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Original Article

Social Needs and Health-Related Quality of Life Among African American Cancer Survivors: Results From the Detroit Research on Cancer Survivors Study

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BACKGROUND: Social needs may affect cancer survivors' health-related quality of life (HRQOL) above and beyond sociodemographic and cancer-related factors. The purpose of this study was to estimate associations between social needs and HRQOL. **METHODS:** Results included data from 1754 participants in the Detroit Research on Cancer Survivors cohort, a population-based study of African American survivors of breast, colorectal, lung, and prostate cancer. Social needs included items related to food insecurity, utility shutoffs, housing instability, not getting health care because of cost or a lack of transportation, and perceptions of neighborhood safety. HRQOL was measured with the validated Functional Assessment of Cancer Therapy–General (FACT-G). Linear regression models controlled for demographic, socioeconomic, and cancer-related factors. **RESULTS:** More than one-third of the survivors (36.3%) reported social needs including 17.1% of survivors reported 2 or more. The prevalence of social needs ranged from 14.8% for food insecurity to 8.9% for utility shutoffs. FACT-G score differences associated with social needs were –12.2 (95% confidence interval [CI] to –15.2 to –9.3) for not getting care because of a lack of transportation, –11.3 (95% CI, –14.2 to –8.4) for housing instability, –10.1 (95% CI, –12.7 to –7.4) for food insecurity, –9.8 (95% CI, –12.7 to –6.9) for feeling unsafe in the neighborhood, –8.6 (95% CI, –11.7 to –5.4) for utility shutoffs, and –6.7 (95% CI, –9.2 to –4.1) for not getting care because of cost. **CONCLUSIONS:** Social needs were common in this cohort of African American cancer survivors and were associated with clinically significant differences in HRQOL. Clinical oncology care and survivorship care planning may present opportunities to screen for and address social needs to mitigate their impact on survivors' HRQOL. *Cancer* **2021;127:467-475**. © 2020 American Cancer Society.

KEYWORDS: African American, cancer, food insecurity, quality of life, social needs, survivorship.

INTRODUCTION

Although cancer mortality declined overall by 29% between 1991 and 2017, cancer mortality remains 13% higher among African Americans than Whites.[1] Racial disparities in cancer mortality are related to persisting inequalities in socioeconomic factors that limit access to cancer prevention, early detection, and treatment.[2,3] Cancer health disparities are increasingly understood in the context of social determinants of health, including food insecurity, housing and neighborhood conditions, access to transportation, and economic and other social factors.[4-6] Within the framework for understanding and addressing social determinants for cancer control, routine screening for health-related social needs is proposed as a strategy to address cancer disparities.[4]

Substantial evidence demonstrates racial inequalities in unmet social needs, and these particularly affect African Americans.[7] The prevalence of food insecurity is nearly 3 times as high among African American (21.2%) as White households (8.1%).[7] Decades of systematic, structural discrimination in the housing market have contributed to disproportionately high levels of housing instability among African Americans, with documented negative impacts on health outcomes, including depression, anxiety, hospitalization, and barriers to care.[8-10] The prevalence of homeownership is lower among African Americans (47%) than Whites (76%),[11] and African Americans are nearly 7 times as likely as Whites to be evicted.[12]

As interventions are developed to address health-related social needs,[13-15] evidence linking social needs to specific, measurable health outcomes is needed. Health-related quality of life (HRQOL) may be a major predictor of cancer-related mortality among African American cancer survivors.[16] Defined as an individual's perceived well-being regarding their mental, physical, and social health status,[17] HRQOL tends to be significantly lower among African American

cancer survivors in comparison with other groups.[18-20] As a means of improving long-term health outcomes among African American cancer survivors, investigators should consider the underlying social needs that these survivors experience.[21,22]

Patient-reported outcomes, including HRQOL, are critical measures for studies of social needs[14,23]; however, evidence demonstrating an association between social needs and HRQOL among African American cancer survivors is currently lacking. To address this gap, we estimate associations between social needs and HRQOL in a population-based cohort of African American cancer survivors in Detroit, Michigan. Findings from this work will allow future investigators to consider the role of social needs experienced by African American cancer survivors as a means of improving HRQOL.

