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Changes in Life Satisfaction and Health for Rural And Non-rural Older Adults in the United States

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Abstract

Drawing from a human development framework, this paper uses the 2014 and 2016 waves of the longitudinal Health and Retirement Study (HRS) with contextual data from the American Community Survey (ACS) and classification scales of the Economic Research Service of the U.S. Department of Agriculture to examine whether county-level rural and non-rural status is associated with changes in life satisfaction and perceived decrease in health among U.S. residents aged 65 and older. Controlling for individual declines in function (cognition, gross motor function and/or fine motor function), other individual characteristics, and additional county-level characteristics, we find that functional decline has a relationship to perceived health change and life satisfaction, but that the most substantial community and individual level characteristics are related to health not life satisfaction. Aside from the walkability of the county, no other county characteristics were predictive of change in life satisfaction. We calculate that the average predicted probability that someone experienced a decrease in health was highest (0.32) among older adults who experienced functional decline and who live in a rural county. This offers useful context for communities, and we discuss the implications for these findings as they relate to understanding how functional decline may be experienced differently for older adults across different types of places and what this may mean about the experience of disability.

Keywords: disability onset, aging, functional decline, well-being, community characteristics

Changements dans la satisfaction de vivre et la santé des personnes âgées rurales et non rurales aux États-Unis

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Résumé

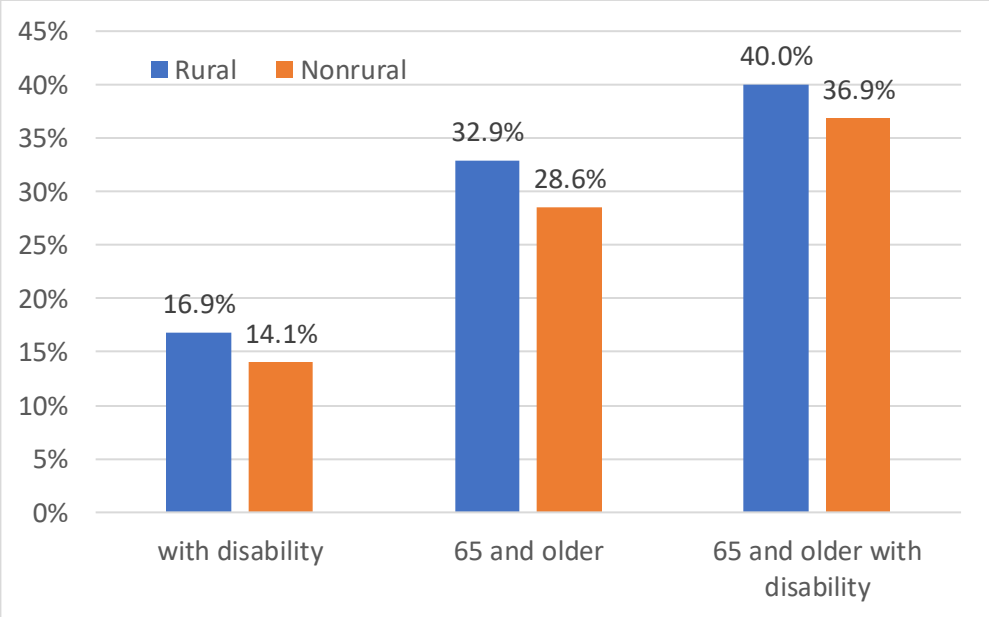
S'appuyant sur un cadre de développement humain, cet article utilise les vagues de 2014 et 2016 de l'étude longitudinale sur la santé et la retraite (HRS) avec des données contextuelles de l'American Community Survey (ACS) et des échelles de classification du service de recherche économique du Département de l'Agriculture des États-Unis pour examiner si le statut rural et non rural au niveau du comté est associé à des changements dans la satisfaction à l'égard de la vie et à une diminution perçue de l'état de santé chez les résidents américains âgés de 65 ans et plus. En prenant en compte les déclins individuels de fonctions (cognition, fonction motrice globale et/ou fonction motrice fine), d'autres caractéristiques individuelles et d'autres caractéristiques au niveau du comté, nous constatons que le déclin fonctionnel est lié au changement de santé perçu et à la satisfaction de vivre, mais que le les caractéristiques les plus importantes au niveau communautaire et individuel sont liées à la santé et non à la satisfaction de vivre. Hormis le potentiel piétonnier du comté, aucune autre caractéristique du comté ne permettait de prédire un changement dans la satisfaction de vivre. Nous calculons que la probabilité moyenne prédite qu'une personne connaisse une détérioration de son état de santé était plus élevée (0,32) parmi les personnes âgées ayant connu un déclin fonctionnel et vivant dans un comté rural. Cela offre un contexte utile pour les communautés, et nous discutons des implications de ces résultats dans la mesure où elles permettent de comprendre comment le déclin fonctionnel peut être vécu différemment pour les personnes âgées dans différents types de lieux et ce que cela peut signifier sur l'expérience du handicap.

