



When Families Do Not Request Help: Assessing a Social Determinants of Health Screening Tool in Practice

Rebecca L. Sokol, PhD, Roshanak Mehdipanah, PhD, Kiana Bess, MPH, Layla Mohammed, MD, & Alison L. Miller, PhD

Rebecca L. Sokol, Assistant Professor, School of Social Work, Wayne State University, Detroit, MI.

Roshanak Mehdipanah, Assistant Professor, Department of Health Behavior and Health Education, University of Michigan School of Public Health, Ann Arbor, MI.

Kiana Bess, Doctoral Student, Department of Health Behavior and Health Education, University of Michigan School of Public Health, Ann Arbor, MI.

Layla Mohammed, Clinical Assistant Professor, Ypsilanti Health Center, University of Michigan, Ypsilanti, MI.

Alison L. Miller, Associate Professor, Department of Health Behavior and Health Education, University of Michigan School of Public Health, Ann Arbor, MI.

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Correspondence: Rebecca L. Sokol, PhD, School of Social Work, Wayne State University, 5447 Woodward Ave., Detroit, MI 48202; e-mail: rsokol@wayne.edu.

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Introduction: Using pediatric social determinants of health screening data from a large medical system, we explored social needs disclosures and identified which needs were associated with resource connection requests.

Method: Data came from records of outpatient pediatric patients (0–18 years) seen between October 2018 and March 2020 (39,251 encounters). We assessed percent of encounters where families (1) indicated a social need, and (2) requested a resource connection. We conducted multivariable logistic regression to identify which needs were associated with resource connection requests.

Results: Among all encounters, 8% indicated a need and 2% requested a resource connection. Among families indicating a need, needs associated with resource requests included: housing (odds ratio [OR], 3.49 [2.42–5.03]), employment (OR, 3.15 [2.21–4.50]), food (OR, 1.89 [1.41–2.52]), and transportation (OR, 1.82 [1.30–2.56]).

Discussion: Families seldom requested resource connections to address social needs. Better understanding families' interests in receiving assistance is an important next step in pediatric social determinants of health screening system development. *J Pediatr Health Care.* (2021) 35, 471–478

KEY WORDS

Social determinants of health, child health, screening, implementation science

INTRODUCTION

In the United States, over 17% of families with children live in poverty ([United States Census Bureau, 2017](#)), 14% experience food insecurity ([Coleman-Jensen, Rabbitt, Gregory, & Singh, 2019](#)), and 40% have experienced challenges in paying utility bills ([U.S. Energy and Information Administration, 2015](#)). These and other needs, a subset of social

determinants of health (SDH), impede the optimal health and development of children (Goldfeld et al., 2018; Patton, Liu, Adelson, & Lucenko, 2019; Viner et al., 2012). Children who have unmet social and material needs experience an increased risk for a variety of poor health outcomes in both childhood and adulthood, including depression, anxiety, overweight and obesity, malnutrition, and sleep disorders (Liu, 2017; National Academies of Sciences, Engineering, and Medicine, 2019b; Sousa et al., 2018; Williamson & Mindell, 2020). Given the connection between social and material needs and child health, recent efforts in health care systems have shown the feasibility and impact of screening and referring families to resources that can help address children's SDH (Berman, Patel, Belamarch, & Gross, 2018; Garg, Toy, Tripodis, Silverstein, & Freeman, 2015; Gottlieb et al., 2016).

In contrast to traditional screening within the health care system—such as screening for specific medical conditions—SDH screening can detect needs that require resources beyond the scope of clinical care (Garg, Boynton-Jarrett, & Dworkin, 2016). Although addressing the root causes of identified SDH requires resources outside traditional medical care, SDH screening within health care settings might improve health care delivery. Becoming aware of patients' social conditions may deepen patient-provider relationships and allow subsequent care adjustments, such as altering care plans to accommodate identified social needs (National Academies of Sciences, Engineering, and Medicine, 2019a). In addition to this care adjustment, health care settings can assist patients in connecting to relevant resources that may help address identified needs (National Academies of Sciences, Engineering, and Medicine, 2019a). Thus, SDH screening can be a first step in identifying and addressing patients' needs. Despite the growth of SDH screening systems in pediatric settings, we know little about assistance refusal and uptake rates among youth and their families.

