

Social Determinant of Health Screening Tools with Validity-Related Data

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ABOUT



This resource characterizes the adult social determinant of health (SDOH) screening tools with publicly-available, validity-related data. The ultimate goal of this resource is to establish the research foundation for those seeking to create SDOH screening tools for adults that produce consistent, true, and correct results.

The validity-related data includes psychometric properties such as sensitivity, specificity, and content validity. Additionally, information regarding the pilot studies demonstrating the utility or feasibility of the tool are included when available. The resources were identified through two searches: a grey literature search on SDOH screening tools, and a scientific literature search on PubMed and Scopus on the validity of SDOH screening tools.

Social Determinant of Health Domains

- Cultural considerations - refugee status, sexual orientation, cultural and linguistic background, and others
- Education
- Employment/Income
- Food Insecurity
- Housing/Utilities - homelessness, unstable or unsafe housing
- Interpersonal safety - community violence and intimate partner violence
- Transportation
- Other

The tools in this resource are organized into two categories: single domain and multiple domains. This document presents information on the tools identified in the searches, including sample questions from the tools, the domain(s) that are covered, and validity data on the tools.



SINGLE DOMAIN

Hunger Vital Sign¹

Domain: Food Insecurity

This tool covers food insecurity and was founded by Dr. Erin Hager, Dr. Anna Quigg and the Childrens' HealthWatch Team. It is a two-question screening tool based off the U.S. Household Food Security Survey, and has been used in medical and community-based settings around the country. It is validated for use in families with young children,² urban youth,³ and adults.⁴ In the young children study, an affirmative response to either question one or two had a sensitivity of 97% and specificity of 83%.² Also, this study established convergent validity through two sets of logistic regressions examining patterns of negative health outcomes by comparison of the tool with the 18-item Household Food Security Survey.² In the urban youth population study, the tool's sensitivity was 88.5% and specificity was 84.1%.³ In the adult study, each question in the tool was analyzed separately. Sensitivity was 99.8% for question one and specificity was 73.7% for question one.⁴ Additionally, this study found question two to have a sensitivity of 96.4% and specificity of 73.7%.⁴

TOOL:

1. "Within the past 12 months we worried whether our food would run out before we got money to buy more."

2. "Within the past 12 months the food we bought just didn't last and we didn't have money to get more."

Both of the above questions have three answer choices: "Often true", "Sometimes true" and "Never true".

SINGLE DOMAIN

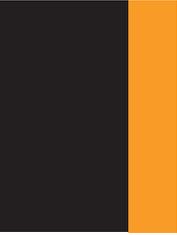
Single Question Screening Tool to Detect Hunger in Families⁵

Domain: Food Insecurity

This tool was developed according to a study by Kleinman et al. that examined the use and accuracy of a one-question screening tool to identify family hunger. In the study, the tool was administered in an inner-city primary health care setting. The brief hunger screening tool had 83% sensitivity and 80% specificity (kappa = 0.62, in comparison to the Household Food Security Survey.⁵ The screening also had significant time-to-time reliability (77%).⁵ Thus, the one-question screening tool was found to have acceptable sensitivity, specificity and reliability.

TOOL:

“In the past month, was there any day when you or anyone in your family went hungry because you did not have enough money for food?”



SINGLE DOMAIN

Single-Item Screening Tool for Limited Health Literacy in English and Spanish Speakers⁶

Domain: Education

These tools were identified in a study by Bishop et al. that evaluated three single-item screening measures for limited health literacy in a community-based population of English and Spanish speakers. The analyses of the three tools were stratified by language and validated using the 40-item Short Test of Functional Health Literacy in Adults by comparing area under the receiver operating characteristic (AUROC) curves. In English speakers, there was no difference between the items. In Spanish Speakers, tool number one identified inadequate literacy better than tool number three (AUROC curve = 0.76 vs 0.65; P = 0.019), thus supporting use of tool number one as a screening tool for diverse populations.⁶

TOOLS COMPARED:

1. “How would you rate your ability to read?”

Answers: Very Poor, Poor, OK, Good, Very Good

2. “How confident are you filling out medical forms by yourself?”

Answers: Not at all, A little bit, Somewhat, Quite a bit, Very

3. “How often do you have someone help you read hospital materials?”

