



Research Article

Healthy Lifestyle Index and Social Determinants among Older Underserved African American Adults

Lucy W Kibe^{1*}, Ehsan Yaghmaei², Katrina M Schrode³, YuFu Kuo¹, Mohsen Bazargan^{2,4}

¹Department of Physician Assistant, Charles R. Drew University of Medicine and Science, Los Angeles, CA 90059, USA

²Department of Family Medicine, Charles R. Drew University of Medicine and Science, Los Angeles, CA 90059, USA

³Department of Psychiatry, Charles R. Drew University of Medicine and Science, Los Angeles, CA 90059, USA

⁴Institute for Integrative & Innovative Research (I3R), University of Arkansas, Fayetteville, AR 72701, USA

*Corresponding author: Lucy W Kibe, Department of Physician Assistant, Charles R. Drew University of Medicine and Science, 1731 E. 120th St., Los Angeles, CA 90059, USA

Citation: Kibe LW, Yaghmaei E, Schrode KM, Kuo Y, Bazargan M (2026) Healthy Lifestyle Index and Social Determinants among Older Underserved African American Adults. Int J Geriatr Gerontol 10:233. DOI: 10.29011/2577-0748.100233

Received Date: 23 May, 2026; **Accepted Date:** 29 May, 2026; **Published Date:** 01 June, 2026

Abstract

Objectives: This study aimed to describe the distribution of healthy lifestyle behaviors and examine associations between the Healthy Lifestyle Index (HLI) and selected sociodemographic, social, food-related, and health-related factors among underserved older African American adults in South Los Angeles. Specifically, we assessed whether HLI was associated with financial strain, food-related resources, food insecurity, and chronic disease burden. **Methods:** Data were collected from 100 African American adults aged ≥ 55 years using structured surveys and interviews. Information was obtained on sociodemographic characteristics, social determinants of health, food-related resources, food insecurity, self-rated health, chronic conditions, and living arrangements. Dietary intake was assessed using the Diet History Questionnaire III (DHQ III), and diet quality was evaluated using the Healthy Eating Index-2015 (HEI-2015). A composite HLI was constructed based on established lifestyle components, including smoking status, physical activity, diet quality, alcohol use, and body mass index. Descriptive statistics were used to summarize participant characteristics. Associations between HLI and selected variables were examined using Pearson correlation coefficients, independent samples t-tests, and one-way analysis of variance, as appropriate. **Results:** Participants were evenly distributed across HLI tertiles. Diet quality was positively associated with HLI group, with mean HEI-2015 scores increasing from 61.70 in the low HLI group to 74.57 in the high HLI group. Only half of the participants met the healthy-diet criterion, suggesting substantial room for improvement in nutrition-related behaviors. Socioeconomic and food-related factors showed mixed patterns across HLI. Financial strain was more common in the low HLI group, and higher HLI scores were significantly associated with lower financial strain ($p = .006$). Difficulty affording food was also lower among participants with higher HLI scores ($p = .008$). Food insecurity showed the expected pattern, with the highest prevalence in the low HLI group and the lowest in the high HLI group; however, this association was marginally significant ($p = .062$). Categorical food access showed a favorable descriptive pattern across HLI tertiles but was not statistically significant. As expected, HLI was also significantly associated with its component behaviors, including physical activity ($p = .008$) and diet quality ($p < .001$). No significant associations were observed between HLI and age, BMI, number of chronic conditions, or individual chronic conditions. **Discussion/Conclusion:** Among underserved older African American adults in South Los Angeles, healthier lifestyle profiles were more closely linked to diet quality, lower financial strain, and food-related economic resources than to chronic disease burden. These findings suggest that lifestyle interventions should not rely only on education or counseling but should also address the practical ability to obtain and afford healthy foods. Community and clinic-based programs that combine culturally responsive nutrition counseling and education on physical activity and tobacco and alcohol consumption with food vouchers, produce and physical activity prescriptions, benefits navigation, smoking cessation products, and other support strategies may be especially relevant for improving healthy lifestyle behaviors in this population.

Keywords: African American older adults; Healthy Lifestyle Index; diet quality; Healthy Eating Index-2015; financial strain; food insecurity; food access; social determinants of health; physical activity.

