

# Depression and Disability Associated with Worse Cognitive Functioning in Sexual and Gender Minority Older Adults

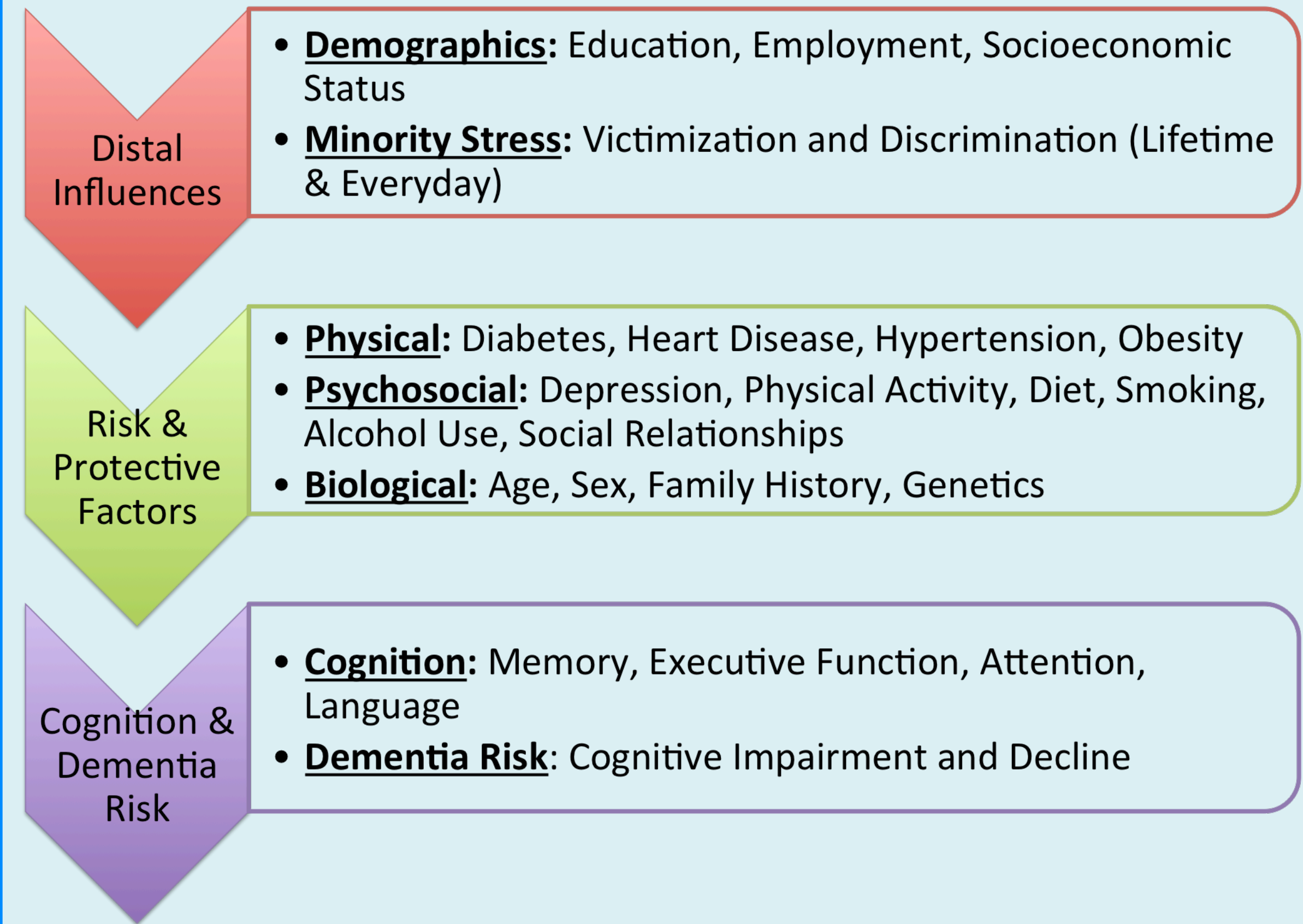
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## Background

- By 2030, there will be nearly 6 million sexual and gender minority (SGM) older adults (aged 60 and older) in the U.S. who identify as lesbian, gay, bisexual, and transgender.
- SGM older adults experience greater health disparities compared to their heterosexual peers.
- Many of these health disparities are considered modifiable risk factors for dementia (diabetes, depression, heart disease, hypertension, smoking, and social isolation).
- Little is known about the cognitive health of SGM older adults and associated health and social factors.

