywords and full article if necessary) and removed if: not empirical articles, not focused on physical education teachers' reflective skills, not in English, Portuguese or Spanish. In order to analyse all the information from the studies selected to this review, conventional content analysis will be used. To provide an analysis and to put into evidence the information that could give an answer to our aim, a framework will be created a priori, which included: (i) author, (ii) study focus, (iii) research design, (iv) participants and context, (v) data sources, (vi) data analysis, (vii) main results, and (viii) how reflection was developed (strategies, frameworks, and levels of reflection). The first author will review all included papers and the first and second authors will review the data synthesis. Disagreements will be discussed and resolved by the three authors until consensus was reached.

Subgroup analysis: In case of sufficient participants, some subgroup analysis can be done (for instance, compare expert and novices' teachers, or according to the context of intervention).

Sensitivity analysis: Articles were not excluded based on low scores. Instead, scores were used to weight confidence in each outcome during synthesis.

Country(ies) involved: Portugal.

Keywords: Reflection, reflective practice, reflective skills, reflection levels, collaborative work, physical education, teacher education, professional development.

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