Pediatric SDH screening efficacy trials have demonstrated the ability of SDH screening systems to successfully link families to resources for addressing identified needs (Fleegler, Lieu, Wise, & Muret-Wagstaff, 2007; Garg et al.,

2015; Uwemedimo & May, 2018). However, SDH screening without linkage to appropriate resources may lead to frustration among both patients and providers, as well as possible reduced screening and reporting in the future (Garg et al., 2016; Perrin, 1998). Thus, it is important to focus on the distinction between youth (or their parents) reporting a need within an SDH screener and expressing an interest in resource referral to address the identified need. In studies of adults, researchers have found that even in settings in which relevant interventions and referrals to community resources are offered, patients do not consistently desire assistance (De Marchis, Alderwick, & Gottlieb, 2020a; De Marchis et al., 2020b; Swavelly, Whyte, Steiner, & Freeman, 2019; Tong et al., 2018). However, little research has examined the discrepancy between social needs reporting and resource connection requests within pediatric settings. To help address this gap, we seek to identify how often (or not) parents and youth request assistance for their reported social needs following SDH screening and for which needs.

The present analyses use SDH screening data from a large pediatric medical system in the United States. We evaluate the application of an SDH screening system to (1) explore the disclosure of social needs and resource connection requests across childhood, and (2) identify which social needs are associated with parents' and youths' requests for connections to resources. Together, we expect findings from this research to inform SDH screening and resource-linkage systems.

METHODS

Participants

Data for the present analyses come from the medical records of pediatric patients (aged 0–18 years) within a large medical system in the Midwestern United States who were seen at an ambulatory care center between October 2018 and March 2020 and completed/had a parent or guardian (hereafter, “parent”) complete the SDH screener for the medical visit ($n = 39,251$ encounters; 30,486 unique children). The medical system includes nine pediatric ambulatory care sites within the Midwestern state in urban and suburban settings and sees approximately 100,000 children annually for outpatient visits. Around one-quarter of all

TABLE 1. Social needs questionnaire for pediatric patients aged 0–18 years

Domain	Question
Food insecurity	Within the past 12 months, you worried that your food would run out before you got money to buy more. Within the past 12 months, the food you bought just did not last, and you did not have money to get more. Within the past 12 months, we worried whether our food would run out before we got money to buy more.
Housing insecurity	In the next 2 months, are you worried that you may not have stable housing?
Utility insecurity	In the last 12 months, has the utility company shut off your service for not paying bills?
Financial strain	In the last 12 months, did you not see a doctor or skip medications to save money?
Transportation needs	In the past 12 months, has a lack of transportation kept you from meetings, work, or getting things needed for daily living?
Employment needs	In the last 4 weeks, have you been looking for work? Do you need help finding a local career center and/or job training?
Elder/child care needs	In the last 4 weeks, did getting elder or child care make it difficult to work or study?
Literacy needs	Do you have someone help you to read instructions or other material from your doctor or pharmacy?
Resource connection request	Do you want to be contacted by the assistance program for help on any of your responses?

outpatient visits had a youth or parent complete an SDH screener, and 80% of pediatric patients seen within the study period completed the SDH screener at least once. The Institutional Review Board at the University of Michigan approved the present study procedures.