Mots-clés : apparition du handicap, vieillissement, déclin fonctionnel, bien-être, caractéristiques communautaires

1.0 Introduction

People with disabilities, older adults, and older adults with disabilities are all more prevalent in rural counties compared to nonrural counties (see Figure 1). Beyond rural status, we know that the older resident disability rate is substantially higher in certain types of counties, including counties with higher rates of poverty or lower rates of employment and counties that are retirement destinations. Not only is the older resident disability rate higher in each of these types of counties, but rates are higher in each of these rural counties compared to nonrural counties of the same typology (author calculations, U.S. Census Bureau, 2017). Why do some communities have more older adults with a disability than others? While some of these county characteristics associated with disability are negative (e.g., high rates of poverty) suggesting that perhaps some aspect of the community may be contributing to disability, some are positive (e.g., amenity-rich retirement areas), indicating that there is a complex relationship between place and disability. Rural places are themselves diverse (Hamilton et al., 2008) and experts call for more attention towards understanding health and well-being outcomes for the aging population within different types of rural places (Jensen et al., 2020). Within the literature, there is a need to extend an understanding of how disability onset is experienced in different types of places.

Figure 1. Percentage of counties whose population has a disability, is 65 or older, and is 65 and older with a disability, by rural/nonrural status.



Source: Author's calculations of 2016 American Community Survey summarized population estimates for each U.S. County (Table DP02 merged to USDA 2013 rural-urban codes).

Aging successfully can be conceptualized in a variety of ways, including maintaining health and remaining satisfied with one's life circumstances. Recent research has identified individual characteristics as important predictors of healthy and successful aging but has provided limited information about the role of geographic characteristics such as rural status and other correlates (Jajtner et al.,

2022; Mitra et al., 2020). Of interest for rural and community health researchers is whether certain geographic characteristics can help to sustain health and well-being for older adults. Using longitudinal data on adults aged 65 and older in the United States, this study examines whether residents who live in rural areas experience different aging outcomes, in terms of health and life satisfaction, compared to residents who live in non-rural areas, controlling for individual functional decline, other individual characteristics, and place-based characteristics.

2.0 Scholarly Context

In general, prior research has found that adults living in non-rural areas rate their health and life satisfaction as higher than adults living in rural areas (Case & Deaton, 2015; Graham & Lawlor, 2018; Plaut et al., 2002). Such regional variation may be due to local community or civic characteristics (Chandra & Graham, 2019). For older adults, these variations may be particularly significant. The World Health Organization (WHO) has identified eight place-based dimensions that influence the well-being of aging citizens: (a) transportation, (b) housing, (c) employment, (d) communication, (e) community support, (f) social participation, (g) social inclusion, and (h) the built environment (WHO, 2007). The American Association of Retired Persons (AARP) has drawn from these guides to register nearly 500 communities in the United States who identify themselves as age-friendly, a designation that has resulted in local-level age-friendly public policy and private sector investment in companies that cater to older people (AARP, n.d.). The AARP Livability Index has been used to examine the relationship between county characteristics and community health and has found that rural counties rank the lowest on community health outcomes (Zhang et al., 2020). As older adults are overrepresented within rural counties, this is of particular concern (Symens Smith & Trevelyan, 2019).

Physical, social, and political characteristics of one's environment may affect an individual's experience. This can be particularly relevant upon the onset of disability associated with aging. In a traditional medical model of understanding disability, any solution lies with rehabilitating the individual. However, in a social model of disability perspective, disability is viewed as a product of an individual's interaction with their environment (Oliver, 2013; Shakespeare, 2016). That is, a person who is experiencing a loss in function may not be affected if their community is arranged to accommodate variation in cognitive, emotional, and physical ability.

