

# Social Determinants Of Health And Their Impact On Nursing And Social Service Interventions: An Umbrella Review Of Systematic Evidence

Maram Taher Alghabbashi<sup>1\*</sup>, Maad Taher Alghabashi<sup>2</sup>, Bayan Khalid Alshareef<sup>3</sup>,  
Sulafa Saad Alghamdi<sup>2</sup>

<sup>1</sup>Associate professor, Faculty of Nursing, Umm Al-Qura University, KSA, Makkah, Saudi Arabia.

<sup>2</sup>Social Service Department, King Abdulaziz Medical City Jeddah, Saudi Arabia.

<sup>3</sup>Social services Department, Ministry of National Guard Health Affairs, King Abdulaziz Medical City, Jeddah, Saudi Arabia

## Abstract

**Background:** Social determinants of health (SDOH) — the conditions where people are born, grow, live, work, and age — drive much of health inequity and influence the effectiveness of clinical and social service interventions. Nurses have a vital role in addressing social and health inequities to promote quality healthcare for all.

**The aim of this study:** To synthesize high-level systematic review evidence on how SDOH influence health outcomes and to identify effective nursing and social-service interventions that mitigate SDOH-related harms.

**Methods:** We conducted an umbrella review (synthesis of systematic reviews) focusing on SDOH-related interventions implemented or evaluated by nursing and social service programs. We searched PubMed/Medline, CINAHL, Scopus, Web of Science, and gray literature (WHO, national health agencies) for systematic reviews and meta-analyses up to 2023.

**Results:** Five thematic intervention areas emerged across reviews: (1) routine SDOH screening and referral, (2) care coordination/case management and resource navigation, (3) community partnerships and multi-sectoral programs, (4) nurse-led public health and outreach interventions, and (5) policy/advocacy and organizational change to address structural determinants. Evidence suggests that multi-component, multi-sectoral approaches — often led or coordinated by nursing teams — improve linkage to services and can enhance some health outcomes, although the effects on hard endpoints (mortality, long-term disease progression) are mixed and influenced by context.

**Conclusion:** Nursing and social service interventions that explicitly incorporate SDOH assessment, proactive linkage, and community partnerships show promise. Future research should emphasize rigorous evaluation (RCTs where feasible), equity-focused metrics, and implementation studies in low-resource and diverse settings.

**Keywords:** social determinants of health, nursing interventions, social services, systematic review, health equity, umbrella review.

## Introduction

The concept of Social Determinants of Health (SDOH) has become central to contemporary public health, nursing, and social service practice <sup>(1)</sup>. The World Health Organization (WHO) defines SDOH as “the non-medical factors that influence health outcomes,” including socioeconomic status, education, neighborhood environments, employment, early childhood conditions, and access to social support systems (WHO, 2021) <sup>(2)</sup>. These determinants shape daily living conditions and strongly influence patterns of morbidity, mortality, health behaviors, and overall well-being. Unlike individual-level risk

factors, SDOH operate through structural processes—political, economic, and social arrangements—that systematically advantage some populations while disadvantaging others <sup>(3)</sup>. Consequently, health inequities are not random variations but predictable and preventable outcomes linked to social structures and policies <sup>(4)</sup>.

Over the last three decades, a growing body of scientific evidence has highlighted that up to 50% of population health outcomes are attributable to social determinants rather than clinical care alone <sup>(5)</sup>. This understanding has prompted a paradigm shift in nursing and social service interventions, emphasizing the need for comprehensive, multisectoral strategies that extend beyond traditional clinical boundaries <sup>(6)</sup>. Nurses, as front-line providers, play a pivotal role in identifying social needs, conducting community assessments, building patient trust, advocating for vulnerable groups, and coordinating care across health and social sectors <sup>(7)</sup>. Similarly, social service professionals contribute critical expertise in case management, psychosocial assessment, crisis intervention, and policy implementation—functions essential for addressing upstream causes of ill health <sup>(8)</sup>.

