

ADDRESSING HEALTH LITERACY IN THE GULF COOPERATION COUNCIL (GCC) COUNTRIES: AN INTEGRATIVE REVIEW PROTOCOL TO SUMMARIZE THE HEALTH LITERACY LANDSCAPE

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Abstract

Introduction: In the world of an ever-evolving face of healthcare practice and policies, it is increasingly becoming more imperative that the greater population is enabled to keep up with the pace of changes and reforms in healthcare. However, to do this, we need to ensure healthcare consumers can access, evaluate and create change in a way that is meaningful and understandable to them.

Objective: The aim of this integrative review is to assess health literacy within the GCC countries in order to provide a picture of the state of health literacy.

Method: An integrative review using the Whitemore and Knafl framework was utilized in order to review empirical studies will be undertaken. This study will also look at grey literature in order to review the evidence that is written about health literacy in the GCC countries.

Discussion: The results are expected to provide a landscape of the current practice in the GCC countries as well as to inform future practice related to caregiving and the influence of health literacy on that realm.

Keywords: Health Literacy, GCC Countries, Review protocol, Health Literacy Landscape

Introduction

Health literacy is defined as “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions” (p.11) (Ratzan & Parker, 2000). The current prevalence of health literacy has been reported to be in the range of 7% and 47% within developed nations worldwide. As recent shifts in healthcare encourage patients to be self-directed and motivated toward self-care management, it is necessary to know the health literacy needs of the populations so that healthcare organizations can be responsive to those needs and support patients towards successful self-management of their conditions (Suri et al., 2016).

Health literacy is increasingly becoming known as a pivotal social determinant of health (Nutbeam, 2008; Rowlands et al., 2015). It includes reading, writing, comprehension skills, and the ability to make decisions in order to navigate the health care system (Berkman et al., 2011; Harbour & Grealish, 2018). Health literacy is necessary in order to engage the communities in fundamental healthcare services. This community engagement ensures that healthcare personnel are responsive to the needs of patients, thus increasing the quality of life (Nantsupawat et al., 2020). In order to empower patients and mitigate costs, healthcare organizations must be aware of measures needed to ameliorate these issues. Health literacy of populations has been of concern for decades worldwide (Easton et al., 2013).

The Gulf Cooperation Council (GCC) includes six countries as member states: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates (UAE). A fast-growing population, increased life expectancy, and the rising burden of non-communicable diseases are contributing to greater demands of health and wellness services in the GCC countries (Khoja et al., 2017). There is a need to develop strategies to overcome these challenges and understand the primary prevention and health promotion issues, especially with regards to population health and wellness literacy in these countries as an important first step. A substantial number of the residents of the GCC countries are made up of predominantly expats from several developed and developing countries. This is also coupled with the fact that most people may not understand the native language well, and may not have a good command of English. Thus, it is important to understand the levels and needs of health literacy that exist within these countries (Khoja et al., 2017). However, within the GCC, little is known about health literacy assessment methods, delivery of interventions, and associated outcomes. This integrative review aims to explore health literacy assessment, intervention delivery, and outcomes within this region. The overarching aim of this integrative review is to systematically explore the literature related to health literacy assessment within the GCC.

Methods

We will apply the Whittemore and Knafl (2005) integrative review methodology for this literature review. An integrative review helps obtain a clear understanding of a complex and dynamic topic (Soares et al., 2014). This review method gathers data from studies without restraining any specific study methods, thus enhancing the achievement of comprehensive knowledge on this topic to inform policy (Broome, 2000). We use the updated methodology suggested by Whittemore and Knafl (2005), which adds sufficient rigour to the study that systematically extracts the relevant qualitative and quantitative information, compares and collates them to synthesize useful knowledge for identifying and resolving multisectoral and composite health and wellness practice and policy (Soares et al., 2014; Whittemore & Knafl, 2005). We will follow the five stages of integrative review in this study that include (1) problem identification; (2) literature search; (3) data evaluation; (4) data analysis; and (5) presentation (Whittemore & Knafl, 2005).