Procedures

Before a health maintenance pediatric examination, parents completed an SDH screening tool (Table 1) that assessed various social needs and if the parent would like to be contacted for help addressing any of the indicated needs. In some clinics, if the patient was aged ≥ 11 years, the patient completed the screening tool, but this practice was not universal to all clinics within the medical system. A primary care working group developed the screening tool iteratively and revised questions throughout the first year of screening patients (i.e., from August 2017 to August 2018, before the current study date range) on the basis of responses from the patient population. The present study focuses on social needs within eight domains: food insecurity, housing insecurity, utility insecurity, financial strain, transportation needs, employment needs, elder or child care needs, and literacy needs. The screening tool also assessed relationship needs and social isolation among parents of children aged 0–10 years. We excluded relationship and social isolation needs in the present study, as an endorsement of any relationship or isolation need automatically generated a referral to a social worker. Questions to assess food insecurity were validated items (Hager et al., 2010). Questions to assess housing insecurity, utility insecurity, financial strain, transportation needs, employment needs, elder or child care needs, and literacy needs were adapted from prior tools, including the Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences assessment tool developed by the National Association of Community Health Centers (n.d.).

The SDH screening tool also included a question regarding if the parent or youth would like to be contacted by a social worker from an assistance program, a central office comprised bachelor-level social workers trained in clinical-community linkages, who help connect families to resources that can address the social needs indicated within the screening tool. The assistance program was created to assist with the nonmedical needs of families. The assistance program social workers problem-solve, research community resources, and assist with the coordination of various needs that arise during medical treatment.

Measures

In addition to the SDH measures (Table 1), key variables in the medical record included demographic data such as child age (between birth and 18 years), child race (White, African American, Asian, Hawaiian/Pacific Islander, Indian/Alaskan Native, Other), child ethnicity (Hispanic or non-

Hispanic), and if the child had Medicaid/Medicare insurance coverage.

Analysis

Using the entire sample of encounters in which the SDH screening tool was completed (39,251 encounters), we descriptively assessed: (1) the percentage of encounters in which a social need was indicated among all encounters in which the SDH screener was completed, by child age; and (2) the percentage of encounters in which a request for connection to resources was made among all encounters in which the SDH screener was completed (e.g., endorsing the item "Do you want to be contacted by the Assistance Program for help on any of your responses?"), by age.

Using a subsample of all medical encounters in which the youth or parent indicated a social need ($n = 3,056$ encounters), we conducted a multivariable logistic regression to identify which social needs were associated with the request for connection to resources, controlling for child age, race, ethnicity, and if the child had Medicaid/Medicare insurance coverage. We excluded 317 encounters with incomplete information on study measures for a final subsample of 2,739 encounters. We clustered standard errors by the child to account for multiple medical encounters for the same child.