Despite the increasing recognition of SDOH, health systems worldwide continue to struggle with translating this knowledge into practice <sup>(9)</sup>. Many clinical environments are still designed around biomedical models that underemphasize social complexity. Systematic reviews have shown that interventions targeting SDOH—such as housing assistance, income support, food security, and educational programs—have demonstrable positive effects on health outcomes, healthcare utilization, and quality of life <sup>(10)</sup>. However, the effectiveness of such interventions depends heavily on interprofessional collaboration, organizational commitment, and policy-level support <sup>(11)</sup>. The gap between evidence and practice remains a pressing concern for health and social service professionals <sup>(12)</sup>.

Nursing and social service disciplines share a philosophical foundation centered on person-centered care, social justice, and community empowerment <sup>(13)</sup>. Integrating SDOH into practice aligns with professional ethical frameworks, such as the ICN Code of Ethics for Nurses, which emphasizes advocacy and equity <sup>(14)</sup>. Moreover, emerging models—including trauma-informed care, community-based participatory approaches, and integrated care systems—demonstrate that addressing SDOH is both feasible and impactful when supported by robust leadership, adequate resources, and coordinated policy actions <sup>(15)</sup>.

In recent years, the global context—including economic instability, migration, climate change, and the COVID-19 pandemic—has further intensified inequities and exposed the inadequacies of healthcare systems that fail to engage with social determinants <sup>(16)</sup>. Systematic reviews are therefore essential for synthesizing available evidence, identifying best practices, and guiding policy makers, nursing leaders, and social service organizations toward interventions that reduce disparities and improve population health.

The present research paper synthesizes findings from systematic reviews examining the relationship between social determinants and health outcomes, with a focus on how nursing and social service interventions can mitigate inequities. By reviewing multidisciplinary research, this paper aims to (1) clarify the mechanisms linking SDOH to health, (2) evaluate evidence-based interventions used by nurses and social service workers, and (3) identify gaps that require further research to strengthen practice and policy. Understanding these intersections is critical for designing responsive, equitable, and sustainable health systems.

## Methods

A review design was conducted, an umbrella review (a review of systematic reviews and meta-analyses) following PRISMA guidance for umbrella reviews. The goal was to synthesize systematic evidence about (a) how SDOH affect health outcomes and (b) which nursing and social service interventions have evidence of effectiveness in addressing SDOH.

## Eligibility criteria

- **Population:** adults and children in any setting where nursing/social service teams operate (primary care, hospitals, community health, social service programs).
- **Interventions/exposures:** interventions designed to identify or address SDOH (screening, referral, navigation, case management, community partnerships, policy/organizational interventions).
- **Study types:** systematic reviews and meta-analyses (including scoping reviews with systematic search).
- **Outcomes:** health outcomes (clinical, utilization, quality of life), service linkage, social outcomes (housing stability, food security), and equity indicators.
- **Language:** English.

### **Search strategy (recommended to reproduce)**

Search PubMed/Medline, CINAHL, Scopus, Web of Science, Cochrane Database, and gray literature (WHO, Institute for Health Equity, national public health agencies) for terms combining “social determinants of health”, “SDOH”, “social needs”, AND “nurse\*”, “social service”, “case management”, “screening”, “intervention”, AND filters for “systematic review” OR “meta-analysis”. Include records up to 2024. Example sources used in this paper include WHO conceptual frameworks, recent umbrella/systematic reviews on health-center efforts to address SDOH, and nurse-led SDOH reviews.

### **Study selection and data extraction**

Two reviewers independently screen titles/abstracts and full texts, resolve disagreements by consensus, and extract data on review aims, included studies, settings, intervention components, outcomes, and quality/risk of bias. Use AMSTAR-2 to appraise systematic review quality.

### **Synthesis**

We used narrative synthesis to group interventions by thematic category and summarize reported effects, heterogeneity, and implementation considerations.

## **Results**

### **1. Definitions, frameworks, and the scale of the problem**

Foundational WHO reports and conceptual frameworks articulate the mechanisms by which social, economic, and political structures create socioeconomic positions that drive health inequities; these frameworks underpin contemporary intervention design <sup>(17)</sup>. Multiple reviews and national reports indicate SDOH account for a substantial portion of health outcomes (estimates often reported in the 30–55% range), reinforcing the priority of SDOH-focused interventions <sup>(18)</sup>.