MATERIALS AND METHODS

Study Population

Detroit Research on Cancer Survivors (ROCS) is a population-based cohort designed to investigate associations between medical history, health behaviors, financial factors, and health-related outcomes among African American cancer survivors.[24,25] Consistent with the National Cancer Institute definition of *survivor*, eligible participants include both survivors in active treatment and those who have completed treatment.[26] Survivors were eligible to join the cohort if they were been diagnosed with primary, invasive breast, colorectal, lung, or prostate cancer since January 1, 2013, and they identified through the Metropolitan Detroit Cancer Surveillance System, a population-based cancer registry covering metropolitan Detroit and a founding participant in the National Cancer Institute's Surveillance, Epidemiology, and End Results program. The Wayne State University institutional review board approved this research. Detroit ROCS recruitment is ongoing with the aim of recruiting more than 5500 survivors. Results presented here are based on cross-sectional data available from the first 2500 participants who completed the ROCS enrollment survey. Participants completed the survey online via Qualtrics, over the phone with an interviewer, or via a mailed paper survey and received a $25 gift card upon survey completion.

Study Measures
Social needs

Social needs information was collected as a series of yes/no questions based on the Health Leads Social Needs Screening Toolkit.[27] These included measures of food insecurity (eating less than the participants felt they should because there was not enough money for food), utility shutoffs for not paying bills, and forgoing health care because of a lack of transportation or cost concerns in the past 12 months; housing instability (concern about not having housing in the next 2 months); and neighborhood safety (whether participants generally felt safe in their neighborhood). The neighborhood safety measure was reverse-coded to indicate the percentage that generally did not feel safe in their neighborhood. We also examined associations between the number of social needs (0, 1, or ≥2) and HRQOL.

Health-related quality of life

HRQOL was measured with the Functional Assessment of Cancer Therapy–General (FACT-G), including subscales for physical, functional, social, and emotional well-being.[28] Each subscale includes 6 to 7 statements (eg, "I have pain"), and participants are asked to indicate how each statement applied to them over the past 7 days (not at all, a little bit, somewhat, quite a bit, or very much). Responses are coded so that higher scores indicate higher HRQOL. The FACT-G has demonstrated appropriate reliability, with α coefficients for internal consistency measured at .71 to .83,[29] and consistent findings of sensitivity to changes in disease progression and performance status, such that a 5-point difference in the total FACT-G score has been associated with meaningful differences in clinical and subjective indicators.[30]

Participant and cancer-related characteristics

Participant characteristics included self-reported sex, educational attainment, household income, employment status, marital status, and health insurance coverage at ROCS enrollment. Self-reported cancer-related information included treatments received (any chemotherapy, surgery, and/or radiation), time since diagnosis, and treatment status at ROCS enrollment. Age at diagnosis, Surveillance, Epidemiology, and End Results summary stage, and an indicator of the percentage of residents in the survivor's census tract with household incomes below the federal poverty level were obtained via linkage with the Metropolitan Detroit Cancer Surveillance System.

Statistical analysis

We calculated univariate descriptive statistics and marginal mean FACT-G scores and 95% confidence intervals (CIs) with robust standard errors by participant

demographic and cancer-related characteristic categories. Bivariate statistics included the proportion of participants experiencing each social need by select participant characteristics and the Pearson chi-square test of differences in prevalence of social needs by participant characteristics. Differences in FACT-G scores associated with the presence (vs absence) of each social need were based on marginal means from linear regression models with each individual social need as the exposure and with the FACT-G score as the outcome of interest with robust standard errors. Adjusted models controlled for participant age, sex, education, household income, employment status, marital status, and census-tract poverty via the categories presented in Table 1. Covariates were selected with a directed acyclic graph. Additional models of the association between individual social needs and FACT-G mutually adjusted for each of the other social needs.

RESULTS

Results include responses from the first 2500 ROCS respondents. We excluded responses from 653 participants who completed an earlier version of the survey before the inclusion of the social needs questions, 6 participants missing social needs information, 85 participants missing HRQOL information, and 2 participants missing both; this left an analysis sample of 1754 participants.

