

# **Social Determinants of Health Screening Tools for Adults in Primary Care: Protocol for a Scoping Review.**

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# Social Determinants of Health Screening Tools for Adults in Primary Care: Protocol for a Scoping Review.

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## Abstract

**Background:** Social determinants of health (SDOH) have been shown to be predictors of health outcomes. Integrating SDOH screening tools into primary care may help to identify individuals or groups with a greater burden of social vulnerability and to promote health equity.

**Objective:** Our objectives are: 1) to identify the existing screening tools to assess social deprivation in adults in primary care settings; 2) to describe the characteristics of these tools and, where appropriate, their psychometric properties; 3) to describe their validity and reliability in those scales in which validation processes have been conducted; and 4), to identify evidence gaps and provide recommendations for future research

**Methods:** This study protocol was structured according a 5-stage framework, and the scoping review will be conducted according to the Joanna Briggs Institute methodology for scoping reviews and reported following the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) guidelines Furthermore, due to the fact that not all the SDOH assessment tools are published as scientific articles, we will use a slightly modified form of the scoping review framework outlined by Peters and colleagues to retrieve specific information about specific tools for screening of SDOH in primary care contexts.

The following electronic databases will be searched by 2 reviewers: Medline (via PubMed), CINAHL Plus, Web of Science (WoS) and SCOPUS. In addition, to searching on grey literature will search in the following sources: DART-Europe E-thesis Portal, OpenGrey and Google Scholar. After revision of inclusion and exclusion criteria, title, abstracts and full text of included studies will be separately screened by two reviewers.

**Results:** A PRISMA-ScR flow chart will be used to depict the sources of evidence screened, and data charting will be used to gain in depth knowledge. The findings of the scoping review will be presented in both narrative and tabular formats, summarizing the existing literature on tools used for SDOH in primary care settings. A critical analysis addressing the variability in tool validation, cultural adaptability, and integration into diverse healthcare systems will be included. Finally, key gaps in the existing evidence will be examined, and research priorities will be proposed emphasizing the need for screening tools culturally sensitive, scalable, and easily integrated into primary care workflows.

**Conclusions:** This scoping review will provide a comprehensive and critical description of the available tools aimed at screening SDOH in primary care settings. Incorporating these tools into routine care has been recognized as a key strategy for addressing health inequalities, given the growing evidence base on the influence of SDOH on health outcomes.

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## Original Manuscript

## **Social Determinants of Health Screening Tools for Adults in Primary Care: Protocol for a Scoping Review.**

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## ABSTRACT

### Background

Social determinants of health (SDOH) have been shown to be predictors of health outcomes. Integrating SDOH screening tools into primary care may help to identify individuals or groups with a greater burden of social vulnerability and to promote health equity.

### Objectives

Our objectives are: 1) to identify the existing screening tools to assess social deprivation in adults in primary care settings; 2) to describe the characteristics of these tools and, where appropriate, their psychometric properties; 3) to describe their validity and reliability in those scales in which validation processes have been conducted; and 4), to identify evidence gaps and provide recommendations for future research.

### Methods and analysis

This study protocol was structured according a 5-stage framework, and the scoping review will be conducted according to the Joanna Briggs Institute methodology for scoping reviews and reported following the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) guidelines Furthermore, due to the fact that not all the SDOH assessment tools are published as scientific articles, we will use a slightly modified form of the scoping review framework outlined by Peters and colleagues to retrieve specific information about specific tools for screening of SDOH in primary care contexts.

The following electronic databases will be searched by 2 reviewers: Medline (via PubMed), CINAHL Plus, Web of Science (WoS) and SCOPUS. In addition, to searching on grey literature will search in the following sources: DART-Europe E-thesis Portal, OpenGrey and Google Scholar. After revision of inclusion and exclusion criteria, title, abstracts and full text of included studies will be separately screened by two reviewers.