Much of the literature on healthy aging focuses on minimizing or preventing disability, improving health outcomes, and minimizing illness. This body of research generally views disability as antithetical to aging well, either ignoring people aging with a disability or counting their well-being as negative by default (Kochera et al., 2005, p. 112; MacArthur Foundation, n.d.). Instead of this approach, the present analysis utilizes a human development model of disability (Mitra, 2018, pp. 9–32; Mitra et al., 2020), considering ways in which we can understand the individual level and contextual characteristics in which people who experience disability onset have the best outcomes. The human development model considers how both environmental demands and an individual can be adjusted to recalibrate outcomes in the face of changes in individual functioning associated with aging (Putnam, 2002).

Given the disparities noted above between the outcomes of persons who reside in rural and non-rural counties, any research that attempts to disentangle place-based associations among aging outcomes, individual characteristics, and geographic characteristics must also consider the possible interplay of disability onset with

outcomes of interest. Due to physiological changes, declines in cognitive function as well as limitations in gross-motor and fine motor skills are common as people age yet are not commonly considered in place-based analyses. Such functional declines are important to consider as disability arises from an individual's interaction with his or her environment (Oliver, 2013; Shakespeare, 2016) and thus may in fact reflect differences in the local surroundings. As an example, an older person who benefits from using a mobility device and resides in an accessible community in terms of building access, sidewalk access, and transportation options will face fewer limitations than a similar person who resides in a less accessible area. The research conducted here is novel in that it includes information about functional decline in considering the association between rural and other place-based characteristics with aging outcomes.

Better understanding of how structural community characteristics may best serve older adults is essential, particularly for rural communities that cannot draw from urban or nearby urban centers for resources. Rural communities have a higher prevalence of adults over age 65, a higher proportion of adults with disabilities, and a higher proportion of adults over age 65 with disabilities (U.S. Census Bureau, 2017). These characteristics suggest that an examination of structural characteristics is necessary for better understanding the relationship between place and individual well-being for this population (Jensen et al., 2020).

3.0 Methods

3.1 Data and Sample

The Health and Retirement Study (HRS) is sponsored by the National Institute on Aging (grant number NIA U01AG009740) and is conducted by the University of Michigan. Since 1992, the HRS has surveyed U.S. residents approaching retirement age biennially using a longitudinal design. The HRS includes individuals over age 50 at the time of entry into the study, and their spouses (Fisher & Ryan, 2018). Participants are selected using a multi-stage probability sampling method, with U.S. counties sampled in the first stage as primary sampling units, geographic area segments in the second stage, and households sampled in the third stage. Age-eligible (50 or older) individuals are selected at random from sampled households and that individual and their spouse—if married—are included in the sample. These sampled individuals—and spouses, whether they remain married or not—are recontacted every two years for in-person interviewing with mailed questionnaire follow-up, allowing for longitudinal analyses. Even with this multistage design, the response rates for both 2016 and 2018 were 74% (HRS Staff, 2023). Weighting to compensate for complex sampling is applied to the analyses presented here, unless noted otherwise. Our analysis centers on the change in functioning and well-being between the 2014 and 2016 waves of the HRS. Note that an error in the 2018 HRS affected the skip patterns in the functional limitations questions asked, resulting in a biased response distribution to the gross and fine motor functioning measures (Bugliari et al., 2021). This is the motivation for using earlier data releases rather than any comparison including the 2018 wave.

We also utilize the 2016 geographic data (from the 2018 restricted file), HRS contextual data with community characteristics from the American Community Survey (ACS), and U.S. Department of Agriculture contextual data resource to perform matching on county for each respondent (Ailshire et al., 2020a, p. 25;

Ailshire et al., 2020b). Because of our interest in examining the effect of structural county characteristics, we limit analysis only to those older respondents (age 65 and older) not in institutions who have not moved between waves. The final sample size, retaining those with geographic data and at least one measure of well-being in both waves is 7,901.

3.2 Measures

3.2.1 Dependent variables. We use two measures of well-being, following research conducted by others (Araujo et al., 2017; Evans & Schaur, 2010; Kapteyn et al., 2015; Kimball et al., 2015; Stone, 2011; Vanhoutte & Nazroo, 2016). A description of each follows.