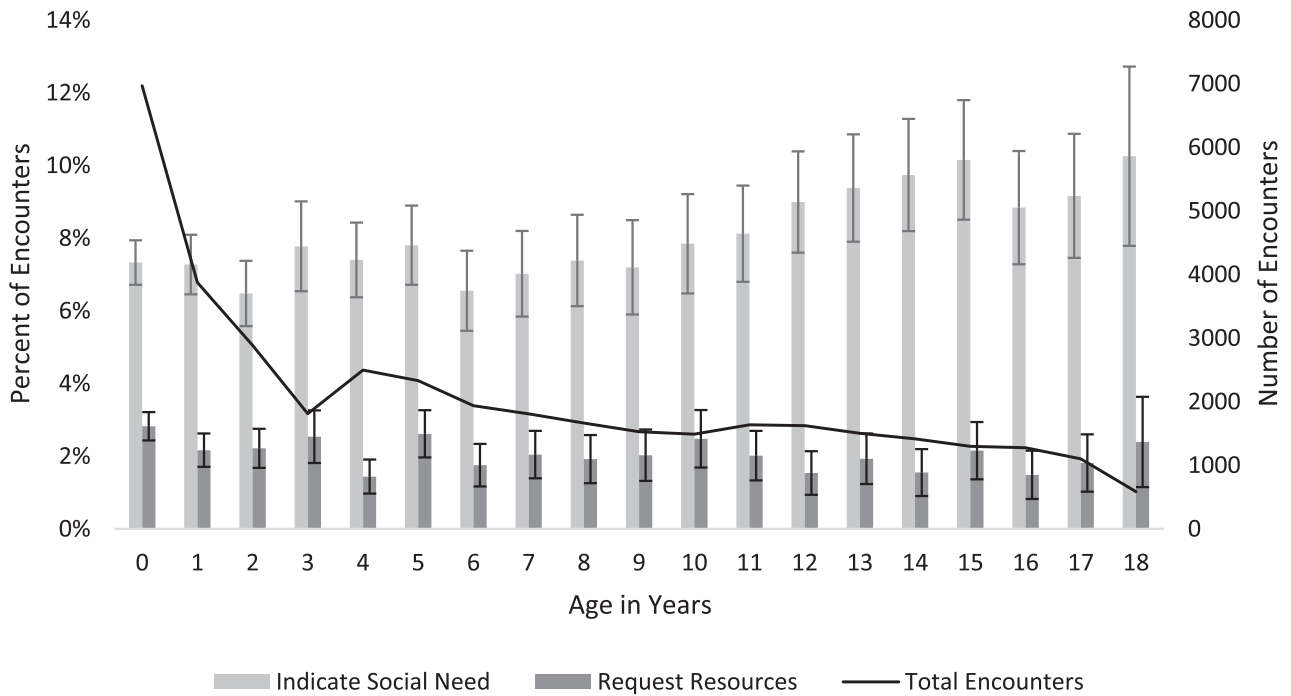
Given that some clinic protocols have patients aged ≥ 11 years complete the SDH screener instead of the caregiver, we conducted sensitivity analyses by estimating the multivariable logistic model exclusively among children aged 0–10 years and then estimating the model exclusively among children aged 11–18 years. Because the same pattern of significance arose in both models, we report results for the combined sample of all ages, 0–18 years.

RESULTS

The number of encounters peaked during the first year of life and decreased after that (solid line, Figure 1). Among all encounters in which the SDH screener was completed ($n = 39,251$), 8% indicated a social need. This percentage was relatively stable across ages 0–18 years, with a minimum of 6% at age 2 years and a maximum of 10% at age 18 years (light gray bars, Figure 1). Among all encounters in which an SDH screener was completed, only 2% requested a referral for their identified needs. This percentage was stable across ages 0–18 years (dark gray bars, Figure 1). Among encounters in which the parent or youth indicated a social need on the SDH screener, only 14% requested a referral for their identified social needs. Among encounters in which the parent or youth did not indicate a social need, 1% requested a referral to a social needs resource.

Table 2 reports descriptive statistics for encounters with complete information on all study measures ($n = 35,780$), stratified by social need status. Encounters in which a parent or youth indicated a social need were more likely to involve older children, children who were African American, children who identified as Hispanic, and children insured by Medicare/Medicaid compared with encounters in which the

FIGURE 1. Total medical encounters, the percentage of total encounters in which the parent/patient indicated a social need, and the percentage of total encounters in which the parent/patient requested connection to resources for identified social needs, stratified by age



Note. Error bars indicate a 95% confidence interval around the mean. The bar chart for percent of encounters indicates the social need and request resources plotted on the left vertical axis; line graph of the total number of encounters plotted on the right vertical axis.

TABLE 2. Descriptive statistics for medical encounters, stratified by social need

