INPLASY

Barriers and facilitating factors in the implementation of Advanced Nursing Practice in acute care hospitals: a mixed methods systematic review protocol

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ADMINISTRATIVE INFORMATION

INTRODUCTION

*R*eview question / Objective The aim of this mixed methods systematic review is to identify the main barriers and facilitating factors in the implementation of Advanced Nursing Practice (ANP) roles to use them for further research. Therefore, the research question of the mixed methods systematic review is more general (1). It addresses quantitative, qualitative and mixed methods studies. The review question is as follows: What barriers and facilitating factors are described for the implementation of Advanced Nursing Practice roles in acute care hospitals?

Rationale We already know that there are barriers and facilitating factors in the implementation of ANP roles, but there is a gap in knowledge if these barriers and facilitating factors change over time in the implementation process. In addition, there are Scoping reviews for single countries, e.g. Germany, who describe barriers and facilitating factors in German-speaking countries (2), but we

also know that the implementation process in Germany is very slow (2, 3), and we don´t know the reasons why. There might be other barriers or facilitating factors in the implementation of ANP roles in other countries all over the world that can point out strategies that might change the implementation process in a positive way.

Condition being studied The academisation in nursing, especially the implementation of advanced nursing practice roles, is recommended because it is associated with better patient outcomes and contributes to the professionalisation of the nursing profession (4-6). The implementation of ANP roles is described as challenging and complex (7). In comparison to the international context, the implementation of ANP roles in German-speaking countries is still at the beginning (2, 4). Although the development of these roles is visible in the European context, the roles are described as not being well established or complete (8, 9). It is therefore important to obtain a comprehensive overview of the hindering

and facilitating factors described in the scientific literature during implementation to be able to conduct further research and potential implementation process changes.

METHODS

Search strategy To conduct the search strategy we used the Refhunter research protocol for systematic reviews (10). The search terms were conducted separately for each database using the specified standardised search terms (e.g. MeSH) in combination with free-text terms.

For piloting the search process we used the following search terms for Pubmed: ("ADVANCED PRACTICE NURS*"[MeSH] OR "ADVANCED NURSING PRACTICE" OR APN OR ANP OR "CLINICAL NURSE SPECIALIST*" OR CNS OR "NURSE PRACTITIONER*"[MeSH] OR NP OR "NURSE CLINICIANS"[MeSH]) AND (IMPLEMENTAT* OR PERFORMANCE OR "IMPLEMENTATION SCIENCE"[MeSH]) AND (BARRIER* OR OBSTACLE* OR LIMITATION*) AND (FACILITATOR*) AND (HOSPITAL*[MeSH] OR "ACUTE CARE" OR MEDICAL CENTER* OR WARD* OR HOSPITAL UNIT* [MeSH]) NOT COMMUNITY NOT "PRIMARY CARE" NOT "NURSING HOME*" NOT "LONG TERM CARE" Additionally the filter with the year restriction 2010 until 2024 is used.

Participant or population Advanced Practice Nurses (APN) have extended skills in nursing practice with a minimum qualification at the master`s level (11). In the literature, different roles of advanced practice nursing are described. For this mixed methods systematic review, the advanced practice nursing definition of the International Council of Nurses (11) is used. This review focuses on the implementation process of advanced nursing practice in acute care hospitals. All possible reasons for hindering and facilitating factors are included in this review.

Studies are included in this review when they describe scientific results about barriers and facilitating factors in the implementation of APN roles. They are also eligible either they are primary or secondary outcomes of the study.

Intervention The process of implementing APN roles in clinical practice is complex (7). Various factors may influence this implementation process (12, 13). For this reason, barriers and facilitating factors, described in the studies, would be extracted.

Comparator Not applicable.

Study designs to be included In this mixed methods systematic review qualitative, quantitative and mixed methods studies are included. Because we would like to become a comprehensive overview of the research topic, all kinds of study designs, except non-scientific designs, are eligible in this review.

Eligibility criteria Included are all qualitative, quantitative and mixed methods studies that examined barriers and facilitating factors in the implementation of advanced nursing practice roles in acute care hospitals. Advanced Nursing Practice is defined at all roles of the International Council of Nurses definition e.g. Clinical Nurse Specialist and Nurse Practitioner with a minimum qualification of a master's degree. Studies in German and English that were published between 2010 and 2024 are included.

Information sources To search for relevant literature and to answer the research question, we plan to search the databases Pubmed, Web of Science Core Collection and CINAHL. The search terms were conducted separately for each database using the specified standardised search terms (e.g. MeSH) in combination with free-text terms. To find also grey literature we plan to search reference lists of included studies as well as Google scholar.

Main outcome(s) The main Outcomes are the reported barriers and facilitating factors in the implementation of APN roles in acute care hospitals. Therefore it is not relevant which group e.g. management, the APN itself or team members named the barriers or facilitating factors.

Additional outcome(s) Not applicable.

Data management For the selection process and data extraction of the systematic review the software rayyan (www.rayyan.ai) will be used to organise and extract the data. Two independent researchers will be involved in the selection process of the data and will be blinded for selection. If there are any disagreements in the study selection, first the selection will be discussed. If there is still no agreement a third researcher will be involved. The inclusion and exclusion criteria are used to select suitable studies. It is planned to extract and report the following topics from the eligible studies: authors, year of publication, country, study design, Population, Setting, APN role(s) (e.g. CNS, NP), barriers in APN implementation, facilitating factors in APN implementation, and person/group who

reported the barriers or facilitating factors. It is planned to report this data in a table.

Quality assessment / Risk of bias analysis The assessment of the evidence of the methodological quality of the integrated studies will be performed with the corresponding critical appraisal tools of the Mixed Methods Appraisal Tool (MMAT) according to Hong, Pluye (14).

Strategy of data synthesis For this mixed methods systematic review a convergent integrated design according to Hong, Pluye (15) will be used. It is planned to conduct data transformation and qualitize the quantitative data to the convergent integrated approach. We will use the guidelines according to the Joanna Briggs Institute methodology for mixed methods systematic review (Lizarondo et. al., 2024). The final data after transformation will be reported in text form.

Subgroup analysis Not applicable.

Sensitivity analysis Not applicable.

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

Country(ies) involved Germany and Austria.

Keywords Advanced Nursing Practice; Implementation; Barriers; Facilitators; Acute Care Hospital.

Dissemination plans It is planned to submit the results from the mixed methods systematic review to a peer-reviewed journal for publication. For the reporting of the systematic review, it is planned to use the PRISMA Checklist (16). In addition, the results serve to form the basis for further research.

Contributions of each author
Author 1 - Inke Zastrow - Conceptualisation, Methodology, Search strategy, Screening, Data extraction, Final manuscript development.
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