Introduction

Older African American adults experience a disproportionate burden of chronic conditions, including hypertension, diabetes, obesity, and cardiovascular disease, all of which are strongly influenced by modifiable health behaviors such as diet, physical activity, smoking, and alcohol use [1-3]. Yet older adults often face barriers to maintaining healthy behaviors, including financial strain, limited food resources, physical limitations, and competing health demands [4, 5]. These challenges may be especially pronounced among older African American adults living in underserved urban communities, where structural inequities shape access to resources that support health [6-8].

A Healthy Lifestyle Index (HLI) offers a useful way to examine the clustering of multiple health behaviors within a single measure. Rather than considering diet, physical activity, smoking, or body weight in isolation, composite indices can provide a broader picture of lifestyle patterns and their relationships to health and social context [9, 10]. This approach may be especially relevant in populations where behaviors are not independent of one another, but instead reflect the cumulative influence of individual, household, and neighborhood conditions [11]. Prior research in older adults has shown that healthier lifestyles are associated with higher socioeconomic conditions, self-perceived health, and other contextual factors, suggesting that lifestyle patterns are shaped by more than individual choice alone [12-14].

Among older adults, food insecurity and related economic hardship are increasingly recognized as important social determinants of health [8]. Food insecurity has been associated with multiple chronic conditions, poorer self-rated health, lower diet quality, and obesity risk in nationally representative samples of older U.S. adults [15, 16]. In African American communities, broader community-based research has also highlighted the importance of social and structural influences on healthy eating and weight-related behaviors, while emphasizing the need for more rigorous studies that examine multiple levels of influence simultaneously [17]. In our prior analyses of older African Americans, overall diet quality was suboptimal, and food insecurity was associated with poorer diet quality, whereas perceived neighborhood food environment was not [18]. These findings suggest that economic and food-related constraints may shape lifestyle behaviors in ways that are not fully captured by disease status alone.

Despite growing recognition of the role of social determinants in shaping health behaviors, less is known about how an overall healthy lifestyle pattern relates to financial strain, food-related resources, and chronic disease burden among older African American adults. Most prior work in this population has examined individual behaviors or single domains such as diet quality rather

than a composite lifestyle profile. To address this gap, the present study examined the distribution of the Healthy Lifestyle Index and its association with sociodemographic, social, and health-related factors among older African American adults in an underserved urban community. We hypothesized that healthier lifestyle patterns would be associated with favorable social and economic conditions, particularly lower financial strain and better food-related resources, and with lower burden of chronic disease.

Methods

Design and Participants

This was a secondary analysis of data from the C-FED study, the design of which has been described previously [2]. Briefly, participants were enrolled from a cohort of African Americans recruited through two churches in South Los Angeles [19]. Participants were eligible if they identified as African American and were 65 years or older, or at least 55 years with a chronic condition. 108 participants completed surveys between October 2021 and July 2022 via an online link, telephone interview, or in-person interview. Those with calories outside realistic range were excluded from the dataset, resulting in an analysis dataset of 100 participants. The study protocol was approved by the Institutional Review Board of Charles R. Drew University of Medicine and Science and all participants gave informed consent to participate.

Data Collection and Measures

A range of demographic, socioeconomic, health, lifestyle, and dietary variables was collected to characterize the study population and examine associations with healthy lifestyle behaviors.

Demographic Factors

Participants reported their age, sex, living arrangement, and educational attainment. Age was treated as a continuous variable (mean $\pm$ SD). Sex was categorized as male or female. Living arrangement was assessed as a binary variable indicating whether participants lived alone (yes/no). Educational attainment was grouped into five categories: (1) no high school diploma, (2) high school diploma, (3) some college, (4) bachelor's degree, and (5) master's or doctoral degree.

Socioeconomic Factors

Socioeconomic status was assessed using indicators of financial and food-related resources. Financial strain was measured using a composite scale reflecting difficulty in meeting basic needs, with higher scores indicating greater financial strain. Food access was assessed using a categorical variable reflecting access to adequate food resources (low, moderate, high). Food insecurity was assessed as a binary variable (food secure vs. food insecure). Adequacy of money for food was assessed using a continuous measure reflecting participants' perceived ability to afford sufficient food, with higher scores indicating greater financial difficulty. Annual household income was collected but excluded from the primary analyses due to conceptual overlap with financial strain.