Participants	Total encounters n = 35,780	No social need n = 33,041	Social need n = 2,739	p Value
Child age (in years)	6 (6)	6 (5)	7 (6)	<.001 ^a
Child race				<.001 ^a
White	29,080 (81)	27,232 (82)	1,848 (67)	
African American	3,766 (11)	3,103 (9)	663 (24)	
American Indian or Alaska Native	129 (< 1)	112 (< 1)	17 (1)	
Asian	2,805 (8)	2,594 (8)	211 (8)	
Ethnicity				.046 ^a
Hispanic or Latino	1,153 (3)	1,047 (3)	106 (4)	
Non-Hispanic	34,627 (97)	31,994 (97)	2,633 (96)	
Insurance				<.001 ^a
Private insurance	27,772 (78)	26,418 (80)	1,354 (49)	
Medicaid/Medicare	8,008 (22)	6,623 (20)	1,385 (51)	
Food insecurity	771 (2)	NA	771 (28)	NA
Transportation needs	358 (1)	NA	358 (13)	NA
Financial strain	640 (2)	NA	640 (23)	NA
Utility insecurity	313 (1)	NA	313 (11)	NA
Housing insecurity	261 (< 1)	NA	261 (10)	NA
Problems finding elder/child care	555 (2)	NA	555 (20)	NA
Literacy needs	705 (2)	NA	705 (26)	NA
Employment needs	275 (1)	NA	275 (10)	NA

Note. NA, not applicable. Values are n (%).

^aIndicates significant difference at $\alpha = 0.05$ (p values according to Pearson χ^2 test).

parent or youth did not indicate a social need ($p < .05$). The most common reported social need was food insecurity, occurring in 28% of encounters in which parents or youth indicated a social need.

In our multivariable logistic regression, social needs that were significantly associated with the request for referrals included: housing insecurity (odds ratio [OR], 3.49; 95% confidence interval [CI], 2.42–5.03), employment needs (OR, 3.15; 95% CI, 2.21–4.50), food insecurity (OR, 1.89; 95% CI, 1.41–2.52), and transportation needs (OR, 1.82; 95% CI, 1.30–2.56; [Figure 2](#)). Identifying as Black (OR, 2.73; 95% CI, 2.25–3.33) and Asian (OR, 2.01; 95% CI, 1.53–2.66) was associated with being more likely to request referrals as compared to identifying as White, as was being insured by Medicare or Medicaid (OR, 1.73; 95% CI, 1.44–2.09) as compared to being privately insured.

DISCUSSION

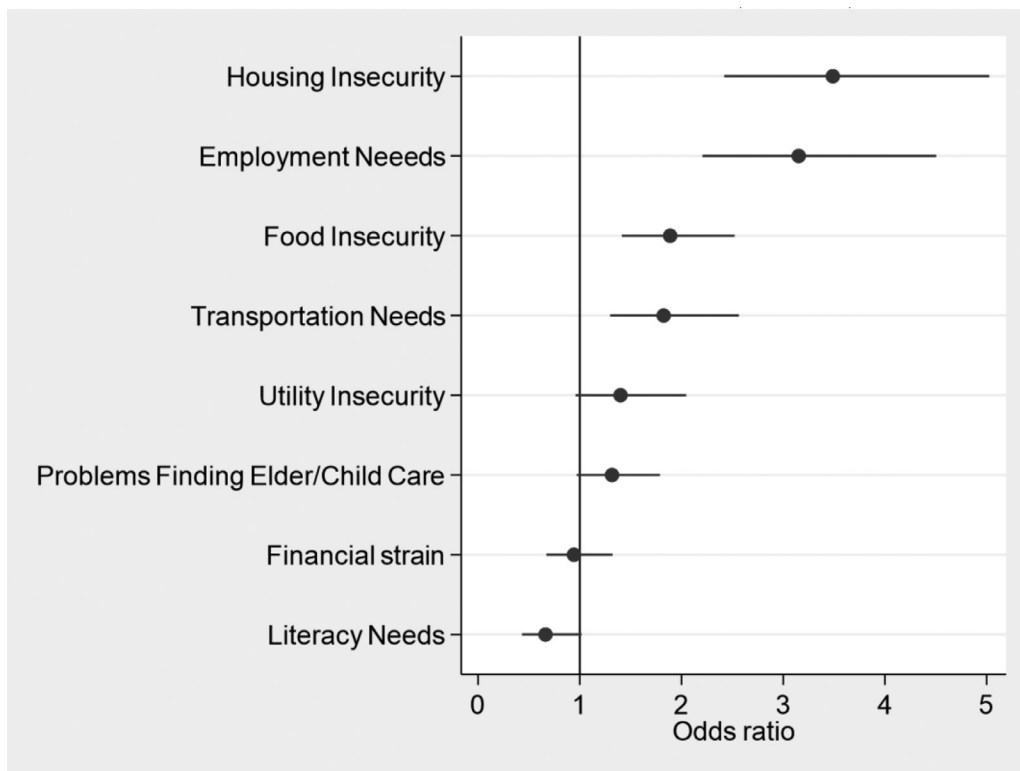
This paper is novel in its investigation of how frequently families report SDH versus request help addressing SDH in pediatric settings. Parents and youth requested a connection to resources only 14% of the time when they indicated a need. This elicits the question: why do families forego assistance after indicating a social need? De Marchis and