Decline in life satisfaction. HRS respondents are asked the following question each wave: 'Please think about your life as a whole. How satisfied are you with it? Are you completely satisfied, very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?' We assessed change in life satisfaction by examining whether people reported lower life satisfaction in 2016 compared to 2014. We permitted moderate variation, comparing across categories of satisfaction (completely, very satisfied), the midpoint (somewhat), and dissatisfaction (not very, not at all satisfied), rather than single unit shifts across the five-point scale. For this study, decline in life satisfaction was measured as a binary variable where a value of one indicated a downward shift in reported life satisfaction from 2014 to 2016 and a value of zero indicated no change or an increase in life satisfaction over the same time period.

Perceived health decline. The HRS prompts respondents to explicitly report whether their health has declined. The question wording is 'Compared with your health when we talked to you in [month] 2014, would you say that your health is better now, about the same, or worse?' For this study, perceived health decline was measured as a binary variable where a value of one indicated persons who reported worse health in 2016 than in 2014 and a value of zero indicated no change or better health over the same time period.

Individual-level independent variables. Our primary individual-level independent variable is *change in functioning* over two years—between the 2014 and 2016 waves. We examine three areas of function in this combined measure: cognition, gross motor, and fine motor. Cognition is assessed by examining mental status and word recall together, a score that is frequently used as a measure of overall cognitive ability for older adults. The possible range is 0 to 35 and the mean and median are both 22. We counted people as experiencing a decrease in cognitive functioning if their score on this measure dropped five or more points (one standard deviation) between waves.

Indices of gross motor and fine motoring function are each assessed as the score of self-reported ability to complete certain tasks. These specific indices are regularly used due to their consistency. A decrease in gross and fine motor functioning is counted if a respondent's score is lower in 2016 than reported in 2014. Someone is counted as having an overall decrease in functioning if they meet any one of these three criteria for a decrease in cognitive, gross motor, or fine motor functioning between 2014 and 2016.

In addition, we include the following as individual-level controls: age (continuous, note the total sample is at least 51 years old), gender (0 if female, 1 if male), marital status (0 if unpartnered, 1 if married or partnered), employment status (0 if not working for any reason, 1 if employed), and household income (continuous, included as log odds in models). We also report relevant individual-level measures related to housing (whether respondent made housing accessibility upgrades since last wave).

Place-based independent variables. Our primary county-level measure is *rural*, coded as zero if not rural and one if rural. This measure is derived from the 2013 Beale Rural-Urban Continuum codes provided on the HRS Cross-Wave Census Region/Division and Mobility File (2018 version 8). In this classification scheme, urban counties are those classified as metropolitan based on their metro area population size. We identify rural counties using the nonmetropolitan codes (Beale codes of 3 through 9), 29.2% of the weighted sample resides in rural counties using this method.

In addition, we include several contextual measures of each county of residence from the ACS. These contextual measures are designed to identify aspects of each person's community that are similar to, or proxies for, dimensions identified by the WHO and the AARP as important for well-being of older adults. These measures also are designed to account for measures of variation that are particularly important for rural communities (Hamilton et al., 2008). For transportation, we examine the percentage of people in that county who reported commuting by public transportation, foot, or bike. This is taken as a proxy for the accessibility of pedestrian travel in a community. Public transportation availability is particularly beneficial to low-income residents and people who cannot drive due to a functional limitation (e.g., vision, cognition, mobility). We include those who walk or cycle to work in this measure, as pedestrian and bike travel is correlated with built environments that are amenable to these modes of transportation (e.g., dedicated footpaths or bike lanes), at least in metropolitan communities (Le et al., 2018).

To understand variation within rural places, we include an indicator as to whether the county experienced population loss, whether the county is coded as 'persistent poverty' using USDA standards, and whether the amenity rating on the USDA scale was below 0, a rating that incorporates physical aspects of the area, including weather, proximity to water, and topographical variation (United States Department of Agriculture Economic Research Service, 2019). We also include the percentage of the population that has limited access to food shopping, a measure designed to capture access to healthy food (Ailshire et al., 2020b).

3.3 Statistical Analysis

We first present a descriptive analysis to identify the extent to which functioning declines over time among older residents. Chi-square tests report differences by type of place (rural/non-rural) and by functional decline status (decline/no decline). We then use logistic regression modeling with marginal effects to report the predicted probability of experiencing a decrease in well-being associated with type of community and change in function.