### Results

A PRISMA-ScR flow chart will be used to depict the sources of evidence screened, and data charting will be used to gain in-depth knowledge. The findings of the scoping review will be presented in both narrative and tabular formats, summarizing the existing literature on tools used for SDOH in primary care settings. A critical analysis addressing the variability in tool validation, cultural adaptability, and integration into diverse healthcare systems will be included. Finally, key gaps in the existing evidence will be examined, and research priorities will be proposed emphasizing the need for screening tools culturally sensitive, scalable, and easily integrated into primary care workflows.

### Conclusions

This scoping review will provide a comprehensive and critical description of the available tools aimed at screening SDOH in primary care settings. Incorporating these tools into routine care has been recognized as a key strategy for addressing health inequalities, given the growing evidence base on the influence of SDOH on health outcomes.

## KEYWORDS

Social Deprivation; Social determinants of Health; Primary Health Care; Social Inequality; Screening

## Background

In recent years, there has been a growing awareness of the significant impact of social determinants of health (SDOH) on individual and population health outcomes. This has led to a transformation in healthcare practices and policies, with a greater recognition of the role of SDOH in perpetuating health inequities and in providing a comprehensive understanding of a patient's health [1]. Health inequalities are defined as the systematic, avoidable and unfair differences in health outcomes that can be observed between different groups of people, and are determined by the social determinants of health [2]. According to the World Health Organization (WHO), SDOH are the conditions in which people are born, grow, work, live, and age, and the broader set of forces and systems that shape the conditions of daily life [3].

SDOH have been shown to be predictors of health outcomes, including, hospital readmissions [4,5], emergency department visits [6], multimorbidity burden [7], depression prognosis [8], and lower adherence to preventive measures [9,10,11]. Identifying individuals or groups with a greater burden of social vulnerability or with the greatest disparities in a particular disease, can guide future action to promote health equity [12], tailored social interventions, and future research [13]. However, despite the clear evidence of the importance of SDOH and the need to address its root causes, there are a number of issues to be considered. First, without multidisciplinary engagement and workflows, and the availability of social resources for subsequent referral [14], expectations may be raised without solutions being provided, and patient trust may be lost. Second, without intersectoral collaboration, long-term strategies, upstream proposals, and public health policies and workflows, we could fall into perpetuating the “fantasy paradigm” [15], understood as a parallel fantasy world in which proximal, downstream, easily tackled exposures are posited as potential solutions to health inequalities [16].

Primary care settings are ideal for addressing SDOH because they are often the first, and sometimes only, point of contact for patients within the health care system. They are also the place for multiple consultations with a significant social burden, where longitudinal continuity of care is provided and where clinicians are aware of the community health resources [17]. The importance of SDOH screening in primary care is underscored by the fact that social needs are often unrecognized in clinical settings, leading to suboptimal care and poorer health outcomes [18]. Therefore, integrating SDOH screening tools into primary care is not only consistent with the principles of holistic and patient-centered care, but also represents a crucial step towards addressing the root causes of health disparities [19].

There is considerable variability in the implementation of SDOH screening tools in primary care settings [20]. The absence of standardized screening tools and protocols and, the varying levels of knowledge and training of providers, hinders the ability to identify SDOH-related needs and intervene appropriately [21]. Moreover, the diverse nature of the SDOH, which covers a wide range of domains and is influenced by individual, community, and policy-level factors, poses a significant challenge to the development of comprehensive screening tools [22]. These tools must be sensitive enough to capture the complexity of social determinants, while also being practical for use in time-constrained primary care settings. A number of SDOH screening tools have been developed and implemented with varying degrees of success. These tools range from brief questionnaires integrated into electronic health records to more extensive assessments conducted through patient interviews [15,20,23]. The development of these tools is often context-specific, taking into account the patient population, the health care setting, and the resources available for follow-up interventions [24]. However, the variability in the content, format, and application of these tools across different healthcare systems underscores the need for a comprehensive synthesis of available tools aimed to assess their effectiveness, validity, and feasibility [15].