Health Status and Comorbidities

Participants self-reported their general physical health, categorized as Excellent/Very Good, Good, or Fair/Poor. Information on physician-diagnosed chronic conditions was collected, including hypertension, diabetes, asthma, cancer, chronic obstructive pulmonary disease (COPD), kidney disease, HIV, and tuberculosis. A summary variable representing the number of chronic conditions was created. Body mass index (BMI) was calculated from self-reported height and weight and treated as a continuous variable.

Lifestyle and Behavioral Factors

Key lifestyle behaviors were assessed, including smoking status and physical activity. Smoking status was categorized as a binary variable (current/former smoker vs. non-smoker). Physical activity was measured as minutes per week of moderate and/or vigorous activity.

Dietary Assessment

Dietary intake was assessed using the Diet History Questionnaire III (DHQ III), a validated food frequency questionnaire capturing usual intake of 135 foods and beverages over the past year. DHQ III data were used to estimate daily intake of macronutrients (e.g., energy, protein, carbohydrates, total and saturated fat, and fiber) and micronutrients (e.g., calcium, iron, sodium, potassium, magnesium, and vitamins), as well as other dietary components such as alcohol and caffeine.

Healthy Eating Index (HEI-2015)

Diet quality was evaluated using the Healthy Eating Index-2015 (HEI-2015), which measures adherence to the Dietary Guidelines for Americans across 13 components. Total HEI scores range from 0 to 100, with higher scores indicating better diet quality.

Healthy Lifestyle Index (HLI)

A composite Healthy Lifestyle Index (HLI) was constructed based on established behavioral components, including smoking status, physical activity, diet quality, alcohol use, and body mass index (BMI). Each component was scored and combined to generate an overall index reflecting adherence to healthy lifestyle behaviors. A score of 1 was earned for not smoking, for engaging in physical activity for ≥ 150 minutes/week, for an HEI-2015 score ≥ 69.72 , for consuming no alcohol, and for having a BMI < 25 ; a score of 0 was earned when the response did not meet the criterion for a 1.

The HLI was treated as a continuous variable (scaled 0–5), with higher scores indicating healthier lifestyle patterns. For descriptive analyses, HLI was also categorized into tertiles representing low, moderate, and high adherence.

Statistical Analysis

Our analysis comprised three phases. First, we conducted descriptive analyses to summarize participant characteristics, including demographic, socioeconomic, health, lifestyle, and

dietary variables. Continuous variables were reported as means and standard deviations (SD), while categorical variables were summarized using frequencies and percentages.

Second, we examined associations between the Healthy Lifestyle Index (HLI), treated as a continuous variable (scaled 0–5), and selected sociodemographic, social, and health-related factors. Pearson correlation coefficients were used to assess relationships between HLI and continuous variables (e.g., age, body mass index, financial strain, physical activity, and number of chronic conditions). For categorical variables, differences in mean HLI scores were evaluated using independent samples t-tests for binary variables (e.g., sex, living arrangement, food insecurity) and one-way analysis of variance (ANOVA) for variables with three or more categories (e.g., education level, food access categories, and self-rated physical health).

Third, we conducted exploratory analyses to evaluate the relationship between HLI and individual chronic conditions (e.g., diabetes, hypertension, asthma, cancer, COPD, and depression) as well as overall chronic disease burden. These analyses were primarily descriptive and aimed to identify potential patterns rather than test specific hypotheses, given the limited sample size.

All statistical tests were two-sided, and statistical significance was defined as $p < .05$. Analyses were conducted using R statistical software.

Results

Table 1 presents the demographic, health, and lifestyle characteristics of the study sample stratified by Healthy Lifestyle Index (HLI) tertiles. The study included 100 African American adults aged 55 years and older, with a mean age of 68.64 years (SD = 8.61). Age was similar across HLI groups, with no meaningful differences observed.

Overall, the sample was predominantly female (71.0%), with a smaller proportion of males (29.0%). Educational attainment varied, with 15.6% of participants reporting no high school diploma, 22.9% having a high school diploma, 39.6% having some college education, and 21.9% holding a bachelor's degree or higher. Most participants were not currently married (58.3%), while 35.4% were married or living with a companion.