All analysis was conducted using Stata v15.1.

4.0 Findings

Table 1 displays the weighted demographic characteristics of the population by the main independent variables: change in function (at the individual level) and geographic location (rural or urban).

Table 1. Demographic Characteristics of the Population 65 and Older who Have not Moved in Last two Years, 2016 (weighted).

	Overall number of cases	**%**	**Change in function** **No decline (Col % or mean)**	**Decline (Col % or mean)**	**P**	**County of residence** **Not rural (Col % or mean)**	**Rural (Col % or mean)**	**p**
County of residence								
Not Rural	5667	70.8	71.4	68.7				
Rural	2234	29.2	28.6	31.4				
Functional decline								
No Decline	6100	78.9				79.5	77.3	
Decline	1801	21.1				20.5	22.7	
Age (mean)	-	74.3	73.9	75.8		74.3	74.0	
Gender					**			
Male	4634	44.9	46.4	39.5		55.1%	54.9	
Female	3267	55.1	53.6	60.5		44.9%	45.1	
Race/ethnicity					**			***
White, non-Hispanic	5595	80.9	82.1	76.5		77.8%	88.5	
Black, non-Hispanic	1230	8.7	8.1	10.7		9.9%	5.7	
Other, non-Hispanic	192	2.4	2.3	3.1		2.5%	2.5	
Hispanic	881	8.0	7.5	9.8		9.9%	3.3	
Marital status					***			
Married or partnered	4582	62.1	64.0	54.9		61.7%	63.1	

Table 1 continued

Not married/partnered	3319	37.9	36.0	45.1		38.3%	36.9	
Employment status					***			
Not working	6385	77.0	75.1	84.5		76.5%	78.5	
Employed	1496	23.0	24.9	15.5		23.5%	21.5	
Household Poverty status					***			
Above poverty	7145	92.5	93.5	88.7		92.4%	92.7	
At/below poverty	756	7.5	6.5	11.3		7.6%	7.3	
Household income								
mean		$76,174	$79,849	$62,450		$82,556	$60,669	
median		$43,897	$47,016	$34,800		$45,330	$41,312	
Education					***			***
Less than college	6057	72.0	69.8	80.5		69.8	77.5	
College educated	1841	28.0	30.2	19.6		30.2	22.5	
Household accessibility upgrades made					**			
None made in last 2 years	6731	86	86.9	82.7		86.1	85.7	
Upgrades made or house already accessible	1170	14.0	13.1	17.3		13.9	14.3	

n=7,901. *p* shows the probability associated with a Chi-square test comparing the distribution of each demographic variable by whether individual experienced functional decline (middle columns) or lived in a rural county (right columns) * p<0.05, ** p<0.01, *** p<0.001

On our primary individual-level independent variable, 21.1% of the sample experienced a decrease in function. Those experiencing functional decline were more likely to be male (60.5% compared to 53.6% among those with no decline, $p<0.01$), and less likely to be white (76.5% of those with functional decline were white compared to 82.1% of those with no decline, $p<0.01$). Those who experienced functional decline were also less likely to be married or working, though this may be a function of age.

The mean age of the population aged 65 and older was 74 years old and most (80.9%) are white.

Table 2 presents the odds ratios for three models as follows: Model 1 for each dependent variable incorporates the individual-level characteristics, including decrease in function. Model 2 examines the county-level covariates of interest, including the rural/non-rural indicator. Finally, Model 3 incorporates all individual and county measures. We focus our reporting of results on Model 3 for both well-being measures—life satisfaction and perceived decrease in health.

When controlling for individual and other county-level measures, the rural indicator did not offer any predictive power in explaining variations in life satisfaction. Decrease in individual functioning was significantly associated with decreases in life satisfaction (OR=1.20, $p<0.05$). Being employed (OR=0.75, $p<0.05$) or partnered (OR=0.76, $p<0.05$) was protective of decline in life satisfaction. Among the community level measures, only walkability was associated with declining life satisfaction (OR=3.48, $p<0.05$)

For the other measure of well-being, perceived decline in health, both walkability (OR=3.51, $p<0.001$) and limited food access (OR=2.05, $p<0.05$) were predictive. Experiencing a decline in function results in 27% increased odds that someone will report that their health has worsened ($p<.01$). Age also is associated with a small increase in odds of perceiving that one's health has worsened (OR=1.02, $p<.01$) as is making accessibility upgrades (OR=1.61, $p<.001$) and being employed (OR=0.67, $p<0.001$).

