

Impaired Health Status is Associated with an Increased Risk of Mild Cognitive Impairment

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Nothing to Disclose



Mild Cognitive Impairment

- Transitional stage between normal aging and dementia
- Cognitive decline or impairment in one or more cognitive domains beyond what is normal for age and education
- Essentially normal functional activities
- Not demented

Significance of MCI

- Increased risk factor of dementia
 - 1-2% of the general population progress to dementia per year
 - 10-15% of subjects with MCI progress to dementia per year
- Increased risk of mortality
- Early diagnosis may prevent progression to dementia or death

Self-Reported Perception of Health

- How a person rates their own health
- Summary measure of health status
- Predicts:
 - Functional decline
 - Health care utilization
 - Mortality
- May help identify subjects at increased risk of geriatric conditions such as MCI, but has not been fully evaluated

Bluestein, D Can Fam Physician:2006

Study Sample

- **Sampling frame of Olmsted County, MN**
 - **The Rochester Epidemiology Project (REP) medical records-linkage system**
- **The eligible population comprised:**
 - **9,953 residents**
 - **Ages 70 - 89 years**
 - **October 1, 2004 (index date)**
- **Stratified sampling within 4 cells:**
 - **Age: 70 - 79, 80 - 89**
 - **Sex: Men, Women**
- **2,050 participated in an in-person evaluation**

Measures of Cognitive Performance

- **Interview - nurse**
 - One item self-reported perception of health
- **Cognitive testing - psychometrist**
 - Domains: Memory, language, visuospatial, executive function
- **Neurological evaluation - physician**
 - Determine etiology
 - Examination to exclude other conditions
- **MCI diagnosis made by consensus**
 - Amnestic MCI: memory is impaired
 - Non-amnestic MCI: -no memory impairment, but impairment in other cognitive domains

