

# Disability in a Community Population with MS with and without Mental Disorders

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## Abstract

**Background:** Population-based studies are needed to evaluate interactions between disability and mental health.

**Materials & Methods:** This study was based on an analysis of a Canadian post-censal survey called the Participation and Activity Limitation Survey (PALS).

**Results:** PALS identified 0.2% MS prevalence. Both MS and mental disorders were generally associated with impairment, but a consistent pattern of interaction between these conditions and MS was not found. Interestingly, MS was found to be associated with higher levels of life satisfaction in certain domains (family and friends).

**Conclusions:** Mental disorders contribute to disability in MS but these conditions were not found to interact synergistically in contributing to health-related impairments.

## Background

MS is one of the most common disabling neurological conditions among young people and is known to be associated with a variety of mental disorders, including major depressive disorder<sup>1</sup>, bipolar disorder<sup>2</sup>, psychotic disorders<sup>3</sup> and anxiety disorders<sup>4</sup>.

The PALS dataset provides an important perspective on disability related to MS since it is based on a probability sample of the general population. The survey included detailed measures of health and functional status. The prevalence of MS according to PALS is 200/100,000 – a plausible value.

**Disclosures/Conflicts:** None.

## Results

**Table 1. The PALS Sample, by MS Status**

Variable Name	Categories	With MS % (n=250)	Without MS % (n=28,390)
Sex	Male	28.5	46.4
	Female	71.5	53.6
Age Group	15-44 years	23.8	24.5
	45+ years	76.2	75.5
Marital Status	Married	59.8	57.5
	Single	20.0	17.0
	Previously married	20.2	25.5

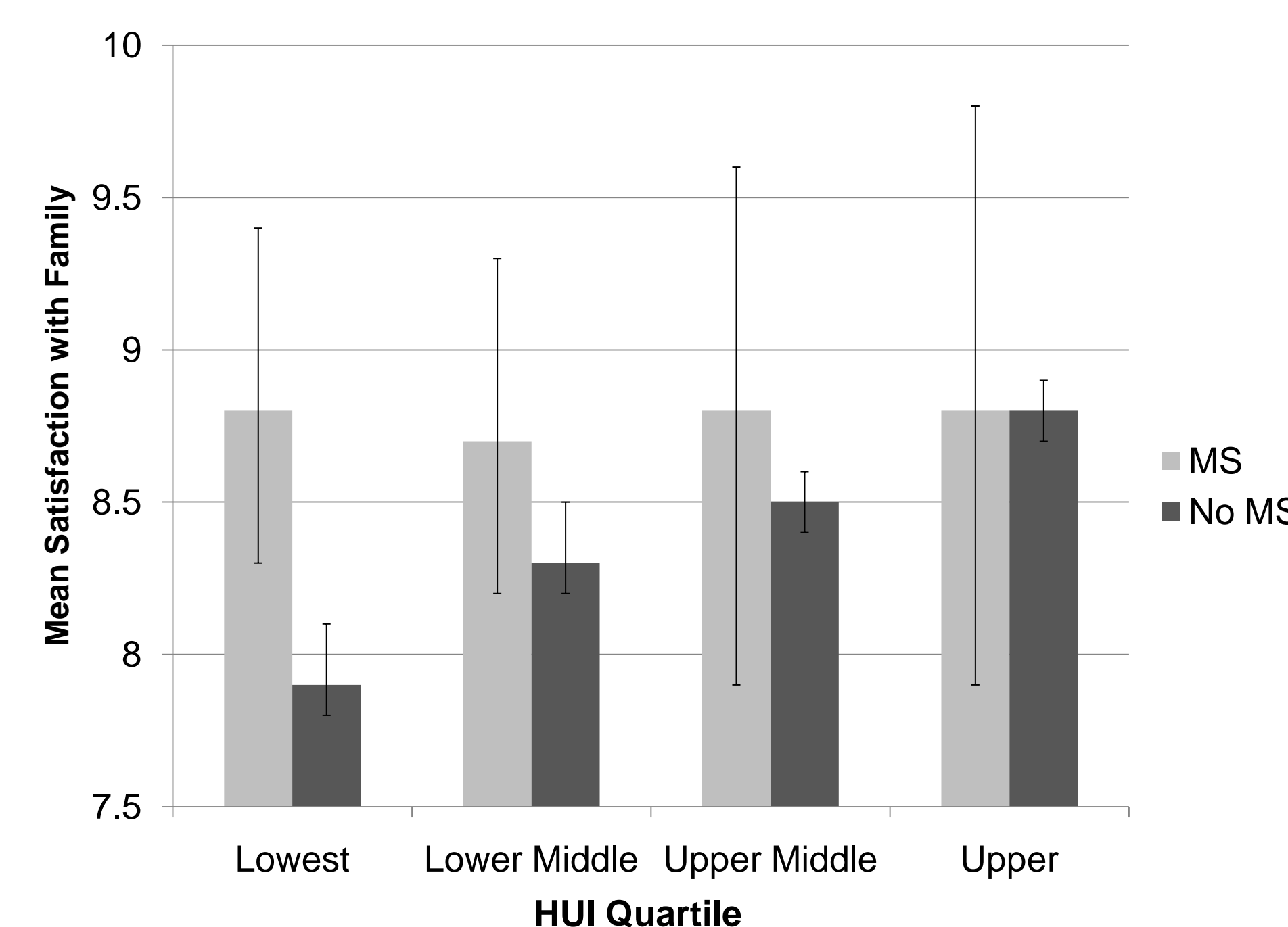
**Table 2. Frequency of Impairment, by MS**