Table 1 describes the sociodemographic and cancer-related characteristics of ROCS participants and associated mean FACT-G scores. Survivors were on average 62.2 years old at their cancer diagnosis and were evenly split between men and women. Approximately 40% reported no education beyond high school, and 35.8% reported household incomes of <$20,000 per year. At ROCS enrollment, 29.4% were employed, 38.7% were retired, and 21.7% were on disability; 40.9% of the participants were married or living with a partner. Prostate cancer (40.2%) and breast cancer (36.6%) were the most common cancers, and they were followed by colorectal cancer (13.2%) and lung cancer (10.1%). Most cancers (62%) were diagnosed at a localized stage. On average, 27 months elapsed between the cancer diagnosis and ROCS enrollment, and 21.6% were currently in treatment when they completed the ROCS questionnaire.

The mean FACT-G score was 81.1 (Table 1), which was comparable to the average of 80 in a normative population of US adults.[31] Older age (FACT-G$_{65-79}$ = 84.3), greater educational attainment (FACT-G$_{college}$ = 87.3), and household incomes of at least $40,000 (FACT-G = 85.9-91.8) were all associated with above-average HRQOL, as were being married/cohabitating (FACT-G = 85.0), being

TABLE 1. Participant Characteristics and Associated Mean FACT-G Scores

Characteristic	Total		FACT-G	
	No.	%	Mean	95% CI
All survivors	1754	100	81.1	80.2-82.0
Age				
<55 y	468	26.7	77.4	75.5-79.2
55-64 y	692	39.5	80.8	79.5-82.2
≥65 y	594	33.9	84.3	83.0-85.6
Sex				
Women	863	49.2	81.1	79.8-82.3
Men	891	50.8	81.1	79.9-82.3
Education				
Less than high school	163	9.4	72.7	69.7-75.6
High school/GED	497	28.7	79.6	77.9-81.3
Some college/2-y degree	633	36.6	80.0	78.6-81.4
College graduate	436	25.2	87.3	85.8-88.8
Income				
<$20,000	628	35.8	73.7	72.3-75.2
$20,000-$39,999	394	22.5	80.4	78.5-82.2
$40,000-$59,999	260	14.8	85.9	83.9-87.9
$60,000-$79,999	135	7.7	88.4	85.9-90.9
≥$80,000	208	11.9	91.8	89.9-93.7
Census-tract poverty				
0% to <5%	95	5.4	89.8	86.8-92.8
5% to <10%	202	11.5	84.9	82.4-87.4
10% to <20%	302	17.2	83.6	81.7-85.4
≥20%	1153	65.8	79.1	78.0-80.2
Employment status				
Employed	515	29.4	89.2	87.9-90.5
Homemaker	34	1.9	83.5	78.8-88.2
Unemployed	120	6.8	67.0	63.5-70.4
Retired	679	38.7	83.7	82.4-84.9
Disability	381	21.7	70.1	68.2-71.9
Marital status				
Married/cohabitating	715	40.9	85.0	83.7-86.2
Widowed	174	10.0	80.3	77.8-82.9
Divorced/separated	454	26.0	79.2	77.5-80.9
Never married	404	23.1	76.7	74.8-78.7
Site				
Breast	641	36.6	81.8	80.4-83.2
Colorectal	231	13.2	80.1	77.5-82.6
Lung	177	10.1	75.1	72.2-78.0
Prostate	705	40.2	82.3	81.1-83.6
Stage				
Localized	1081	62.0	82.2	81.1-83.3
Regional	521	29.9	80.8	79.3-82.4
Distant	142	8.1	74.1	70.9-77.4
Currently in treatment				
No	1354	78.4	82.2	81.3-83.2
Yes	374	21.6	77.1	75.2-79.0

Abbreviations: CI, confidence interval; FACT-G, Functional Assessment of Cancer Therapy–General.
Column percentages may not add up to 100 because of rounding.

employed (FACT-G = 89.2) or retired (FACT-G = 83.7) at ROCS enrollment, and living in the lowest poverty areas (FACT-G = 83.6-89.8). Lung cancer (FACT-G = 75.1), a distant stage at diagnosis (FACT-G = 74.1), and currently being in treatment at ROCS enrollment (FACT-G = 77.1) were associated with below-average HRQOL. CIs for each FACT-G score listed here excluded the sample mean of

81.1. Point estimates for FACT-G means that were associated with graduating from college, having a household income of at least $60,000, living in the lowest poverty census tracts (<5%), and being employed were at least 5 points higher than the population average and reflected clinically meaningful differences in HRQOL, whereas those associated with lung cancer and a distant stage at diagnosis were at least 5 points lower.