Health and lifestyle characteristics differed across HLI tertiles. Mean Healthy Eating Index (HEI-2015) scores increased across tertiles, from 61.70 (SD = 6.46) in the low HLI group to 74.57 (SD = 4.46) in the high HLI group. Similarly, physical activity levels were substantially higher in the high HLI group compared to the low HLI group (484.07 vs. 11.83 minutes/week). The proportion of non-smokers also increased across tertiles (80.0% in low, 95.0% in moderate, and 96.7% in high HLI groups). However, physical activity was highly skewed, with median values of zero in the low and moderate HLI groups, indicating that many participants reported no activity.

Socioeconomic and social factors also varied by HLI. Financial strain and food insecurity were more prevalent among participants in the low HLI group, whereas those in higher HLI tertiles were more likely to report lower financial strain and better food access. For example, 43.3% of participants in the low HLI group reported low financial strain compared to 72.5% and 66.7% in the moderate and high HLI groups, respectively. Similarly, access to food resources improved across HLI tertiles.

Living arrangement showed a similar pattern, with a higher proportion of participants living alone in the low HLI group (40.0%) compared to the moderate (27.5%) and high (26.7%) HLI groups.

Self-rated physical health did not differ significantly across HLI tertiles. Although a greater proportion of participants in the high HLI group reported fair or poor health, this descriptive pattern was not statistically significant and should be interpreted with caution. Specifically, 53.3% of participants in the low HLI group reported excellent or very good health, whereas 41.4% of those in the high HLI group reported fair or poor health.

Overall, these findings indicate that higher HLI is associated with more favorable lifestyle behaviors and improved socioeconomic conditions, particularly in relation to financial strain and food access, although patterns for self-rated health were less consistent.

Variable	Low HLI (n≈30)	Moderate HLI (n≈40)	High HLI (n≈30)	Total
Sociodemographic Characteristics				
Age (years), M (SD)	67.80 (6.42)	69.20 (9.47)	68.73 (9.49)	68.64 (8.61)
Sex				
Female	16 (53.3%)	29 (72.5%)	26 (86.7%)	71 (71.0%)
Male	14 (46.7%)	11 (27.5%)	4 (13.3%)	29 (29.0%)
Education				
No HS diploma	4 (13.8%)	8 (20.0%)	3 (11.1%)	15 (15.6%)
HS diploma	9 (31.0%)	9 (22.5%)	4 (14.8%)	22 (22.9%)
Some college	13 (44.8%)	13 (32.5%)	12 (44.4%)	38 (39.6%)
Bachelor or higher	3 (10.3%)	10 (25.0%)	8 (29.6%)	21 (21.9%)
Living alone				
No	18 (60.0%)	29 (72.5%)	22 (73.3%)	69 (69.0%)
Yes	12 (40.0%)	11 (27.5%)	8 (26.7%)	31 (31.0%)
Socioeconomic Factors				
Financial strain				
Low	13 (43.3%)	29 (72.5%)	20 (66.7%)	62 (62.0%)
Moderate	12 (40.0%)	9 (22.5%)	8 (26.7%)	29 (29.0%)
High	5 (16.7%)	2 (5.0%)	2 (6.7%)	9 (9.0%)
Food insecurity				
Not food insecure	17 (58.6%)	28 (70.0%)	21 (77.8%)	66 (68.8%)
Food insecure	12 (41.4%)	12 (30.0%)	6 (22.2%)	30 (31.2%)
Food access				
Low	11 (84.6%)	17 (73.9%)	11 (64.7%)	39*
Moderate	1 (7.7%)	2 (8.7%)	2 (11.8%)	5*