colleagues have investigated this question as it relates to adult patients ([De Marchis et al., 2020a](#); [De Marchis et al., 2020b](#)), and they posit two major sources of discrepancy between patients' social risk screening results and interest in assistance: validity of social risk screening measures and lack of patient interest in assistance ([De Marchis et al., 2020a](#)).

Regarding the validity of social risk screening, the lack of psychometric testing of social risk screening tools may exaggerate social risks in some populations while underestimating them in others. Similar to many SDH screening tools in practice ([Rabin et al., 2016](#)), the present tool was adapted from prior tools to meet clinic needs without further validity testing. Although we do not know the validity of the present tool, poor sensitivity and/or specificity may be why we found that many families who did not report a social need requested assistance (i.e., false negative), and conversely, why some families who did report a social need did not request assistance (i.e., false positive). The field requires rigorous validation studies to assess the psychometric properties of clinically relevant SDH screeners across various populations.

Beyond measurement limitations, parents and youth may decline assistance following SDH screening because, although they have a need, they are not interested in

FIGURE 2. Odds ratios from a multivariate logistic regression estimating the association between disclosure of social needs and the request for resource connection ($n = 2,739$)



Note. Black horizontal lines indicate 95% confidence intervals for each odds ratio. Confidence intervals intersecting the vertical odds ratio line (odds ratio = 1) are nonsignificant. The multivariate logistic model includes the plotted social needs and the following covariates: child age, child race, child ethnicity, and if the child had Medicaid/Medicare insurance coverage.

resource referrals. In the present analysis, we found specific social needs that were—and were not—associated with a request for assistance across ages. Needs associated with assistance requests included: housing insecurity, employment needs, food insecurity, and transportation needs. In contrast, we found no associations between utility insecurity, problems finding elder or child care, financial strain or literacy needs, and a request for resource connection. We propose potential reasons why youth and their parents may or may not be interested in assistance.

First, individuals might be considering their own capacity—or their social network’s capacity (Radey, 2018; Varda & Talmi, 2018)—to address needs when deciding whether or not to ask for additional help. Specifically, if individuals believe that they cannot readily address their needs regarding housing insecurity, employment needs, food insecurity, or transportation needs on their own or through their existing network, they may be more likely to recruit additional resources to help address these needs.

Second, in contrast to thinking of their own capacity to address needs, parents and youth may be thinking of their clinic’s or community’s capacity—or lack thereof—to address needs when deciding whether or not to ask for additional help. Specifically, individuals may wonder, “Why request resources for my financial strain if I do not think my clinical team can help me address this?” Parents and youth may think community-based resources cannot realistically address complex needs with multiple determinants, such as financial strain (Frey et al., 2017; Rupasingha & Goetz, 2007). Alternatively, parents may have already requested resources in the past that ultimately did not address their needs. Future qualitative research will help elucidate why parents and youth recruit assistance to address only certain social needs.

Finally, even if families would like help addressing their social needs, they may not trust resource referrals—especially families who may have experience with the child protection or juvenile justice systems and families who may perceive a threat from Immigration and Customs Enforcement. If this distrust exists, other alternatives for resource linkages could include access to trusted staff such as community health workers or home visitors. In some clinic settings, health providers also may sufficiently be aware of community resources to offer referrals directly and/or offer referral materials to families (Garg et al., 2015).