Table 2 provides the prevalence of social needs by survivor sociodemographic and cancer-related characteristics. More than 1 in 3 survivors (36.3%) experienced at least 1 social need. Food insecurity was most common (14.8%), and it was followed by not seeing a doctor because of cost (13%), housing instability (11.4%), forgoing care because of a lack of transportation (10.2%), feeling unsafe in their neighborhood (9.2%), and concern about utility shutoffs (8.9%). The prevalence of social needs was inversely associated with age, education, and income. More women (40.6%) than men (32.3%) reported any social needs; however, this difference was driven by differences in food insecurity (16.7% among women and 13% among men; $P < .001$) and forgoing care because of cost (15.4% among women and 10.8% among men; $P = .005$). The prevalence of the other social needs considered did not differ by sex. Social needs were most common among survivors who were unemployed or on disability at ROCS enrollment. Similarly, social needs were least common among those who were married or cohabitating. More survivors diagnosed with distant-stage disease reported having social needs; this was driven by differences in food insecurity (23.9% for distant-stage disease, 16.7% for regional-stage disease, and 12.7% for local-stage disease; $P < .001$) and utility shut-offs by stage at diagnosis (12.8% for distant-stage disease, 10.6% for regional-stage disease, and 7.5% for local-stage disease; $P = .026$). The prevalence of other social needs did not differ by stage.

The presence of each social need was associated with large and clinically meaningful differences in FACT-G scores (Table 3). These differences ranged from a 10.3-point difference in FACT-G scores among survivors who did not see a doctor because of cost to differences of 18.6 points for housing instability and 18.9 points for forgoing health care because of a lack of transportation. The mean FACT-G score among survivors who reported no social needs was 86.4 (95% CI, 85.5-87.3), whereas the score was 76.3 (95% CI, 74.4-78.3) among survivors with 1 social need and 65.9 (95% CI, 63.7-68.2) among those with 2 or more. In adjusted models, the presence of each social need was associated with differences in FACT-G scores ranging from 6.7 points for not seeing a doctor

because of cost to 12.2 for not seeing a doctor because of a lack of transportation. The presence of 1 or 2 or more social needs was associated with differences in FACT-G scores (in points) of 6.7 (95% CI, 4.6-8.8) and 14.0 (95% CI, 11.4-16.5), respectively. In mutually adjusted models, housing instability, forgoing care because of a lack of transportation, and not feeling safe in the neighborhood remained independently associated with clinically meaningful differences in HRQOL.

DISCUSSION

In this population-based cohort of African American cancer survivors, more than one-third experienced at least 1 unmet social need, and social needs were associated with large and clinically meaningful differences in HRQOL. These findings highlight the potential usefulness of comprehensive health-related social needs screening and intervention in oncology practice.

Research is increasingly focused on health-related social needs, their association with worse health outcomes, and the development of interventions to address them.[23] In the context of cancer care, several previous studies have estimated the prevalence of food insecurity and described interventions to improve food insecurity. Our estimate that 14.8% of African American cancer survivors in Detroit experience food insecurity is similar to an estimate from Simmons et al,[32] who reported that 17.4% of patients approached in waiting rooms of a university cancer center experienced food insecurity, but lower than estimates among underserved oncology patients in New York City (56% food insecure)[33] or population-based cancer survivors in New Mexico (36% food insecure).[34] Differences in measures of food insecurity and in populations included, particularly with respect to socioeconomic factors, food environments, and access to social programs designed to increase food security, likely contribute to these differences in estimates.