Stage 1: Problem identification

Clear identification of the research/guiding question(s) is necessary for a high-quality integrative review (Whittemore & Knafl, 2005). To achieve the research objective we will conduct a thorough and systematic exploration of the relevant theoretical/conceptual, empirical, and grey literature on health literacy (HL) among GCC countries in light of the following guiding questions:

1. What assessments for health literacy have currently been conducted within the healthcare professions in the GCC?
2. What has been the approach to collecting data on health literacy in the GCC?
3. What interventions and programs have been completed addressing health literacy?
4. What is the impact or outcomes of implementing interventions aimed at promoting health literacy?

Stage 2: Literature search

Search terms and databases: With consultation with a health sciences librarian, we developed a preliminary search strategy. First of all, a set of databases were selected to search for relevant articles that include major academic databases such as MEDLINE (Ovid), PubMed, EMBASE, PsycINFO, CINAHL, and Web of Science and an Arabic database Al Manhal. We also selected some grey literature sources/databases namely, Google, Google Scholar, OAIster, and GCC government websites (see Table 1 for the complete list). Also, using the recommendation by the Canadian Institute for Health Information (CIHI, 2011) we will include only the first 100 results from the high-yielding grey literature sources such as Google, Google Scholar, and OAIster (WorldCat) to ensure relevant studies were extracted. Secondly, a comprehensive list of search terms related to each term of

Table 1: List of searched databases

For published articles	For grey literature
<ol style="list-style-type: none"> 1. MEDLINE (Ovid) 2. PubMed 3. EMBASE 4. CINAHL Plus with Full-text 5. PsycINFO 6. Psychology & Behavioral Sciences Collection 7. Sociological Abstracts 8. Social Services Abstracts 9. Social Work Abstracts 10. SocINDEX with Fulltext 11. Cochrane Library 12. Cochrane Database of Systematic Reviews 13. Web of Science 14. Al Manhal 	<ol style="list-style-type: none"> 1. Google Scholar 2. Google 3. ProQuest (Theses and dissertations) 4. OAISTER (WorldCat) 5. OpenGrey 6. GCC governmental websites <ol style="list-style-type: none"> a. Secretariat General of the GCC, https://www.gcc-sg.org/en-us/Pages/default.aspx) b. World Bank GCC, https://www.worldbank.org/en/country/gcc c. Co-operation Council for the GCC, https://www.fatf-gafi.org/pages/co-operation-council-for-the-arab-states-of-the-gulf-gcc.html d. Gulf Cooperation Council https://arab.org/directory/gulf-cooperation-council/ e. Global Edge: GCC Resources, https://globaledge.msu.edu/trade-blocs/gcc/resources f. GCC-STAT, https://gccstat.org/en/ Middle East Policy Council https://mepc.org/commentary/gulf-cooperation-council-meets-kuwait g. Arabic collection online https://dlib.nyu.edu/aco/ h. Preprints- https://www.hsls.pitt.edu/preprint i. E-Marefa

this topic such as 'Health literacy' and 'GCC countries' was selected that includes Medical Subject Heading (MeSH) terms as well as keywords to identify relevant articles (see Table 2 for complete list). Each set of the keywords for similar terms will be connected by the Boolean operator 'OR' followed by linking them with other sets of terms using the Boolean operator 'AND'. To expand the search, we will use the citation pearl-growing approach, which essentially includes a review of the reference list of relevant systematic reviews and other articles to find potentially eligible articles that might be missed during the search. We will also employ a single citation search to retrieve all relevant articles through PubMed.

Inclusion and exclusion of studies: A clear set of inclusion and exclusion criteria were developed by our research team to select articles relevant to our research objectives (Table 3). We will not limit the inclusion based on the time of publication and will include both English and Arabic language. Original research articles will be included mainly in this review, which might be qualitative, quantitative, or mixed-method studies. Any literature reviews, books/book chapters, commentaries and editorials will be excluded from this review.

Two-stage screening of articles: We will use a software platform – Covidence to coordinate the screening process between the research team members for this review. All extracted articles will be uploaded to Covidence followed by duplicate removal and setting up the inclusion and exclusion criteria in the software system (Covidence systematic review software, Veritas Health Innovation, Melbourne, Australia. <http://www.covidence.org>). The screening will be divided into two stages: (i) title and abstract screening, and (ii) full-text review (Figure 1) completed by two members of the research team individually and blindly. The abstracts will be classified as relevant, potentially relevant, or not relevant. The articles that met inclusion criteria and were agreed upon by both the reviewers will be moved to the next stage for full-text review. The articles that cannot be decided to include or not include based on the abstracts only will also be considered for full-text review. The full-text review will be conducted by the same reviewers. An eligible article will be considered to extract data for this review. We will expect an 80% agreement between the two reviewers. If the reviewers disagree on any articles, a third reviewer will resolve the conflict.