Primary care providers face numerous barriers to implementing SDOH screening, including time constraints, lack of training, and uncertainty about how to address identified needs [18,25]. There are also concerns that screening may reveal problems that providers are ill-equipped to deal with, leading to increased stress and workload without a clear pathway for patient referral and intervention [15]. Without collaboration between sectors such as social work or community resources in SDOH screening and subsequent referral, primary care clinicians alone may not be able to cope [25]. Therefore, an important aspect of evaluating SDOH screening tools is to consider not only their ability to identify social determinants, but also their integration into care processes, the availability of resources to address identified needs, and their impact on patient outcomes [26].

To avoid duplication of effort, a preliminary search conducted in July 2024 did not identify any comprehensive synthesis of available tools for screening for SDOH applicable in primary care settings. Several approaches to synthesizing the existing literature were considered and scoping was found to be the most appropriate for the needs of this study according to the four common reasons for deciding to undertake a scoping review proposed in the seminal work of Arksey and O'Malley [27], namely: to examine the extent, range and nature of research on an emerging topic; when a systematic review is not feasible or appropriate; to summarize and disseminate the range of evidence from the existing literature; and to identify gaps in the evidence where research has not been conducted.

### **Study aims**

Therefore, our overall aim is to explore the literature describing the usefulness of SDOH screening tools for adults in primary care settings. To this, we will address the following specific objectives: (1) to identify the existing screening tools for assessing social deprivation in adults in primary care settings; (2) to describe the characteristics of these tools such as country, year of publication, and items included; (3) to describe their validity and reliability in those scales that have undergone validation processes; and (4) to identify evidence gaps and provide recommendations for future research.

## **METHODS**

In reviewing the existing literature, several approaches were considered, and scoping was found to be the most appropriate for the requirements of this study. Thus, this study protocol was structured according to the 5-stage framework by Arksey and O'Malley [27]. In addition, the scoping review will be conducted according to the Joanna Briggs Institute methodology for scoping reviews [28] and reported following the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) guidelines [29]. Furthermore, because not all the SDOH assessment tools are published as scientific articles, we will use a slightly modified form of the scoping review framework outlined by Peters and colleagues [30] to retrieve specific information about specific social deprivation screening tools in primary care contexts.

### **Identifying the research question**

Some differences can be observed between these two approaches [29,30]. In essence, both approaches can be complementary, as the former is a checklist for reporting a scoping review compatible with the population, concept, and context framework that we have chosen to describe the research question of our review. Our population will be adults (aged 18 years or older), our concept SDOH tools understood as the conditions in which people are born, grow, work, live, and age, and the broader set of forces and systems that shape the conditions of daily life [3], and as contextual framework, that the tools should be applicable to primary care settings.

### **Identifying relevant studies**

The search strategy has been developed in collaboration with the research team and the subject librarians and reported adapting the PRISMA-S guidelines for literature search [31] to a scoping review. The following electronic databases will be searched by two reviewers (JMA and VMV): MEDLINE (via PubMed), CINAHL Plus, Web of Science (WoS) and SCOPUS. The search strategy included, combined using Boolean operators, terms related with the following descriptors: (1) social determinants of health, (2) measurement tools, (3) validation studies, and (4) primary health care. Table 1 provides, as an example, the search strategy for MEDLINE database:

**Table 1. Search strategy in MEDLINE**

Concept	tool [Title/Abstract]) OR ("questionnaire"[Title/Abstract])) OR ("scale"[Title/Abstract])) OR (measurement[Title/Abstract])) OR ("test"[Title/Abstract])) OR ("measure"[Title/Abstract])) OR ("assessment"[Title/Abstract])) OR ("index"[Title/Abstract])) OR ("indexes"[Title/Abstract]) OR ("score"[Title/Abstract])
<b>AND</b>	
Social Determinants of Health	poverty[Title/Abstract]) OR (poverty[MeSH Terms])) OR (socioeconomic status[Title/Abstract])) OR (low socioeconomic status[Title/Abstract])) OR (low socioeconomic status[MeSH Terms])) OR (Social Deprivation[MeSH Terms])) OR (Social Deprivation[Title/Abstract])) OR (Social Vulnerability[Title/Abstract])) OR (Social Vulnerability[MeSH Terms])) OR (Social Determinants of Health[Title/Abstract])) OR (Social Determinants of Health[MeSH Terms])) OR ("social class"[MeSH Terms])) OR (social determinants[Title/Abstract])) OR (socioeconomic factors[MeSH Terms])) OR (socioeconomic factors[Title/Abstract])) OR (deprivation[Title/Abstract])
<b>AND</b>	
Validity	(validity[Title/Abstract]) OR (Feasibility Studies[MeSH Terms] OR (Feasibility[Title/Abstract])) OR (applicability[Title/Abstract])) OR (screening[Title/Abstract])) OR (validation[Title/Abstract])) OR ("validation studies as topic"[MeSH Terms])) OR (health outcome predictor[Title])
<b>AND</b>	
Context	(((((Primary Health Care[Title/Abstract]) OR (Primary Health Care[MeSH Terms])) OR (primary care[Title/Abstract])) OR (Family Practice[Title/Abstract])) OR (Family Practice[MeSH Terms])) OR (general practice[MeSH Terms])) OR (general practice[Title/Abstract])) OR (clinical setting[Title])

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## Study selection

The identified studies will be transferred to the web-based version of Rayyan Systematic Review Tool [33] for further processing. The search will be carried out independently by two authors. Rayyan is a web-based tool designed to facilitate the screening process, which is a critical component of any systematic review. As recommended, two authors, after agreeing a framework for screening papers according to the research objectives [29] will independently carry out the title and abstract selection of studies. For our scoping review, the inclusion criteria are described in table 2, but being aware that a reflexive process of the inclusion and exclusion criteria will be undertaken during the screening process, which will serve to consolidate the criteria [30].

**Table 2. Inclusion and exclusion criteria based on Population, Concept and Context framework**

	Inclusion	Exclusion
Population	- Adult participants (including elderly people)	- Children/pediatric population and adolescents
Concept	- Screening tools for SDH that include more than one dimension of SDH - Screening tools with social deprivation indexes	- Screening tools for ONLY one SDOH (eg, screening tools for only food insecurity)
Context	-Primary care settings	-Other specialty or emergent care setting
Types of evidence	-Full text articles of empirical research studies (eg, validation studies, randomized controlled trials, observational studies) - Study protocols - Full text conference proceedings - Articles written in English or Spanish - Documents retrieved from institutional websites - PhD dissertations	- Reviews - Abstracts o posters - Articles for which we cannot obtain the full text, or which are not written in English or Spanish

*Critical appraisal.* As scoping reviews are primarily aimed at identifying and exploring the existing literature on a topic, it has been stated that a quality assessment is not applicable [30]. In our case, as the methods used to develop the SDOH screening tool may not always be standardized, making a quality assessment is likely to be unsuccessful. However, a critical review assessing their ability to be incorporated into care processes, their relationship to the availability of resources to address identified needs, and their impact on patient outcomes will be included in results and discussion sections.

## RESULTS

### Charting the data

A PRISMA-ScR [29] flow chart will be used to depict the sources of evidence screened, the assessment of documents eligibility (which could be included tools extracted from institutional documents, not just articles) and the tools included in the review, with reasons for exclusions at each stage.