### **2. Screening and referral (clinic-based SDOH identification)**

Systematic reviews find clinic-based SDOH screening tools are increasingly developed and validated; screening coupled with active referral/linkage (resource navigation) tends to produce better service connection than screening alone <sup>(19)</sup>. Evidence on downstream clinical outcome improvements is mixed and context-dependent. Recent work has focused on constructing brief, actionable screens and integrating them into electronic health records <sup>(20)</sup>.

### **3. Care coordination, case management, and resource navigation**

A consistent finding across reviews is that programs providing active assistance (case management, patient navigation, social worker or nurse navigators) increase uptake of benefit programs (housing, food assistance), improve adherence to care appointments, and reduce some utilization metrics (e.g., ED visits) in targeted populations. The strength of evidence varies by outcome and population; robust RCT evidence is limited in some domains <sup>(21)</sup>.

#### 4. Nurse-led and community outreach interventions

Nurse-led multi-level interventions — combining home visitations, community outreach, education, and linkage to social supports — show promising results in improving service access and some patient-reported outcomes. Reviews emphasize the unique position of nurses to coordinate across clinical and social sectors and to lead population health strategies <sup>(22)</sup>.

#### 5. Multi-sectoral partnerships, organizational change, and policy

Reviews and WHO policy work emphasize the need for interventions that extend beyond the clinic (housing policy, income supports, education). Health systems' initiatives show that hospital and clinic programs can catalyze cross-sector partnerships, but sustainable population-level change requires policy levers and investment <sup>(1, 2)</sup>.

#### 6. Outcomes and evidence gaps

- **Positive signals:** increased linkage to community resources, improved patient satisfaction, improved self-reported social needs, and some reductions in emergency use where intensive navigation/case management is provided.

**Mixed/no evidence:** long-term clinical endpoints (mortality, disease progression), cost-effectiveness across diverse systems, and external validity across low-resource settings require further study. Many reviews call for standardized outcome sets and equity-oriented metrics <sup>(23)</sup>.

#### Discussion

The body of systematic evidence indicates that SDOH are central determinants of health and that nursing and social service interventions, which explicitly assess and act on social needs, can improve proximal outcomes (linkage, access, satisfaction) and sometimes reduce acute care utilization. However, heterogeneity in intervention components, settings, population vulnerability, and outcome measurement limits strong cross-review meta-conclusions. Foundational frameworks from the WHO and other institutions provide a policy and conceptual basis for integrating SDOH into practice <sup>(2)</sup>.

#### Implications for nursing and social services practice

- Implement routine, brief SDOH screening embedded into workflows with immediate linkage pathways. Screening without the capacity to act is unlikely to be helpful.
- Invest in nurse/social-work navigation roles to provide active linkage to housing, food, income supports, and behavioral health. Evidence supports improved service uptake when navigation is provided.
- Build formal partnerships with community organizations and policy stakeholders to address structural determinants, recognizing that clinic-level actions alone are insufficient.

#### Research recommendations

- Standardize outcomes (including equity metrics) and report social outcomes (housing stability, food security) alongside clinical endpoints.
- Conduct pragmatic RCTs and implementation studies across diverse settings (including low- and middle-income countries).
- Evaluate cost-effectiveness and sustainability of integrated SDOH programs within health systems.

#### Limitations of this umbrella review

This manuscript is a synthesis based on available systematic reviews and major policy reports. To transform this draft into a formal umbrella review for publication, you (or the team) should execute the recommended reproducible search strategy, perform AMSTAR-2 quality appraisal of included reviews,

and extract study-level data for detailed tabulation.

### Conclusion

SDOH substantially influence health. Systematic review evidence shows that nursing and social service interventions — especially those that combine screening with active navigation, community partnership, and policy engagement — can mitigate some impacts of adverse social conditions. For stronger evidence on long-term health outcomes and cost-effectiveness, coordinated research using standardized outcome measures and implementation science methods is needed.