Stage 3: Data evaluation

For data extraction, we have already developed a schema. The information following the schema will be extracted from the articles using Microsoft Excel spreadsheet (Microsoft Office, Redmond, Washington, USA). The schema includes study characteristics, presented in Table 4, and topic-specific i.e., health literacy-related information presented in Table 5. The data extraction will be performed by one member, however, another member will randomly double-check some of the extracted data to

remove the bias and ensure the accuracy of the findings. In case of any disagreements, a discussion will be arranged between the research team members to come to a consensus.

Stage 4: Data analysis: a qualitative synthesis of the studies

An integrative review retrieves a broader description of the research topic and generally reports the synthesized result in a narrative format (Whittemore & Knafl, 2005). We will apply Ritchie & Spencer's (2002) five-stage process for the synthesis of our findings.

- (1) Familiarization – being familiar with the data contents.
- (2) Identifying a thematic framework – identifying key issues, concepts and themes.
- (3) Indexing – systematically applying the thematic framework to the data.
- (4) Charting – rearranging the data according to the appropriate thematic reference.
- (5) Mapping and interpretation – identifying the key characteristics of the data.

Full text of the eligible articles will be shared with all team members for familiarizing the data. The coding guide will be developed based on the key issues, ideas, concepts, and themes. Health literacy-related outcomes, practices, approaches, initiatives, interventions, and tools will be extracted for study. We will use both inductive and deductive coding to identify and organize themes. The process of familiarization with the data and coding for themes will be carried out separately. Initial themes identified through coding will be shared with the team members to discuss, collate, and evaluate through an analytical framework to derive more extensive themes and categories. One team member will do the indexing and outlining of individual study findings in light of the extensive themes and categories, whereas the entire team will cross-check the mapping and interpretation based on key characteristics of the framework. The accuracy and relevance will be assessed by the team as well. The accuracy and relevance of the findings will be assessed by the team as well. Using the "framework" method will aid an extensive approach for analyzing and synthesizing the evidence (Armstrong et al., 2007).

Stage 5: Presentation

Using both the tabular and narrative format the results will be synthesized from the analysis of the extracted data using the "framework" method. We will also discuss the current state of the knowledge and evidence of practice and policies around health literacy in this region and the future implications for research, practice, and population health. We will also appraise the quality of the studies and the strength of evidence will be outlined in this stage.

Table 2: List of search keywords

Search terms for health literacy:
“health literacy” [Keyword, MeSH]; Patient Education as Topic [MeSH]; “health education” [Keyword, MeSH]; “patient education handout” [Keyword, MeSH]; “health promotion” [Keyword, MeSH]; “health behaviour” [Keyword]; “health behavior” [Keyword, MeSH];
Search terms for Gulf Cooperation Council countries
“Gulf Cooperation Council” [Keyword]; GCC [Keyword]; “GCC countries” [Keyword]; “Gulf Cooperation Council countries” [Keyword]; Gulf region [Keyword]; Gulf countries [Keyword]; Bahrain [Keyword, MeSH]; Kuwait [Keyword, MeSH]; Oman [Keyword, MeSH]; Qatar [Keyword, MeSH]; “Saudi Arabia” [Keyword, MeSH]; “United Arab Emirates” [Keyword, MeSH]; UAE [Keyword]
Search terms for intervention
Intervention [Keyword]; Trial [Keyword];

Table 3: Inclusion and exclusion criteria

Inclusion criteria	<ol style="list-style-type: none"> 1. <i>Studies</i>: original research with any health literacy intervention 2. <i>Populations</i>: research focusing on GCC countries 3. <i>Design</i>: any types of studies 4. <i>Outcomes</i>: includes, but not limited to, improved health literacy
Exclusion criteria	<ol style="list-style-type: none"> 1. Studies not describing active health literacy initiative or issues around health literacy. 2. If the description of the health literacy lacked detail such that it was unclear if there was a health literacy approach and/or activity 3. No original studies; e.g. publications in the form of editorials, reviews, or opinion articles 4. Studies not in English or Arabic