Table 2. *Logistic Regression Models Predicting Decrease in Well-being Between 2014A2016, Adults Aged 65 and Older*

	DV=Perceived decrease in health						DV=Decrease in life satisfaction					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	Odds ratio (Std Error)	*p*	Odds ratio (Std Error)	*p*	Odds ratio (Std Error)	*p*	Odds ratio (Std Error)	*p*	Odds ratio (Std Error)	*p*	Odds ratio (Std Error)	*p*
Individual level measures												
Experienced decrease in function	1.26 (.09)	***	-		1.27 (.09)	**	1.19 (.10)	*	-		1.20 (.10)	*
Age	1.02 (.01)	***	-		1.02 (.01)	**	1.00 (.01)		-		1.00 (.01)	
Race/ethnicity (ref=White, NH)												
Black, NH	0.69 (.07)	***	-		0.67 (.08)	**	1.13 (.15)		-		1.06 (.14)	
Other, NH	1.10 (.23)		-		1.13 (.24)		0.92 (.29)		-		0.90 (.29)	
Hispanic	0.92 (.10)		-		0.92 (.11)		1.04 (.21)		-		0.96 (.18)	
Male (ref=female)	1.10 (.09)		-		1.10 (.09)		1.08 (.08)		-		1.08 (.08)	
College educated	0.98 (.07)		-		0.97 (.07)		0.93 (.10)		-		0.92 (.10)	
Employed	0.67 (.07)	***	-		0.67 (.07)	***	0.75 (.09)	*	-		0.75 (.10)	*
HH income (log odds)	0.94 (.03)		-		0.94 (.03)		0.91 (.05)	*	-		0.90 (.05)	
Partnered	0.94 (.09)		-		0.95 (.09)		0.75 (.08)	***	-		0.76 (.08)	*
Made accessibility upgrades	1.60 (.12)	***	-		1.61 (.12)	***	1.18 (.14)		-		1.18 (.14)	

Table 2 continued

County level measures												
Rural	-		1.25 (.09)	**	1.19 (.09)	*	-		1.10 (.12)		1.09 (.12)	
Population loss county	-		0.96 (.11)		0.94 (.12)		-		0.87 (.12)		0.81 (.11)	
Persistent poverty county	-		1.04 (.13)		1.08 (.14)		-		1.19 (.21)		1.14 (.19)	
Low amenity county	-		0.98 (.07)		1.03 (.07)		-		1.04 (.09)		1.03 (.09)	
Percent population has limited access to food shopping	-		1.98 (.53)	*	2.05 (.57)	*	-		1.26 (.58)		1.30 (.60)	
Percent took public transport, walked, cycled to work	-		3.03 (.96)	***	3.51 (1.11)	***	-		3.74(2.07)	*	3.48 (1.97)	*
Intercept	0.15 (.09)	***	0.27 (.02)	***	0.11 (.07)	***	0.33 (.24)		1.00 (.01)	***	0.29 (.22)	
Number of Cases	*7,806*		*7,879*		*7,805*		*7,107*		*7,167*		*7,805*	

* p<0.05,** p<0.01, *** p<0.001 (2-tailed tests)

Table 3 shows the marginal effects of model 3 (the full model) for each dependent variable, displayed as average predicted probabilities of experiencing a decline in well-being. Note that 26.1% of the sample perceived that their health had decreased and 10.8% reported lower life satisfaction this wave compared to last. Holding constant all measures in the full models presented in Table 2, those with functional decline had higher predicted probability of experiencing a decline in life satisfaction (0.12 for those in nonrural counties and 0.13 for those in rural counties). Also note that those who experienced functional decline have higher predicted probabilities of health decline than those without loss of function. This was most pronounced among those residing in rural counties (predicted probability of 0.32).