High	1 (7.7%)	4 (17.4%)	4 (23.5%)	9*
Difficulty affording food, M (SD)	2.07 (1.39)	1.48 (0.78)	1.50 (0.86)	1.66 (1.05)
Health Factors				
Self-rated physical health				
Excellent/Very good	16 (53.3%)	11 (27.5%)	8 (27.6%)	35 (35.0%)
Good	8 (26.7%)	20 (50.0%)	9 (31.0%)	37 (37.0%)
Fair/Poor	6 (20.0%)	9 (22.5%)	12 (41.4%)	27 (27.0%)
No. of Chronic Conditions, M (SD)	2.30 (1.70)	1.95 (1.26)	2.00 (1.44)	2.07 (1.45)
Smoking status				
Non-smoker	24 (80.0%)	38 (95.0%)	29 (96.7%)	91 (91.0%)
Smoker	6 (20.0%)	2 (5.0%)	1 (3.3%)	9 (9.0%)
Physical activity (min/week), M (SD)	11.83 (29.02)	342.63 (894.52)	484.07 (694.41)	285.82 (701.91)
Physical activity (min/week), Median (IQR)	0 (0.0)	0 (217.5)	160 (510.8)	0 (180.0)
Diet quality (HEI-2015), M (SD)	61.70 (6.46)	67.77 (8.97)	74.57 (4.46)	67.99 (8.65)
BMI (kg/m ²), M (SD)	31.08 (4.42)	31.13 (7.57)	28.24 (7.02)	30.30 (6.67)
Note. Values are presented as mean (SD) or n (%). Totals may vary due to missing data. *Food access totals are based on a reduced sample due to missing responses.				

Table 1: Participant Characteristics by Healthy Lifestyle Index (HLI) Tertiles

Healthy Lifestyle Index Distribution

Table 2 presents the distribution of the Healthy Lifestyle Index (HLI) tertiles and component indicators. Participants were approximately evenly distributed across HLI tertiles, as expected based on tertile classification, with 30.0% classified as low, 40.0% as moderate, and 30.0% as high HLI.

Examination of individual HLI components indicated that most participants reported not using alcohol (99.0%) and non-smoker status (91.0%). Nearly all participants reported healthy alcohol use, resulting in minimal variability across HLI tertiles. In contrast, a smaller proportion of participants met criteria for a healthy diet (50.0%), physical activity (31.0%), and healthy body mass index (24.0%), suggesting that these components contributed most to variability in overall HLI.

Characteristic	n (%)
HLI tertiles	
Low	30 (30.0%)
Moderate	40 (40.0%)
High	30 (30.0%)
HLI components (favorable status)	
Healthy diet	50 (50.0%)
Physically active	31 (31.0%)
Healthy alcohol use	99 (99.0%)
Healthy body mass index	23 (24.0%)
Non-smoker	91 (91.0%)

Table 2: Distribution of Healthy Lifestyle Index (HLI) and Component Indicators (N = 100)

Associations between Participant Characteristics and HLI

Associations between participant characteristics and HLI are presented in (Table 3). Among continuous variables, higher HLI scores were significantly associated with lower financial strain ($r = -.28, p = .006$), lower difficulty affording food ($r = -.27, p = .008$), higher levels of physical activity ($r = .26, p = .008$), and higher diet quality as measured by the Healthy Eating Index ($r = .55, p < .001$). No significant associations were observed for age, access to food, or number of chronic conditions.

Among categorical variables, sex was significantly associated with HLI, with females having higher HLI scores than males ($p = .010$). Smoking status was also significantly associated with HLI ($p = .037$), with non-smokers demonstrating higher HLI scores than smokers. No significant differences were observed across categories of living arrangement, income, education, food access, or self-rated health. A marginal association was observed for food insecurity ($p = .062$), with food-insecure participants exhibiting lower HLI scores.

Variable	Category	Statistic	Test / Effect	p
Age (years)	–	M (SD)	$r = .05$	.653
Sex	Female (n = 71): M = 3.10 (0.81) Male (n = 29): M = 2.64 (0.77)	Group means	$t(98) = 2.64$	.010
Education	No HS diploma (n = 15): M = 2.87 (0.83) HS diploma (n = 24): M = 2.81 (0.84) Some college (n = 40): M = 2.96 (0.86) Bachelor (n = 10): M = 3.20 (0.79) Master/Doctorate (n = 11): M = 3.27 (0.65)	Group means	$F(4,95) = 0.85$	.499
Do you live alone?	No (n = 69): M = 3.02 (0.81) Yes (n = 31): M = 2.85 (0.85)	Group means	$t(98) = 0.92$	.361
Difficulty affording food	–	M (SD)	$r = -.27^{**}$	.008
Financial strain	–	M (SD)	$r = -.28^{**}$	.006
Food insecurity	Not food insecure (n = 70): M = 3.07 (0.79) Food insecure (n = 30): M = 2.73 (0.87)	Group means	$t(98) = 1.89$	.062
Food access	Low (n = 39): M = 2.94 (0.85) Moderate (n = 5): M = 3.00 (1.22) High (n = 9): M = 3.33 (0.71)	Group means	$F(2,50) = 0.75$	.479
Self-rated physical health	Excellent/Very good (n = 35): M = 3.06 (0.82) Good (n = 37): M = 2.95 (0.86) Fair/Poor (n = 27): M = 2.89 (0.85)	Group means	$F(2,96) = 0.35$	.705
Number of chronic conditions	M = 2.07 (1.45)	Correlation	$r = -.09$	.389
Smoking status	Non-smoker (n = 91): M = 3.04 (0.81) Smoker (n = 9): M = 2.22 (0.83)	Group means	$t(9.03) = 2.45$	.037
Physical activity (min/week)	–	M (SD)	$r = .26^{**}$	.008
Diet quality (HEI-2015)	–	M (SD)	$r = .55^{***}$	< .001
BMI (kg/m ²)	–	M (SD)	$r = -.15$	.158