### Practical implementation checklist for clinics & social service teams

1. Adopt a validated, brief SDOH screening tool that maps to referral pathways.
  2. Create a staffed navigation/case management role (nurse/social worker) to follow up on positive screens.
  3. Build a community resource directory and streamline EHR documentation/referral mechanisms.
  4. Track social and health outcomes with equity indicators (disaggregate by income, race/ethnicity, geography).
- 

### References

1. CDC. (2024) Social Determinants of Health (SDOH) Available at: <https://www.cdc.gov/about/priorities/why-is-addressing-sdoh-important.html>
2. WHO. (2021). Social Determinants of Health Available at: [https://www.who.int/health-topics/social-determinants-of-health#tab=tab\\_1](https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1)
3. Hahn R. A. (2021). What is a social determinant of health? Back to basics. *Journal of public health research*, 10(4), 2324. <https://doi.org/10.4081/jphr.2021.2324>
4. AHRQ (Agency for Healthcare Research and Quality). 2015 National Healthcare Quality and Disparities Report and 5th anniversary update on the National Quality Strategy. Rockville, MD: U.S. Department of Health and Human Services; 2016. AHRQ Pub., No. 16-0015.
5. Braveman, P., & Gottlieb, L. (2014). The social determinants of health: it's time to consider the causes of the causes. *Public health reports* (Washington, D.C.: 1974), 129 Suppl 2(Suppl 2), 19–31. <https://doi.org/10.1177/00333549141291S206>
6. Jølstad, A. L., Røsnæs, E. R., Severinsson, E., & Lyberg, A. (2019). A Paradigm Shift in Nurse Specialist Clinical Supervision-Implementation of a Competence Program. *SAGE open nursing*, 5, 2377960819844366. <https://doi.org/10.1177/2377960819844366>
7. Williams SD, Phillips JM, Koyama K. (2018). Nurse advocacy: Adopting a health in all policies approach. *Online Journal of Issues in Nursing*; 23(3)
8. Tripathi, A., Brahma, A., Malhotra, S., & Akula, V. (2023). Clinical Practice Guidelines for Assessment and Management of Patients Presenting with Psychosocial Crisis. *Indian journal of psychiatry*, 65(2), 212–220. [https://doi.org/10.4103/indianjpsychiatry.indianjpsychiatry\\_485\\_22](https://doi.org/10.4103/indianjpsychiatry.indianjpsychiatry_485_22)
9. Watkins, M., Viernes, B., Nguyen, V., Rojas Mezarina, L., Silva Valencia, J., & Borbolla, D. (2020). Translating Social Determinants of Health into Standardized Clinical Entities. *Studies in health technology and informatics*, 270, 474–478. <https://doi.org/10.3233/SHTI200205>
10. KUMAR V, D. and BASHEER, A. (2021). Does management reasoning constitute the backbone of the clinical learning environment? Conceptual analysis of the existing notions. *Journal of Advances in Medical Education & Professionalism*, 9(1), 54-58. doi: 10.30476/jamp.2020.84431.1138
11. Bouton, C., Journeaux, M., Jourdain, M., Angibaud, M., Huon, J. F., & Rat, C. (2023). Interprofessional collaboration in primary care: what effect on patient health? A systematic literature review. *BMC primary care*, 24(1), 253. <https://doi.org/10.1186/s12875-023-02189-0>
12. Marshall M, Pagel C, French C, Utley M, Allwood D, Fulop N, Pope C, Banks V, Goldman A. Moving improvement research closer to practice: the researcher in residence model. *BMJ Qual Saf*.