Table 3. *Average Predicted Probability of Experiencing Decrease in Well-being for Residents Aged 65 and Older in Rural and Nonrural Counties*

	Perceived decrease in health		**Decrease in Life Satisfaction**	
	No functional decline	Experienced functional decline	No functional decline	Experienced functional decline
Non-rural	0.24 (.01)	0.29 (.01)	0.10 (.05)	0.12 (.01)
Rural	0.28 (.01)	0.32 (.02)	0.11 (.01)	0.13 (.01)

5.0 Discussion

Our analysis observed an association between rural status and declining life satisfaction and perceived decreases in health among persons aged 65 and older in the United States. This finding is consistent with that of other researchers who have noted lower rates of life satisfaction and health for persons residing in rural areas (Case & Deaton, 2015; Graham & Lawlor, 2018; Plaut et al., 2002).

While functional decline was associated with changes in life satisfaction—after controlling for other individual-level covariates—the effect was somewhat small. This should be of interest to aging policy researchers and service providers as it suggests that functional decline in and of itself does not influence overall satisfaction with life. Future qualitative work could delve into this issue in more detail to understand how older adults adjust their perceptions of life as decreases in function accrue. In addition, a reframing of the measure of life satisfaction to specifically ask respondents whether life was better, the same, or worse compared to 2 years ago might yield different results than the measure used here which simply asked, in each wave, a respondent's current satisfaction with life.

This analysis yields some contradictory findings in our understanding of the role of county characteristics in explaining change in well-being, with several statistics that run counter to our hypotheses. The finding related to our community walkability measure being associated with a decrease in life satisfaction is one example. One explanation for this is that many counties, particularly rural counties, have very low rates of non-car commuting to work. The average across all counties represented in the HRS sample is just 4.5%. A better measure would capture walkability and accessibility of public spaces, not just work commutes. Adding measures that better assess this construct, and do so at a more specific geographic level, would benefit future research in this area. The built environment is difficult to capture and measures that are not specific to the immediate neighborhood of the person studied may have limited utility.

5.1 Limitations

There are several limitations to the results presented here. First, we limited this analysis to people who did not move between waves and who were able to provide a self-report of health and life satisfaction. While a relatively small proportion of people moved between waves, these people may differ in our measures of interest. This may introduce bias, particularly if those who moved did so because their community did not serve their needs well. In addition, a small number of HRS respondents have a proxy respond for them. This can occur for several reasons, but a primary reason is if the respondent has a decline in cognitive function that prevents their participation in the interview. Subjective questions—such as perception of life satisfaction and health—are not asked since a proxy is not a suitable respondent for such items. This would exclude from our analysis those individuals who experienced a substantial decline in function and also may impact estimates.

Finally, we wish to acknowledge the limitation of using counties to study community characteristics. While counties offer some utility, there is often much variation within counties that may be masking the relationship between well-being and place characteristics. We expect that a more detailed geographic analysis would explain more of the place-based variation. This analysis is meant to serve as a first step at understanding the relationship between loss of function, decrease in well-being, and how community characteristics shape this process. Inclusion of additional community characteristics and at finer geographic levels is warranted.

6.0 Conclusion

This analysis hints at some of the ways in which county-level structural factors may explain differences in well-being associated with aging. Future research in this area should consider more detail in two aspects: geography and measurement. Geographically, it would be ideal to have comparisons that are more specific than county level comparisons. Both quantitative and qualitative studies of individual communities could serve as useful extensions of this. The community development literature considers the importance of local context, but that where place-based differences may exist, these may not be places according to the political boundaries we use and that are readily available for analysis. Further, place may be significant in meaning based on culture, resources, or physical accessibility, but the understanding of place itself may vary regionally (Gaspard et al., 2023), further complicating this comparison. Operationally, more detailed measures of community factors would be useful, particularly additional measures that align with the WHO framework for healthy aging. Identifying current measures of the physical built environment at the local level is one methodological challenge. Further, as these two measures of well-being yielded differences in what measures help to explain the variation in outcomes, additional ways of operationalizing well-being warrant exploration. Additional research adding to our understanding of the intersection of aging, disability onset, and community could benefit residents and communities alike.

Communities have generally not included input from people with disabilities as they plan their infrastructure. An obvious example is when buildings are not physically accessible, but political and social participation is also important, and these domains of community life also may not be inclusive. Using a healthy aging framework to consider methods of improving or maintaining well-being, life satisfaction, and health for older adults, community planners can better consider how to best serve this population. Clearly, communities with a more rapidly aging population will need to address these issues sooner than others. These efforts may serve as a steppingstone to support those with disabilities and the community more broadly.

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