Quality assessment of the selected studies

We will check the credibility and transferability of the findings of the eligible studies. As an integrative review, our review is likely to have studies from diverse methodologies. Quantitative studies will be assessed using the guidelines of the Cochrane Collaboration for health promotion and public health interventions (Armstrong et al., 2007). We will use certain parameters to assess different aspects of study quality such as the appropriateness of study design, methods, selective reporting, ascertainment of outcomes, attrition, key confounding factors, the rigour of analysis, and sample size. To evaluate credibility, dependability, conformability, transferability, authenticity, and relevance of qualitative studies we will use the Qualitative Research Quality Checklist (QRQC) (Saini & Shlonsky, 2012) a 25-point quality assessment checklist. For the mixed-method studies, the revised Mixed Methods Appraisal Tool (MMAT) will be used (Pluye et al., 2011). Credibility is an important issue, especially for grey literature. Using the Authority, Accuracy, Coverage, Objectivity, Date, and Significance (AACODS) checklist (Tyndall, 2010) we will ensure the information extracted from Grey literature sources are credible. We expect very few studies including a discussion of methodology, limitations, and data collection process in the studies identified through grey literature search as they contain mostly individual websites, reports, evaluations, or other types of materials rather than research studies. Therefore, we will mainly focus on authority to assess credibility. We will also employ a domain-dependent criteria, "Technical criteria" (Eysenbach et al., 2002) to focus on how the information is presented or what meta information is available. Two reviewers will assess the quality of the studies independently using a pre-defined set of questions. Any disagreement will be resolved through further discussion or by the help of a third reviewer, if necessary.

Discussion

Anticipated outcomes:

The purpose of this comprehensive integrative review is to identify and assess existing health literacy-related assessment plans, interventions, and programs to improve health literacy in GCC countries. With this study, we will be able to assemble all such activities to create a knowledge baseline on this topic. We will also know the needs and demands of health literacy among these populations. Barriers, facilitators, and outcomes of the existing health literacy interventions will be identified as well. What type of programs may work for these populations and what does not work will be determined through this study.

Potential impact:

The findings from this integrative review will significantly contribute to increasing our knowledge in this area. Research and policy gaps will be identified to develop strategies and plan future interventions to improve health literacy. The knowledge of the extent of the need for health literacy among different parts of the region will help devise area and population-specific intervention programs.

Evidence-based programs could be designed having the information on the outcomes and success of previous endeavours. Overall, this research will contribute to the improvement of the health and wellness of the citizens of the GCC countries.

Strengths

We have already developed a thorough and detailed search strategy to obtain the relevant articles. We also have created a robust data extraction tool that puts us in a strong position to carry out the study smoothly and synthesize results effectively and efficiently. We have also consulted with the knowledge users during this process. This approach will also help us reach maximum knowledge mobilization and community engagement. Our research team is also highly experienced in conducting all sorts of literature reviews and working with health literacy and relevant topics.

Limitations

Nevertheless, there are also some limitations and challenges of this study. We will only include original articles, whereas other types of articles such as reviews, environmental scans, editorial etc. may contain useful information that we might not identify. As an integrative review, we will keep our research question relatively broad and will not restrict it to any methodological framework, which may yield less specific results that might be difficult to practice for a policy change.

Patient and Public Involvement:

During the development of the research objective, guiding questions, search strategy, and data extraction tool, we have consulted with the knowledge users to ensure the appropriateness of the research approach. We will also involve them in the analysis and interpretation stages to ensure the contextualization of the results. We will also involve community scholars, citizen researchers, and policy stakeholders in the final presentation of the findings to mobilize the knowledge and relate the findings for policy implications.

Knowledge Translation

Our knowledge translation strategy includes approaches to include both academic and non-academic audiences. For academic audiences, we will publish the review findings in an open-access journal. We will also present our findings at academic conferences. For community and policy stakeholders we will create an infographic, a lay summary, and social media posts to mobilize the findings to wider audiences to bring quicker impacts.

Declarations

The authors declare that there is no conflict of interest.