	PALS Sample with MS N=250	PALS Sample without MS N=28,390
Hearing	11.5	24.5
Agility	87.4	54.0
Seeing	25.7	15.6
Communication	34.5	9.0
Mobility	91.9	56.0
Pain	75.5	57.0
Memory	29.0	9.4

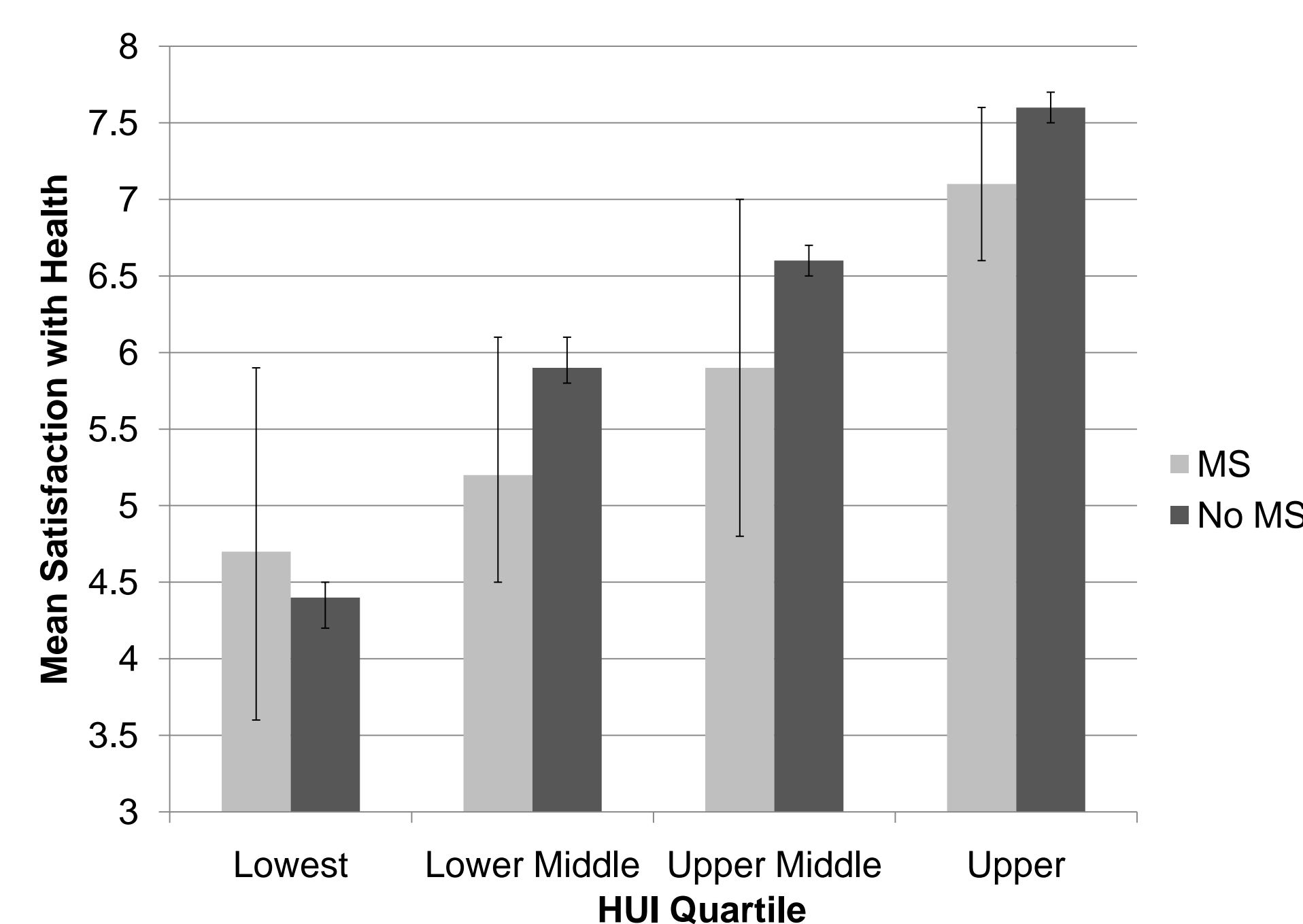
**Table 3. Frequency Ratios by MS & Mental Disorder status.**

	Frequency Ratios (95% CI)	
	MS	Mental Disorders
Agility	2.5 (1.4-4.3)	2.1 (1.5-2.8)
Seeing	1.3 (0.89-2.0)	1.3 (1.2-1.5)
Mobility	2.4 (1.7-3.4)	1.6 (1.4-1.9)
Pain	1.4 (1.0-2.0)	2.3 (2.0-2.5)
Memory	2.3 (1.6-3.3)	4.5 (3.9-5.3)