In contrast to families declining assistance following the identification of social needs, families who indicated no social need made up almost half of the resource referral requests. Researchers have found that adult patients with negative screening results may still express interest in receiving assistance, and this interest is higher among patients with lower income levels and poorer health status (De Marchis et al., 2020b). On the basis of this prior research, parents and youth in the present sample might have requested assistance following a negative screening result because their present needs did not fit within the description of one of the assessed needs. Future SDH

screening should ensure that clinics implement screening tools that comprehensively assess the most salient needs within their communities.

In addition to the validity issues previously discussed, key concerns with the SDH screener used in the present study involve social desirability bias and underreporting social needs. However, these concerns apply to all SDH screening systems in which parents serve as the primary informants (Sokol et al., 2019). Parents often hold the most knowledge about their children’s experiences and needs, but parents can also be influenced by social desirability bias and/or fear of intervention by child protective services when answering questions about their children’s SDH (Falletta et al., 2018; Feinberg, Smith, & Naik, 2009; Swain, McKinney, & Suskind, 2020). Future research should rigorously evaluate means to reduce social desirability bias and reporting fears within SDH screening systems. For example, beginning an SDH screener with a statement that conveys an empathetic tone toward caregivers, highlights the practice’s concern about all children’s safety, and states the practice’s willingness to help with any identified issues might reduce social desirability and increase the likelihood that parents and youth request help (Dubowitz et al., 2007).

Our findings that parents and youth requested a connection to resources only 14% of the time when they indicated a need is substantially lower than other evaluations of pediatric-based screening systems, in which over one-third of families who indicate a social need request follow-up resources (Flegler et al., 2007; Garg et al., 2015; Uwemedimo & May, 2018). We suspect this discrepancy between present and prior research may be partly an artifact of the study setting, whereas prior studies have evaluated pediatric SDH screening systems in the context of a research trial, we presently assessed a screening system as it exists in practice. In a research setting, research staff may bring parents’ attention to the SDH screening system more so than in practice. Similarly, this increased attention to the system in research settings may increase parents’ perceptions of the utility of the screener and the medical team’s potential to facilitate service linkages. As previously described, this lower assistance acceptance rate may also relate to the limited specificity of the present SDH screening tool.

A strength of the present research involves evaluating an SDH screening system in a large, real-world medical setting. To date, most research on SDH screening systems involves controlled efficacy trials. Our work evaluates the system in practice within a large pediatric medical system, and to our knowledge, it is the first study to do so (Sokol et al., 2019). However, a limitation of this “real-world” application is our inability to control how the screening system is implemented and how data are recorded. For example, although parents were supposed to complete the screener for children aged 0–10 years, and the child was supposed to complete the screener from ages 11–18 years, we do not know the extent to which this protocol was adhered to in practice. Thus, we are unable to assess if responses vary between child- and parent-report.

Regardless of age and across multiple areas of social need, we identified a disconnect between needs reported and help requested. This disconnect could indicate a measure validity concern and/or families' disinterest in resource referrals. Future research should consider the viewpoints of youth and parents to unpack this disconnect. The discrepancy between needs reported and assistance requested might also demonstrate a need to improve communication within the SDH screening process—both between patients and providers and between providers and resources. Improving these communications may include ensuring that screening information is relayed accurately and efficiently to resources and people who can help implement coordinated outreach efforts and identify accessible and trusted community resources around the most common needs. Successful models will require health systems to work closely with communities and patients to identify existing social care assets that could be leveraged in addressing social and material needs.

Conclusion

In our evaluation of an SDH screening system in practice, we found that parents and youth seldom requested help addressing identified social needs. Better understanding families' interests in receiving assistance for identified needs is an important next step in pediatric SDH screening system development and other health care-based assistance strategies.

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