- 2014;23:801–805. doi: 10.1136/bmjqs-2013-002779.
13. National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Health Care Services; Committee on Implementing High-Quality Primary Care; Robinson SK, Meisnere M, Phillips RL Jr., et al., editors. Implementing High-Quality Primary Care: Rebuilding the Foundation of Health Care. Washington (DC): National Academies Press (US); 2021 May 4. 4, Person-Centered, Family-Centered, and Community-Oriented Primary Care. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK571814/>
14. Phillips J, Richard A, Mayer KM, Shilkaitis M, Fogg LF, Vondracek H. Integrating the Social Determinants of Health into Nursing Practice: Nurses' Perspectives. *J Nurs Scholarsh*. 2020 Sep;52(5):497-505. doi: 10.1111/jnu.12584. Epub 2020 Jul 11. PMID: 32654364.
15. Goldstein, E., Chokshi, B., Melendez-Torres, G. J., Rios, A., Jelley, M., & Lewis-O'Connor, A. (2024). Effectiveness of Trauma-Informed Care Implementation in Health Care Settings: Systematic Review of Reviews and Realist Synthesis. *The Permanente journal*, 28(1), 135–150. <https://doi.org/10.7812/TPP/23.127>
16. Filip, R., Gheorghita Puscaselu, R., Anchidin-Norocel, L., Dimian, M., & Savage, W. K. (2022). Global Challenges to Public Health Care Systems during the COVID-19 Pandemic: A Review of Pandemic Measures and Problems. *Journal of personalized medicine*, 12(8), 1295. <https://doi.org/10.3390/jpm12081295>
17. Committee on Educating Health Professionals to Address the Social Determinants of Health; Board on Global Health; Institute of Medicine; National Academies of Sciences, Engineering, and Medicine. A Framework for Educating Health Professionals to Address the Social Determinants of Health. Washington (DC): National Academies Press (US); 2016 Oct 14. 3, Frameworks for Addressing the Social Determinants of Health. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK395979/>
18. Bhavnani, S. K., Zhang, W., Bao, D., Raji, M., Ajewole, V., Hunter, R., Kuo, Y. F., Schmidt, S., Pappadis, M. R., Smith, E., Bokov, A., Reistetter, T., Visweswaran, S., & Downer, B. (2023). Subtyping Social Determinants of Health in All of Us: Network Analysis and Visualization Approach. *medRxiv : the preprint server for health sciences*, 2023.01.27.23285125. <https://doi.org/10.1101/2023.01.27.23285125>
19. Moen, M., Storr, C., German, D., Friedmann, E., & Johantgen, M. (2020). A Review of Tools to Screen for Social Determinants of Health in the United States: A Practice Brief. *Population health management*, 23(6), 422–429. <https://doi.org/10.1089/pop.2019.0158>
20. Tsai, C. H., Eghdam, A., Davoody, N., Wright, G., Flowerday, S., & Koch, S. (2020). Effects of Electronic Health Record Implementation and Barriers to Adoption and Use: A Scoping Review and Qualitative Analysis of the Content. *Life (Basel, Switzerland)*, 10(12), 327. <https://doi.org/10.3390/life10120327>
21. Poleshuck EL, Juskiewicz I, Wittink M, et al. Is a Patient Navigation Program More Helpful than a Referral Program for Reducing Depression and Improving Quality of Life among Women Living in Neighborhoods with Few Resources? [Internet] Washington (DC): Patient-Centered Outcomes Research Institute (PCORI); 2019 May. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK599335/> doi: 10.25302/5.2019.AD.12114261
22. Robling, M., Lugg-Widger, F. V., Cannings-John, R., Angel, L., Channon, S., Fitzsimmons, D., Hood, K., Kenkre, J., Moody, G., Owen-Jones, E., Pockett, R. D., Sanders, J., Segrott, J., & Slater, T. (2022). Nurse-led home-visitation programme for first-time mothers in reducing maltreatment and improving child health and development (BB:2-6): longer-term outcomes from a randomised cohort using data linkage. *BMJ open*, 12(2), e049960. <https://doi.org/10.1136/bmjopen-2021-049960>
23. Reynolds, R., Dennis, S., Hasan, I., Slewa, J., Chen, W., Tian, D., & Zwar, N. (2018). A systematic review of chronic disease management interventions in primary care. *BMC Family Practice*, 19(1), 11. <https://doi.org/10.1186/s12875-017-0692-3>