## Conceptual Model



## Objectives

- To examine the relationship between modifiable risk factors for dementia and subjective cognitive functioning in SGM older adults.
- To identify additional health and social factors associated with subjective cognitive functioning.

## Study Overview & Methods

- In 2010-2011, a community-based sample of SGM older adults was recruited from the Center on Halsted, a comprehensive LGBT community center in the Midwest.
- Cross-sectional study: SGM adults aged 50 and older (N=210) completed a self-administered survey.
- Multivariable regression was used to examine the associations between modifiable risk factors for dementia, other health and social factors, and self-reported cognitive functioning.

## Subjective Cognitive Functioning

- Assessed via a previously validated, 4-item cognitive measure from the Medical Outcomes Study HIV Health Survey (Wu, Revicki, Jacobson, & Malitz, 1997).
- Questions asked about difficulty with reasoning and problem solving, memory problems, trouble with attention, and difficulty with doing activities involving concentration and thinking over the past month.
- Cognitive functioning was rated from 0–100, with higher scores suggesting better cognitive function.

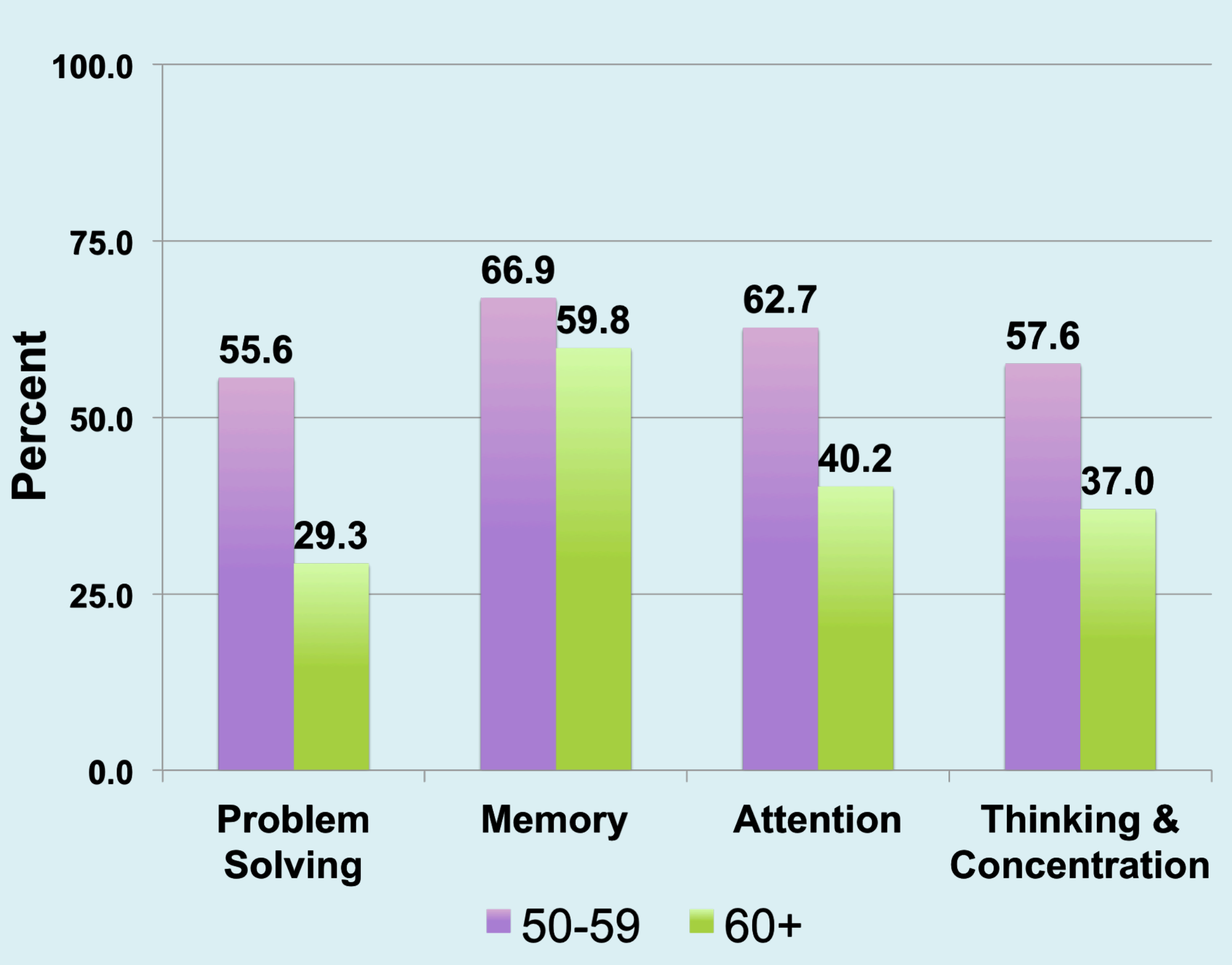
## Health and Social Factors

- Modifiable risk factors for dementia:** self-reported chronic conditions (diabetes, heart disease, hypertension, and smoking), and depression (10-item Center for Epidemiological Studies Depression Scale).
- Other health and social factors:** HIV status, disability (ADLs and IADLs), self-rated health, living alone, social network size, social support, and experiencing discrimination from health providers.

## Table 1. Participant Characteristics

Characteristics (N=210)	N (%)
<b>Demographics</b>	
Age, mean (SD)	59.6 (8.0)
Gender, Female	50 (60.3)
Transgender	11 (5.2)
Gay/Lesbian	163 (80.3)
Bisexual	27 (13.3)
Black	65 (34.2)
> High School	163 (79.9)
Income Inadequate	125 (61.2)
<b>Modifiable Risk Factors</b>	
Diabetes	32 (15.4)
Depression (CES-D ≥ 10)	75 (35.7)
Heart disease	27 (13.0)
Hypertension	39 (18.8)
Current Smoking	53 (25.7)
<b>Other Health and Social Factors</b>	
HIV	71 (33.8)
Disability, mean (SD)	1.8 (4.1)
Poor self-rated health	46 (24.0)
Live alone	119 (63.0)
Social network size, mean (SD)	10.61 (7.4)
Social support, mean (SD)	4.13 (3.4)