Answers: Always, Often, Sometimes, Occasionally, Never

SINGLE DOMAIN

Tool to Identify Poverty in a Family Practice Setting⁷

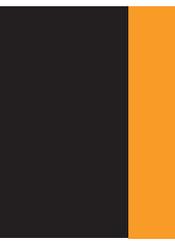
Domain: Employment/Income

A tool to identify poverty was developed and field-tested in a study by Brcic et al. to assist primary care providers in identifying poverty in clinical practice. Nine different questions were compared and one was ultimately found to perform the best as a predictor of poverty with a sensitivity of 98%, a specificity of 60%, an OR of 32.3, and a 95% CI 5.4–191.5. This study also performed a multivariate analysis, but ultimately the authors recommend the use of the single question with the possibility of adding supplementary questions at the clinician's discretion.⁷

TOOL:

Do you (ever) have difficulty making ends meet at the end of the month?

Answer: Always --> Rarely



SINGLE DOMAIN

Interpersonal Violence and Sexual Violence Assessment Tool Compilation⁸

Domain: Interpersonal Safety

The CDC has compiled a list of existing tools that assess intimate partner violence and sexual violence victimization in clinical/health settings. Furthermore, the document includes information, when available, about each tool's sensitivity, specificity, reliability and validity. There are several validated tools available in this document, as well as information about the development and psychometric properties of each tool. The PDF document can be used to find an ideal tool for the specific setting and implementation for which it will be used.

TOOL:

For full tool:

<https://www.cdc.gov/violenceprevention/pdf/ipv/ipvandsvscreening.pdf>

MULTIPLE DOMAINS

Health Leads 2018 Social Needs Screening Toolkit⁹

Domain: Cultural Considerations, Education, Employment/Income, Food Insecurity, Housing/Utilities, Transportation

This toolkit was developed by Health Leads and covers several domains. There is an overall recommended tool with 10 different questions; this tool is provided in both English and Spanish. Furthermore, a “Screening Questions Library” is included that has more sample questions from several domains (food insecurity, housing instability, utility needs, financial resource strain, transportation challenges, childcare, employment and education), as well as other helpful information and questions that can be included in tools. Information about all the questions’ validation, precision, and reading grade level is included as well. The toolkit lists exposure to violence as an essential domain, but does not recommend singular questions due to research demonstrating that singular screening questions are typically not enough to identify intimate partner violence, elder abuse and/or community violence, and gives links to other screening tools to identify such issues.

TOOL:

For full tool:

<https://healthleadsusa.org/resources/the-health-leads-screening-toolkit/>

MULTIPLE DOMAINS

WE CARE¹⁰

Domain: Education, Employment/Income, Food Insecurity, Housing/Utilities, Other

The latest WE CARE survey was adapted from a previous version of the screening instrument which had a test-retest reliability of 0.92.¹¹ The survey was created by a team, including Dr. Arvin Garg, for studies involving screening parents for unmet social needs.^{11, 12} Though these studies focused on screening adults with children, most of the questions are applicable to adults without children as well. The survey has 12 questions that address six needs: childcare, food security, household heat, housing, parent education and employment, as well as whether the parent wanted assistance for each need. It was written at a third-grade level and took less than five minutes to complete.¹² The studies are not validation studies, but a 2007 study on the instrument does include that the tool was assessed for face validity (specifically assessed for understandability, ease to complete, and cultural appropriateness) by two focus groups consisting of clinic parents.¹¹ Furthermore, content validity was established by faculty members and social workers and a two-week test-retest reliability assessment found the reliability to be 0.92.¹¹ The 2007 study found that brief family SDOH screening is feasible within pediatric practice, and a 2015 study demonstrated that systematic use of the screening tool along with the referral system during primary care visits lead to a greater receipt of community resources by families.^{11, 12}

TOOL:

For full tool:

<https://sirenetwork.ucsf.edu/tools-resources/mmi/we-care>

MULTIPLE DOMAINS

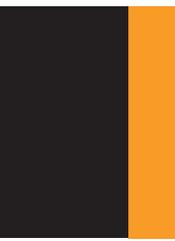
WE CARE¹⁰

Domain: Education, Employment/Income, Food Insecurity, Housing/Utilities, Other

WE CARE TOOL:

We want to make sure that you know all the community resources that are available to you for problems. Many of these resources are free of charge. Please answer each question and hand it to your child's medical assistant at the beginning of the visit. Thank you!