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Table 4: Study characteristics

Study	Objective	Location	Target population	Study design	Population size	Key findings	Key conclusions

Table 5: Description of health literacy initiatives in included studies

Study	Content of health literacy	Health literacy Activities	Settings	Description of the initiative	Level of community engagement	Partners from knowledge-users

Figure 1: Flow diagram of search and selection process for the systematic integrative review (adapted from diagram for systematic review)

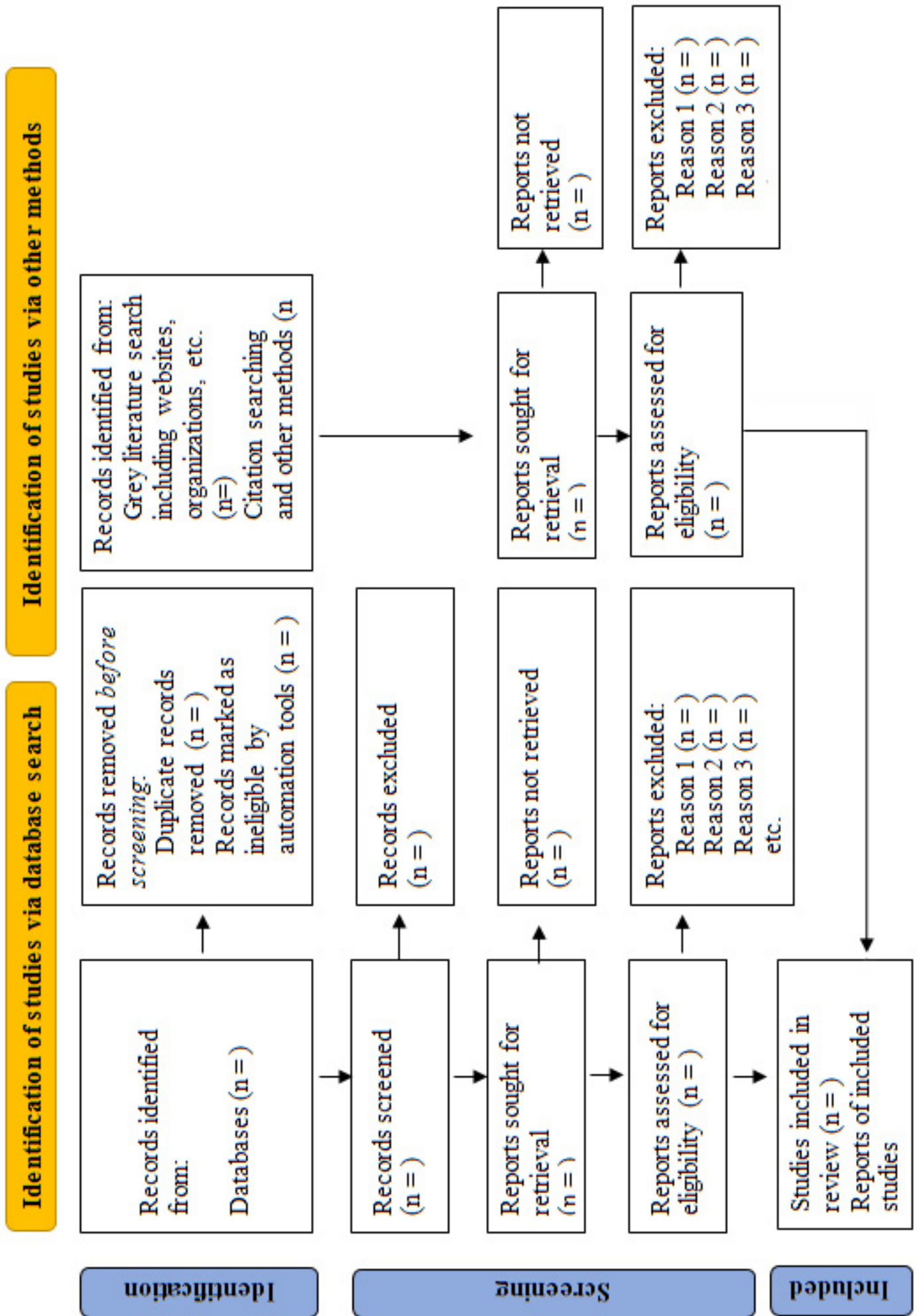


Figure 1: Flow diagram of search and selection process for the systematic integrative review (adapted from diagram for systematic review)

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