Discrimination from health providers	22 (10.5)

## Cognitive Impairment by Age Group



## Table 2. Associations with Subjective Cognitive Functioning

Characteristics	Cognitive Functioning	P-Value
<b>Demographics</b>		
Age	r = 0.3	< .001
Gender, Female	78.0 (19.4)	.07
Transgender	75.9 (14.6)	.02
Gay/Lesbian	83.8 (17.5)	
Bisexual	73.8 (24.8)	
Black	73.8 (21.3)	<.001
> High School	83.7 (17.6)	.03
Income Inadequate	78.7 (18.7)	.002
<b>Modifiable Risk Factors</b>		
Diabetes	77.0 (21.6)	.17
Depression (CES-D ≥ 10)	72.6 (20.7)	<.001
Heart disease	80.4 (20.1)	.69
Hypertension	79.5 (16.9)	.39
Current Smoking	76.1 (19.3)	.008
<b>Other Health and Social Factors</b>		
HIV	76.0 (21.9)	.003
Disability	r = -0.2	.008
Poor self-rated health	76.7 (17.7)	.03
Live alone	81.2 (18.9)	.29
Social network size	r = 0.02	.79
Social support	r = -0.1	.17
Discrimination from health providers	77.7	.17

## Table 3. Multivariable Model

Characteristic	β	95% CI	P-Value
Age	.17	0.1, 0.7	.02
Gender, Female	-.14	-10.9, -0.2	.04
Gay/Lesbian	.02	-5.6, 7.2	.80
Black	-.22	-14.5, -2.4	.006
>High School	-.06	-9.1, 3.4	.37
Income Inadequate	.07	-2.4, 7.5	.31
Depression	-.21	-13.1, -2.7	.003
Disability	-.14	-1.2, -0.1	.04

Note: β = Standardized coefficient; R<sup>2</sup> = .27

## Discussion

- SGM older adults aged 50-59 reported worse cognitive functioning than those aged 60 and older.
- Black SGM older adults also reported worse cognitive functioning compared to their white peers.
- Depression and disability were associated with reporting worse cognitive functioning, which has been found in previous studies on subjective memory.
- Subjective cognitive impairment is associated with future cognitive decline and risk of dementia (Rabin et al., 2015).
- Depression and disability may be important areas to consider for screening SGM older adults at risk for cognitive impairment and dementia.
- Limitations: results are cross-sectional and based on self-reported cognitive functioning.

## Health Implications

- These results provide insight into the potential correlates of cognitive functioning in SGM older adults.
- There is a need for longitudinal studies with objective assessments of cognition in SGM older adults.
- Future research is needed to better understand cognitive functioning and dementia risk in diverse, aging SGM populations.

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