We are unaware of previous work describing multiple social needs or their association with HRQOL in the context of cancer care; however, our findings suggest that several social needs are independently associated with clinically meaningful differences in quality of life. Nearly half of the survivors who reported having social needs experienced 2 or more needs (17.1% of 36.3% reporting any social needs), and HRQOL was much worse among survivors reporting multiple social needs in comparison with those reporting 1 need.

Detroit ROCS participants represent a particularly underserved population of African American cancer survivors. Detroit consistently has much higher levels

TABLE 2. Prevalence of Social Needs by Participant Characteristics and Cancer-Related Factors

Characteristic	Food Insecurity (n = 258), %	Utility Shutoff (n = 155), %	Housing Instability (n = 198), %	No Doctor, Transportation (n = 178), %	No Doctor, Cost (n = 226), %	Feel Unsafe in Neighborhood (n = 160), %	Any Social Need (n = 623), %
All	14.8	8.9	11.4	10.2	13.0	9.2	36.3
Age							
<55 y	23.1	14.8	17.5	13.6	15.6	13.4	46.6
55-64 y	15.9	9.2	12.1	9.7	14.0	8.3	37.9
≥65 y	7.1	3.9	5.8	8.2	9.9	7.0	26.3
χ^2 P	<.001	<.001	<.001	.014	.017	<.001	<.001
Sex							
Women	16.7	9.8	11.5	10.4	15.4	9.2	40.6
Men	13.0	8.0	11.3	10.0	10.8	9.3	32.3
χ^2 P	.027	.19	.89	.78	.005	.94	<.001
Education							
Less than high school	24.7	15.4	26.1	20.4	18.6	13.0	53.7
High school/GED	14.8	8.7	11.1	11.3	10.2	8.6	35.3
Some college/2-y degree	16.6	8.6	11.5	12.0	17.2	11.3	40.4
College graduate	9.1	6.9	6.1	2.6	8.4	5.6	24.6
χ^2 P	<.001	.013	<.001	<.001	<.001	.005	<.001
Income							
<$20,000	28.5	14.6	21.1	20.8	18.1	14.5	55.5
$20,000-$39,999	11.7	8.4	10.0	8.1	16.2	8.4	36.8
$40,000-$59,999	3.9	5.5	3.9	2.7	6.3	5.5	22.9
≥$60,000	5.4	6.3	6.4	0.0	14.5	11.3	22.2
χ^2 P	<.001	<.001	<.001	<.001	<.001	<.001	<.001
Census-tract poverty							
0% to <5%	2.1	2.1	2.2	1.1	6.4	4.3	15.2
5% to <10%	7.9	8.0	6.0	5.5	12.6	4.0	27.1
10% to <20%	14.4	6.0	8.5	8.1	12.4	5.7	30.6
≥20%	17.1	10.4	13.9	12.4	13.8	11.5	41.1
χ^2 P	<.001	.008	<.001	<.001	.22	<.001	<.001
Employment status							
Employed	8.3	7.1	6.7	3.1	11.4	6.5	27.3
Homemaker	20.6	17.7	14.7	11.8	14.7	17.7	44.1
Unemployed	39.5	21.0	37.0	25.2	18.0	18.8	65.3
Retired	8.4	4.3	5.4	8.8	11.1	6.4	27.4
Disability	26.0	15.7	20.3	17.5	16.1	14.1	53.4
χ^2 P	<.001	<.001	<.001	<.001	.011	<.001	<.001
Marital status							
Married/living with partner	7.7	6.3	6.5	6.0	9.8	6.9	24.5
Widowed	15.5	8.6	12.1	12.1	14.4	9.3	38.2
Divorced/separated	18.0	10.9	12.5	12.8	15.4	8.3	42.0
Never married	23.8	11.6	18.5	14.3	15.7	14.3	50.1
χ^2 P	<.001	.009	<.001	<.001	.011	<.001	<.001