Note. HLI was treated as a continuous variable. Continuous variables were analyzed using Pearson correlation coefficients, and categorical variables using independent samples t-tests or one-way ANOVA. $p < .05$, $** p < .01$. Alcohol use was not included in association analyses because nearly all participants met the healthy alcohol criterion (99%), resulting in insufficient variability.

Table 3: Associations between Participant Characteristics and Healthy Lifestyle Index (HLI)

Discussion

In this sample of older African American adults living in an underserved urban community, healthier lifestyle patterns appeared to be more closely related to social and economic conditions than to chronic disease burden. In particular, higher HLI scores were associated with lower financial strain and better food-related resources, while no clear association was observed with the overall number of chronic conditions. Taken together, these findings suggest that lifestyle behaviors in later life may be shaped as much by social context and access to resources as by disease status. This is important because many health interventions focus primarily on individual behavior change even though financial and structural barriers might limit a person's ability to follow healthy recommendations.

This pattern is consistent with a growing body of literature showing that healthy behaviors are not simply the result of individual knowledge or motivation, but are influenced by the broader conditions in which people live. Prior work in older adults has shown that healthier lifestyles are associated with socioeconomic conditions and self-perceived health [12]. More broadly, food insecurity and other material hardships have been linked to poorer diet quality, poorer self-rated health, obesity, and a higher burden of chronic conditions among older adults in the United States [4, 5, 15]. Our findings extend this literature by suggesting that, in this population, these social and economic constraints may be reflected not only in diet quality alone, but in broader lifestyle patterns.

The findings also align with our earlier work from this cohort. In a prior analysis, we found that food insecurity was associated with poorer overall diet quality, whereas perceived neighborhood food environment was not [18]. Viewed alongside the present findings, that earlier work suggests that financial and household-level constraints may be more important than perceived neighborhood availability alone in shaping healthy behavior. This distinction matters. It is possible for healthy foods to be present in a community and still remain out of reach because of cost, competing household demands, transportation barriers, or other practical limitations. In that sense, the healthier lifestyle patterns observed in this study may reflect differences in the ability to act on healthy intentions, not simply differences in knowledge or preference.

One notable finding was the lack of association between HLI and chronic disease burden. It is expected that individuals with more chronic conditions would have less healthy lifestyle patterns. However, that was not the case in this sample. There are several possible explanations. First, chronic conditions are highly prevalent in older adults, particularly in underserved populations, and may not meaningfully distinguish those with healthier versus less healthy behavior patterns. Second, the relationship may be more complex, with some individuals adopting healthier behaviors after diagnosis while others continue to face barriers that limit behavior change. Third, a cross-sectional design cannot capture timing. Current lifestyle patterns may reflect recent adaptations, whereas chronic conditions often develop over many years. For

these reasons, the absence of an observed association should not be interpreted to mean that lifestyle is unimportant for chronic disease, but rather that in this sample, chronic disease burden did not explain lifestyle variation as clearly as social and economic factors did.