	Do you have a high school degree?	Yes	No ↓	If NO, would you like help to get a GED?	Yes	No	Maybe Later
	Do you have a job?	Yes	No ↓	If NO, would you like help with finding employment and/or job training?	Yes	No	Maybe Later
	Do you need daycare for your child?	Yes	No ↓	If YES, would you like help finding it?	Yes	No	Maybe Later
	Do you think you are at risk of becoming homeless?	Yes	No ↓	If YES, would you like help with this?	Yes	No	Maybe Later
							↓ If yes, is this an emergency? Yes* No
	Do you always have enough food for your family?	Yes	No ↓	If NO, would you like help with this?	Yes	No	Maybe Later
							↓ If yes, do you need food for tonight? Yes* No
	Do you have trouble paying your heating bill and/or electricity bill?	Yes	No ↓	If YES, would you like help with this?	Yes	No	Maybe Later
							↓ If yes, are you at risk of having your utilities shut off in the next week? Yes* No



MULTIPLE DOMAINS

WellRX¹³

Domain: Education, Employment/Income, Transportation, Housing/Utilities, Food Insecurity, Interpersonal Safety, Other

The WellRx questionnaire was developed by researchers at the Office for Community Health at the University of New Mexico in Albuquerque. The latest version of WellRX from January 2017 is a 15-question screening tool. The questionnaire was developed for use in family medicine clinics for a study by Page-Reeves et al.¹³ The tool covers the following 11 topics: food insecurity, housing, utilities, income, employment, transportation, education, substance abuse, child care, safety, and abuse. It also addresses frequency of emergency department visits and hospitalizations. The questions were confirmed to be of “low literacy” level by a university hospital specialist, but the study does not include details on validity or reliability. The study is not a validation study and does not address sensitivity, specificity, or content validity, but it is included in this document because it did demonstrate significant outcomes in a journal article. These include the institutionalization of the WellRX process at a university teaching hospital, as well as influencing a state department of health requirement that managed care organizations have community health workers available for Medicaid patients.¹³ Furthermore, the study displays how the questionnaire recognized patients’ unmet social needs, which had been previously unknown to clinicians.¹³ Lastly, through correspondence with lead-researcher Janet Page-Reeves, PhD, our research team discovered that the questions included in the tool were developed in a year-long, community-engaged process involving community health workers and providers; it was pilot-tested in multiple types of clinic settings and is now used extensively.

TOOL:

Please contact jpage-reeves@salud.unm.edu for access to the full tool.

MULTIPLE DOMAINS

WellRX¹³

Domain: Education, Employment/Income, Transportation, Housing/
Utilities, Food Insecurity, Interpersonal Safety, Other

WellRX TOOL:

Social Determinants Screening Tool

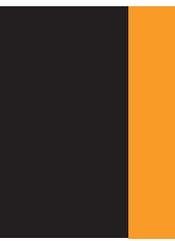
1. In the past 2 months, did you or others you live with eat smaller meals or skip meals because you didn't have money for **food**? _____ Yes _____ No
2. Are you **homeless** or worried that you might be in the future? _____ Yes _____ No
3. Do you have trouble paying for your **gas or electricity** bills? _____ Yes _____ No
4. Do you have trouble finding or paying for a ride (**transportation**)? _____ Yes _____ No
5. Do you need daycare, or better **daycare**, for your kids? _____ Yes _____ No
6. Are you without regular **income**? _____ Yes _____ No
7. Do you need help finding a **better job**? _____ Yes _____ No
8. Do you need help getting more **education**? _____ Yes _____ No
9. Are you concerned about someone in your home using **drugs or alcohol**? _____ Yes _____ No
10. Do you feel **unsafe** in your daily life? _____ Yes _____ No

Feel unsafe at home Physically or emotionally hurt Prefer not to answer
 Injuries Physically or emotionally threatened Other:
 Neglect Made to feel afraid

11. Do you need help with **legal issues**? _____ Yes _____ No

In the last 6 months have you been at the Emergency Department more than twice? _____ Yes _____ No
If Yes, How many times? _____

In the last 6 months, have you been hospitalized? _____ Yes _____ No
If yes, How many times? _____



ADDITIONAL INFORMATION

During our searches we identified other SDOH screening tools; however, they were excluded because either the research team did not discover publicly-available validity-related data on the tool, or because the tools were only validated in non-adult populations. The tools excluded for the first reason were the Accountable Health Communities Health-Related Social Needs Screening Tool, iHELP, Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences (PRAPARE), Survey of Well Being for Young Children (SWYC) SDOH section, HelpSteps, EveryONE Project, Roots to Health, and Access-Health SDOH. The tools excluded for the second reason were the screening tool from the CDC-Kaiser Permanente Adverse Childhood Experience study, Rapid Assessment for Adolescent Preventative Services (RAAPS), and Safe Environment for Every Kid (SEEK).

Disclaimer: Exclusion from this report does not suggest non-validity.

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