TABLE 2. Continued

Characteristic	Food Insecurity (n = 258), %	Utility Shutoff (n = 155), %	Housing Instability (n = 198), %	No Doctor, Transportation (n = 178), %	No Doctor, Cost (n = 226), %	Feel Unsafe in Neighborhood (n = 160), %	Any Social Need (n = 623), %
Cancer site							
Breast	15.8	10.1	11.4	9.3	14.9	8.4	38.9
Colorectal	15.8	9.3	9.3	12.3	13.3	12.3	38.4
Lung	19.9	6.8	14.3	14.2	14.2	13.7	42.2
Prostate	12.4	8.3	11.4	9.4	10.9	7.9	31.8
χ^2 P	.058	.50	.48	.16	.17	.032	.013
Stage							
Localized	12.7	7.5	10.6	10.2	12.2	8.6	33.7
Regional	16.7	10.6	12.0	9.5	15.3	9.5	40.0
Distant	23.9	12.8	16.2	12.8	11.4	13.5	42.5
χ^2 P	<.001	.026	.13	.52	.20	.17	.014
In treatment							
No	14.2	8.6	10.5	9.2	13.4	8.3	35.0
Yes	17.2	9.7	14.5	13.2	11.6	12.7	41.0
χ^2 P	.15	.50	.029	.026	.36	.010	.032

Abbreviation: GED, general equivalency diploma.

of poverty than the United States as a whole.[35] Decades of race-based residential segregation have contributed to high levels of concentrated poverty that particularly affect African Americans and affect their access to economic, political, and social resources.[36] In 2017, 34.5% of Detroiters lived in poverty, whereas 15.6% of Michigan residents and 15.3% of all Americans did. The majority of Detroit residents (78.1%) are Black, and 37.7% of Black Detroiters have reported household incomes below the poverty line in comparison with 25.2% of Black Americans.[35] Social needs may be particularly prevalent in this population of cancer survivors; however, we expect that our findings of substantially lower HRQOL among cancer survivors experiencing social needs will apply to other survivor populations.

Screening for social needs should be performed in the context of having evidence-based interventions and referral strategies to address them and feedback systems to demonstrate that needs have been met. Identifying strategies to sustainably address health-related social needs in oncology practice is a critical area of future research. Food insecurity was the most common social need identified in this study. There is existing evidence that patients referred to food resources after a positive clinical screen for food insecurity tend to access a wider variety of foods and food resource programs, including food banks, monetary assistance, and the Supplemental Nutrition Assistance Program, which have all been shown to reduce food insecurity.[37-39] When hospital-based food pantries were made available in cancer clinics in New York City, utilization was highest among the most vulnerable populations.[40] A program providing a monthly $230 grocery voucher to food-insecure patients with cancer in community cancer centers found that 77% of voucher funds went to the purchase of healthy foods, including fruits and vegetables.[37] These studies provide promising early results of food-insecurity interventions among patients with cancer, but longitudinal follow-up and rigorous epidemiologic evidence are needed to determine whether addressing food insecurity can improve cancer health outcomes.

Housing instability, a lack of transportation, and neighborhood safety emerged as social needs with independent associations with HRQOL in this cohort. The long history of racial residential segregation in Detroit likely contributes to these environmental social needs.[36] Nearly two-thirds of ROCS participants live in census tracts with ≥20% of residents living below the federal poverty level, and these areas of concentrated poverty may

TABLE 3. Differences in FACT-G Scores Associated With the Presence of Social Needs

		Mean FACT-G	95% CI	Adjusted		Mutually Adjusted	
				FACT-G Difference	95% CI	FACT-G Difference	95% CI
Food insecurity	No	83.7	82.8 to 84.5				
	Yes	66.6	64.2 to 69.1	−10.1	−12.7 to −7.4	−4.3	−7.2 to −1.4
Utility shutoff	No	82.4	81.6 to 83.3				
	Yes	68.0	64.8 to 71.7	−8.6	−11.7 to −5.4	−2.9	−6.2 to 0.3
Housing instability	No	83.2	82.4 to 84.1				
	Yes	64.7	62.0 to 67.3	−11.3	−14.2 to −8.4	−6.2	−9.2 to −3.1
No doctor, transportation	No	83.1	82.2 to 83.9				
	Yes	64.2	61.3 to 67.1	−12.2	−15.2 to −9.3	−6.8	−10.0 to −3.6
No doctor, cost	No	82.4	81.5 to 83.3				
	Yes	72.1	69.5 to 74.7	−6.7	−9.2 to −4.1	−2.8	−5.4 to −0.2
Feel unsafe in neighborhood	No	82.5	81.7 to 83.4				
	Yes	67.6	64.5 to 70.7	−9.8	−12.7 to −6.9	−7.0	−9.8 to −4.1
No. of social needs	None	86.4	85.5 to 87.3				
	1	76.3	74.4 to 78.3	−6.7	−8.8 to −4.6		
	≥2	65.9	63.7 to 68.2	−14.0	−16.5 to −11.4		