Implications

These findings have practical implications for intervention design. Efforts to improve healthy behaviors among older African American adults should not focus only on education or individual counseling. While those strategies remain important, they may have limited impact if they do not also address the material conditions that shape day-to-day choices. This may help explain why education alone sometimes produces only modest improvements in long-term lifestyle behaviors within underserved communities [17]. Community-based interventions that incorporate food support, navigation of local resources, financial and social support, and culturally responsive lifestyle counseling may be more effective than approaches that focus narrowly on individual behavior change. Prior community-based work in African American populations supports the value of multilevel strategies that address healthy eating and related behaviors in real-world social contexts [17, 20]. Similarly, work on healthy aging in Black/African American older adults has highlighted the importance of addressing food insecurity, neighborhood conditions, and other social determinants as part of a broader approach to health and well-being [21].

Limitations

This study should also be interpreted in light of its limitations. The sample size was modest, and the analyses were cross-sectional, which limits causal inference. The study was conducted in a specific underserved urban population, and the findings may not generalize to all older African American adults. Several measures, including chronic conditions and lifestyle behaviors, were based on self-report and are therefore subject to recall and social desirability bias. In addition, some of the relationships examined here may be interrelated in ways that are difficult to disentangle in a relatively small sample. At the same time, the study also has important strengths. It focuses on an understudied, high-risk population, uses a composite lifestyle measure rather than examining individual behaviors in isolation, and builds on a well-characterized cohort with detailed data on diet, exercise, food access, and health-related factors (Kibe et al., 2024).

Conclusion

In conclusion, this study suggests that among older African American adults in an underserved urban community, healthier lifestyle patterns may be more strongly associated with social and economic conditions than with chronic disease burden. These findings reinforce the importance of addressing financial and food-related barriers as part of efforts to support healthy aging. The study adds to growing evidence that improving health behaviors in underserved populations may require both individual-level education and broader support for the social and economic realities

that influence daily decision-making. In populations facing longstanding structural inequities, healthier lifestyles may depend not only on what individuals know or intend to do, but also on the resources they have available to make healthy choices possible.

Declaration Statements

Abbreviations: CDU; Charles R Drew University of Medicine and Science

Grant Support

This work was supported by Accelerating Excellence in Translational Science (AXIS) Center at Charles R. Drew

University of Medicine and Science [grant number NIMHD/NIH U54MD007598], and the Clinical Research Education and Career Development (CRECD) Program at Charles R. Drew University of Medicine and Science [NIMHD/NIHR25MD007610] Author Lucy W. Kibe has received research support from these two agencies.

Competing Interests Declaration

The authors declare that they have no competing interests regarding this manuscript. In particular, they state that they have no financial, personal, or professional interests that may have influenced the analysis or interpretation of the data presented in this manuscript.

Ethics Approval and Consent to Participate: Not applicable

Statement of Author Contributions

LK: Conceptualization, Data curation, Methodology, Writing-Reviewing and Editing, Software

EY: Data curation, Methodology, Writing- Reviewing and Editing, Software.

KS: Data curation, Methodology, Writing- Reviewing and Editing, Software.

YK: Methodology, Writing- Reviewing and Editing.

MB: Conceptualization, Data curation, Methodology, Writing-Reviewing and Editing, Software.

Data Availability Statement

The data sets used and analyzed in the current study are available from the corresponding author for collaborative studies. Personal identification details of the participants were separated from the completed questionnaires. The data were stored in a locked room at the Charles R. Drew University of Medicine and Science (CDU). No information relating to identifiable individuals was disseminated at all. The data sets used and analyzed in the current study are available from the corresponding author for collaborative studies. Code availability: N/A.