The data charting is specific to scoping reviews and differs from the data extraction processes commonly used in other types of research synthesis designs, where data extraction is a more structured process that very often includes statistical procedures. Conversely, for scoping reviews, data charting is a more comprehensive approach that incorporates narrative information to describe details about how, why and where the study was conducted [34]. Accordingly, a consensus-based data-charting form will be used by the two reviewers who will independently extract the data, discuss the results and iteratively update the data-charting form. This data-charting form will contain descriptive variables (year of publication, study design, setting, target population, data source) and information about the aims and structure (dimensions, items, procedures for filling the questions) of the tool, and setting characteristics.

### **Summarizing and reporting results**

The findings of this scoping review will be presented in both narrative and tabular formats, summarizing the existing literature on tools used for SDOH in primary care settings. The narrative summary will describe the scope and nature of the screening tools identified including their structure (domains, number of items, how the information should be obtained, e.g. questionnaires, digital platforms), and the contexts in which they are applied. The integration of these tools into clinical workflows and whether there is any evidence of their effectiveness in improving patient outcomes will also be considered.

*Critical analysis.* The results will include a critical analysis of the strengths, limitations, and usability in primary care settings of the screening tools. This analysis will address the variability in tool validation, cultural adaptability, and integration into diverse healthcare systems. Potential biases or limitations in the implementation or outcomes of the tools, such as insufficient training of healthcare providers or limited follow-up on identified needs, will also be concerns to be discussed.

*Research gaps and priorities.* Key gaps in the existing evidence, such as social determinants not included in the tools, concerns about age or gender underrepresentation, or limited follow up analysis of the usefulness of SDH screening on health outcomes will also be critically examined. Finally, in the light of these findings, research priorities will be proposed emphasizing the need for screening tools culturally sensitive, scalable, and easily integrated into primary care workflows.

## DISCUSSION

This scoping review will provide a comprehensive and critical description of the available tools aimed at screening SDOH in primary care settings. Incorporating of these tools into routine care has been recognized as a key strategy for addressing health inequalities, given the growing evidence base on the influence of SDOH on health outcomes. Nonetheless, the absence of a comprehensive review makes it difficult for healthcare practitioners to select the most appropriate tools for their context and patient populations.

By identifying and cataloguing the variety of screening tools currently available, this review will contribute to the field by examining their scope, structure, and the dimensions of SDOH they cover. Furthermore, this review will assess the contextual elements such as resource accessibility and stakeholder involvement (patients, practitioners, health providers) that influence the implementation and effectiveness of these technologies in primary care. This review will map the body of literature to identify potential gaps and areas for additional research, including tool validation in varied populations, tool influence on clinical outcomes, and tool integration into larger care systems.

Including SDOH screening tools for children in this review might seem to make our review more coherent, but on the contrary, it would greatly increase the complexity of the review, as the tools for children and adults are very different. Overall, measuring SDOH in children should emphasize developmental needs, relationship and influence with caregivers, and early life conditions, whereas measures for adults tend to focus more on employment, social deprivation, and cumulative social conditions, and focus on the individual rather than indirectly asking the caregiver about the child's health [35]. Therefore, a review of SDOH for pediatric population requires a synthesis study, probably with a different methodological approach, focusing exclusively on this topic.

A key strength of this protocol is its systematic approach, which adheres to the current methodological frameworks for scoping reviews. This ensures that the review process will be transparent and reproducible, while allowing for the inclusion of a broad range of study designs and settings. However, limitations include the potential for missing unpublished or non-English or Spanish language studies, which may result in an incomplete understanding of the global landscape of SDOH screening tools.

### *Dissemination and ethical considerations.*

To guarantee that the insights resulting from this review reaches a variety of stakeholders, such as healthcare practitioners, policymakers, and academics, the findings will be disseminated using several dissemination strategies including reporting results in open-access journals and in scientific conferences. In addition, stakeholders will be engaged at every stage of the review process to facilitate the adoption and implementation of evidence-based screening tools in clinical settings, thereby increasing their impact on health equity. Finally, the review will identify any knowledge gaps and suggest areas for further investigation.

Ethical approval is not required for this review as it involves the analysis of publicly available empirical studies and the production of secondary data.

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