Abbreviations: CI, confidence interval; FACT-G, Functional Assessment of Cancer Therapy–General.
Adjusted models control for age, sex, education, income, employment, marital status, and census-tract poverty.

expose residents to higher levels of eviction and housing instability, fewer services (including public transportation), and higher levels of crime.[41] However, even these seemingly intractable problems have potential solutions. The federally funded Housing Choice Voucher Program provides low-cost housing options on the private rental market to low-income residents, and public housing options shelter approximately 1.2 million Americans.[42] Despite the long wait lists for these programs, evidence suggests that once stably housed, recipients of public housing and voucher programs have more resources to spend on food, transportation, and health care.[10] Programs already exist to provide transportation to patients with cancer for appointments, including the American Cancer Society's Road to Recovery program.[43] Policies such as the Justice in Policing Act of 2020 are emerging to address neighborhood safety and build trust between law enforcement and African American communities.[44] Working within the cancer care delivery system, patient navigators and social workers can use comprehensive social needs screening tools to identify unmet housing and transportation needs and work to link cancer survivors to national and local resources. Although it is unlikely that all of the social needs affecting HRQOL can be addressed directly within the oncology practice setting, our results support the continued development of multi-agency partnerships between cancer centers and community organizations to link survivors to services. Ongoing work to improve access to, funding for, and usability of existing programs is needed, as are longitudinal studies linking policy and programs to changes in HRQOL and other clinical outcomes of interest and qualitative work to understand the

experiences and priorities of cancer survivors facing social needs. The strengths of this work include its use of a population-based cohort of African American cancer survivors, a population that experiences a disproportionate burden of social needs and is underrepresented in many studies of cancer survivorship. The detailed survey instruments allowed for the inclusion of several social needs, a validated measure of HRQOL, and the inclusion of several potential confounding factors. The inclusion of several common cancers increases the generalizability of our findings beyond the context of a single cancer site.

Several limitations should also be taken into consideration. Although the inclusion of African American survivors provides valuable information about outcomes in a population that is at particular risk for experiencing social needs and is also underrepresented in previous work, these findings might not be generalizable to other populations. Although Detroit ROCS is population based, an average of 27 months elapsed between cancer diagnosis and ROCS enrollment, and the sickest patients with cancer and those diagnosed with rapidly fatal cancers are likely underrepresented in this work. Although this study incorporates measures of several social needs, each is measured by 1 item, and we are not able to determine the duration or severity of the social needs identified. The data included here are cross-sectional, and this limits our ability to determine the directionality of associations.

Health-related social needs were common in this population of African American cancer survivors and were associated with substantially lower HRQOL. The oncology clinical care setting and survivorship care planning present potential opportunities to identify and address

social needs among cancer survivors to improve both cancer outcomes and survivors' HRQOL beyond the context of cancer.

CONFLICT OF INTEREST DISCLOSURES

The authors made no disclosures.

AUTHOR CONTRIBUTIONS

Theresa A. Hastert: Conceptualization, formal analysis, project administration, writing–original draft, and writing–review and editing. **Jean A. McDougall:** Conceptualization, project administration, and writing–original draft. **Shaila M. Strayhorn:** Conceptualization, project administration, and writing–original draft. **Mrudula Nair:** Writing–review and editing. **Jennifer L. Beebe-Dimmer:** Data curation and funding acquisition. **Ann G. Schwartz:** Data curation, funding acquisition, and writing–review and editing.

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