References

1. Noonan AS, Velasco-Mondragon HE, Wagner FA (2016) Improving the health of African Americans in the USA: an overdue opportunity for social justice. *Public health reviews*. 37:12.
2. Kibe LW, Bosah A, Schrode KM, Kuo Y, Shaheen M, et al. (2024) Assessing food access, exercise, and dietary history among older african american parishioners during the COVID-19 pandemic (C-FED study): design, opportunities, challenges, and lessons learned. *Journal of racial and ethnic health disparities*. 11:1857-1868.
3. Kibe LW, Yaghmaei E, Schrode KM, Kuo Y, Bazargan M (2026) Association Between DASH Adherence and Hypertension Among Older African American Parishioners in an Underserved Urban Community. *J Prim Care Community Health*. 17:21501319261428338.
4. Assoumou BOMT, Coughenour C, Godbole A, McDonough I (2023) Senior food insecurity in the USA: a systematic literature review. *Public Health Nutrition*. 26: 229-245.
5. Leung CW, Kullgren JT, Malani PN, Singer DC, Kirch M, et al. (2020) Food insecurity is associated with multiple chronic conditions and physical health status among older US adults. *Preventive medicine reports*. 20:101211.
6. Wong AKC, Liu T, Liu LZ, Bayuo J, Tao X, et al. (2025) Healthcare and Social Needs of Older Adults in Underserved Urban Communities: Insights from Community Health Workers. *Journal of Urban Health*. 102:1057-1068.
7. Odoms-Young A, Brown AGM, Agurs-Collins T, Glanz K (2024) Food insecurity, neighborhood food environment, and health disparities: state of the science, research gaps and opportunities. *The American journal of clinical nutrition*. 119:850-861.
8. Folorunsho S (2025) The role of social determinants of health in shaping racial and disability disparities among older adults in the United States. *Aging Soc Policy*. 1-17.
9. Scioni M, Baldan C, Ghirardo A, Boccuzzo G (2025) Construction of a healthy lifestyle index using Italian national survey data. *Int J Popul Data Sci*. 10:2977.
10. Bruckner F, Gruber JR, Ruf A, Edwin Thanarajah S, Reif A, et al. (2024) Exploring the link between lifestyle, inflammation, and insulin resistance through an improved healthy living index. *Nutrients*. 16:388.
11. Viallon V, Freisling H, Matta K, Nannsen AØ, Dahm CC, et al. (2024) On the use of the healthy lifestyle index to investigate specific disease outcomes. *Scientific reports*. 14:16330.
12. Roldán González E, Lerma Castaño PR, Aranda Zemanate AY, Caicedo Muñoz ÁG, Bonilla Santos G (2022) Healthy lifestyles associated with socioeconomic determinants in the older adult population. *J Prim Care Community Health*. 13: 21501319221112808.
13. Behgam N, Karimi Ghahfarokhi M, Azizpour Y, Naderyan Feli S, Mozafari S, et al. (2025) Association of blood pressure control, lifestyle and socioeconomic status with self-rated health in patients with hypertension: a national cross-sectional study. *BMJ open*. 15: e104241.
14. Shaaban AN, Martins MRO, Peleteiro B (2022) Factors associated with self-perceived health status in Portugal: Results from the National Health Survey 2014. *Frontiers in public health*. 10:879432.

15. Choi YJ, Crimmins EM, Ailshire JA (2022) Food insecurity, food environments, and disparities in diet quality and obesity in a nationally representative sample of community-dwelling older Americans. *Preventive medicine reports*. 29:101912.
16. Sassine AJ, Wambogo EA, Moshfegh AJ, Sahyoun NR (2026) Dietary Patterns of US Older Adults and Their Associations with Diet Quality, Health, and Food Insecurity. *Public Health Nutrition*.1-34.
17. Coughlin SS, Smith SA (2017) Community-based participatory research to promote healthy diet and nutrition and prevent and control obesity among African-Americans: a literature review. *Journal of racial and ethnic health disparities*. 4:259-268.
18. Kibe LW, Schrode K, Bazargan M, Shaheen M (2023) Impact of food insecurity and food environment on the diet quality of older African Americans during the COVID-19 pandemic. *Frontiers in Public Health*. 11:1268961.
19. Adinkrah EK, Bazargan S, Cobb S, Kibe LW, Vargas R, et al. (2024) Mobilizing faith-based COVID-19 health ambassadors to address COVID-19 health disparities among African American older adults in under-resourced communities: a hybrid, community-based participatory intervention. *PLoS One*. 19: e0285963.
20. Thomson JL, Goodman MH, Tussing-Humphreys L (2015) Diet quality and physical activity outcome improvements resulting from a church-based diet and supervised physical activity intervention for rural, Southern, African American adults: Delta Body and Soul III. *Health promotion practice*. 16:677-688.
21. Khan M, Holton J, Basic A (2023) "WE DON'T AGE ALONE; WE AGE AS A COMMUNITY": BARRIERS AND ENABLERS OF AGING WELL IN BLACK/AFRICAN AMERICAN OLDER ADULTS. *Innovation in Aging*. 7:983.