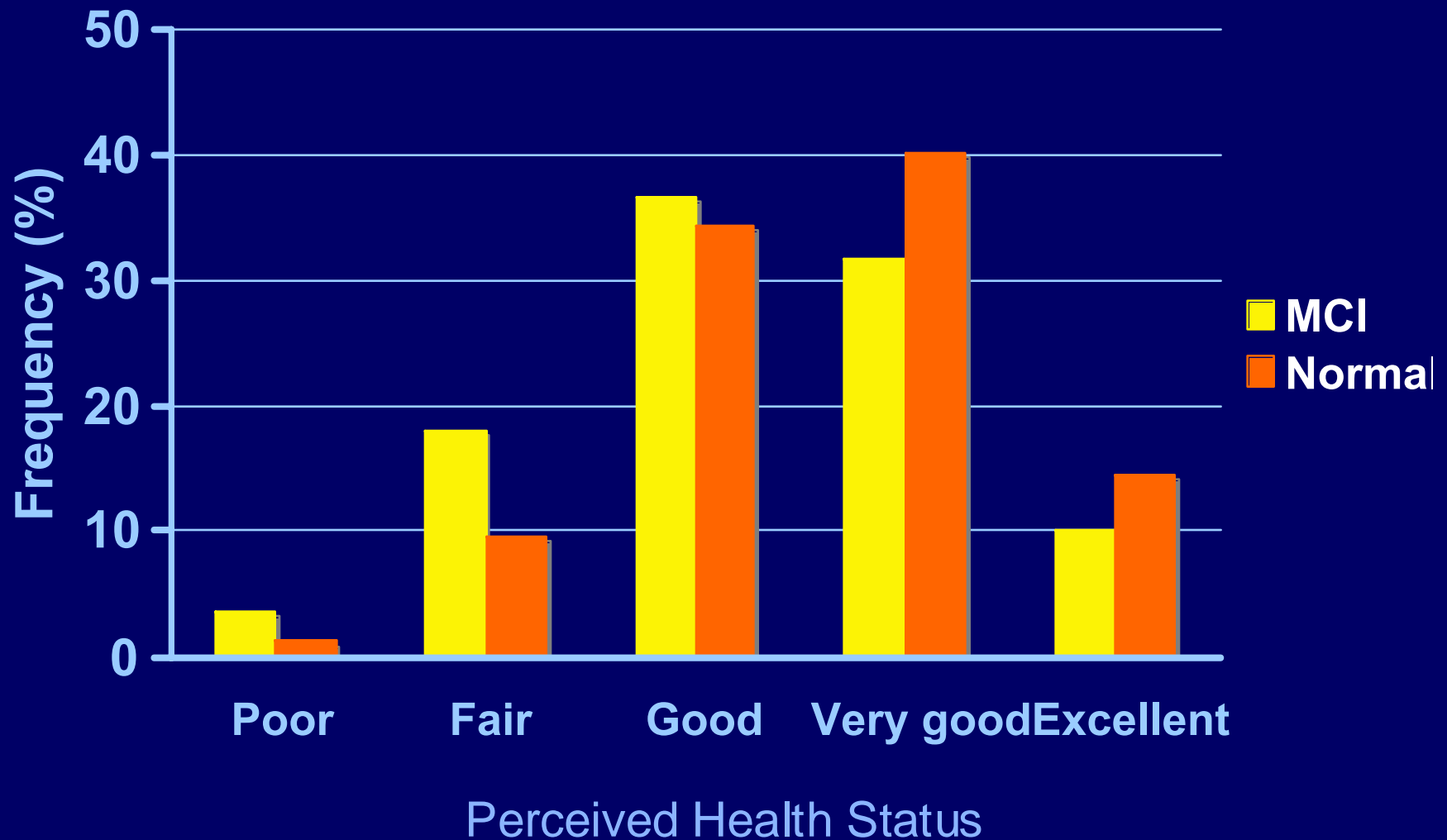
Statistical Analyses

- **Cross-sectional case-control analyses**
- **Cases: All MCI cases**
- **Controls: All subjects free of MCI or dementia**
- **Exposure: self reported perceived health**
 - Fair, poor, good, very good, excellent
- **Adjustments: sex, education, age, comorbidity**
- **Odds ratios (OR), 95% confidence intervals (95% CI)**
- **Two-sided tests, $\alpha = 0.05$**

Characteristics of Sample

	MCI	Controls	p
Total sample	329	1640	- -
Age (median), y	82.7	79.6	<0.0001
Sex (n, % Male)	192 (58.4%)	810 (49.4%)	0.003
Education (median), y	12	13	0.0001
Health fair/poor (n, %)	71 (21.6%)	177 (10.8%)	<0.0001

Perceived Health Status and MCI



Perceived Health Status and MCI

Univariate

Poor/fair OR = 2.26 (1.67, 3.07)

Multivariable

Poor/fair OR = 2.03 (1.49, 2.78)¹

Poor/fair OR = 1.81 (1.31, 2.50)²

¹ Adjusted for age, sex, education

² Adjusted for age, sex, education and comorbidity

Perceived Health Status and MCI by Sex

Men	OR = 2.22 (1.47, 3.35)¹
	OR = 1.96 (1.29, 3.00)²
Women	OR = 1.86 (1.14, 3.02)¹
	OR = 1.67 (1.02, 2.76)²

¹ Adjusted for age and education

² Adjusted for age, education, and comorbidity

Perceived Health Status and MCI by Age

70 - 79 **OR = 2.30 (1.33, 3.99)¹**

OR = 1.95 (1.09, 3.48)²

80 - 89 **OR = 1.96 (1.34, 2.87)¹**

OR = 1.79 (1.22, 2.64)²

¹ Adjusted for sex, education

² Adjusted for sex, education, and comorbidity

Associations by MCI Subtype

Amnestic MCI **OR = 1.87 (1.31, 2.68)¹**
OR = 1.66 (1.15, 2.41)²

Non-amnestic MCI **OR = 2.46 (1.47, 4.11)¹**
OR = 2.21 (1.30, 3.74)²

¹ Adjusted for age, sex, education

² Adjusted for age, sex, education, and comorbidity

Conclusions

- Perceived health status is associated with cognitive impairment
- The association is stronger in:
 - Men
 - Younger subjects
 - Amnestic MCI
- Perceived health status may help identify elderly subjects who may be cognitively impaired