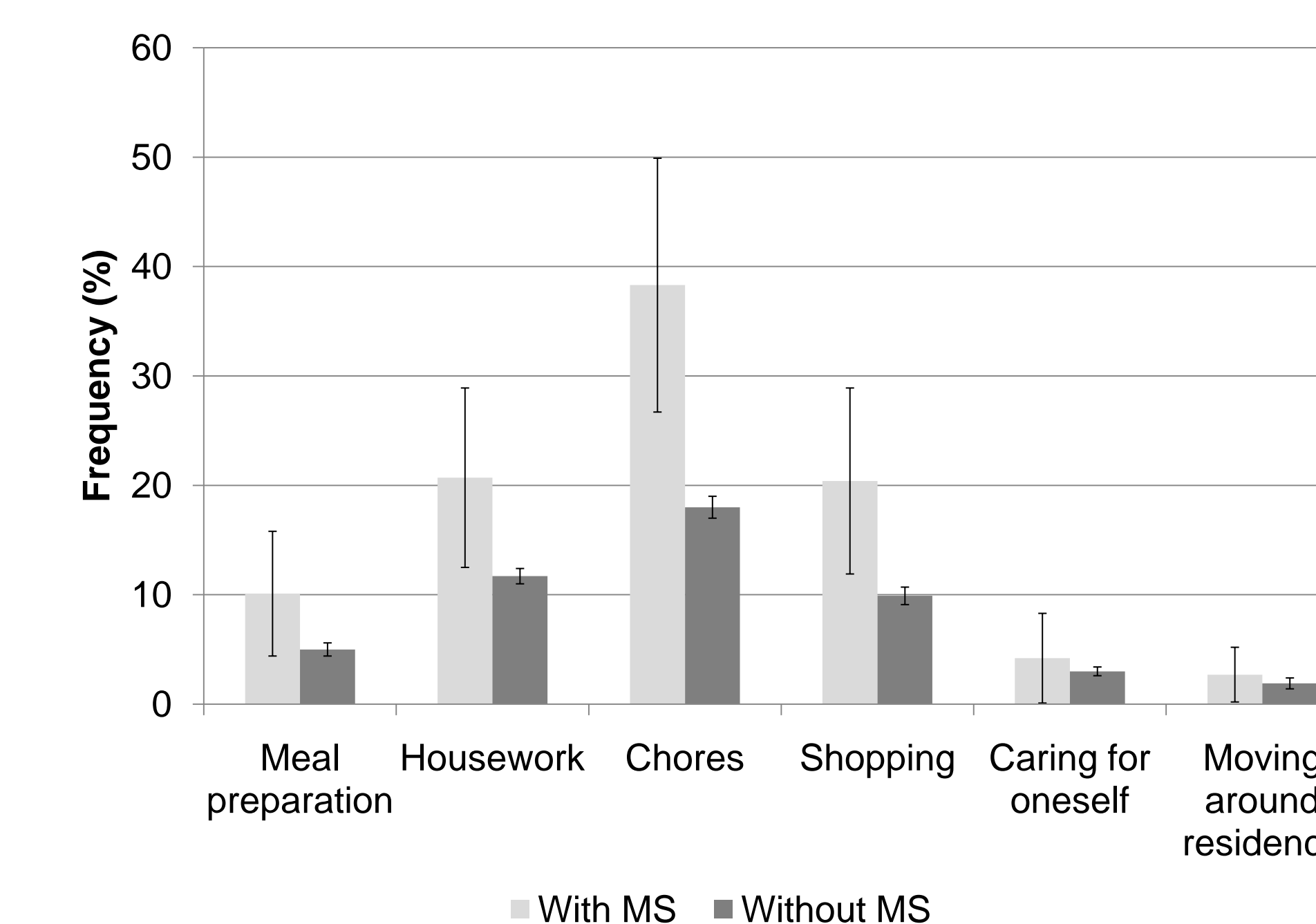
**Figure 1: Satisfaction with Family**



**Figure 2: Satisfaction with Health**



**Figure 3: Needs for Caregiver Support**



## Summary

- MS and mental disorders are each related to impairment, but seem to have additive rather than interactive effects.
- In distinction to other groups, in MS declining satisfaction with family and friends is not seen at lower health status levels.
- People with MS generally report higher levels of impairment than do other

## Limitations

- The measures employed in PALS were generally brief instruments and items that have not been externally validated.
- The main limitation of the study is that the entire sample had some sort of disability.

## Conclusions

- MS is associated with high levels of impairment. Mental disorders are also associated with impairment, but do not appear to interact with MS.

## References

1. Patten SB, Beck CA, et al. Major depression in MS: a population-based perspective. *Neurology* 2003;61:1524-7.
2. Joffe RT, Lippert GP, Gray TA, et al. Mood disorders and MS. *Arch Neurol* 1987;44:376-8.
3. Patten SB, Svenson LW, Metz LM. Psychotic disorders in MS: population-based evidence of an association. *Neurology* 2005;1123-5.
4. Korostil M, Feinstein A. Anxiety disorders and their clinical correlates in multiple sclerosis patients. *Mult Scler* 2007;13:67-72.