

Multimorbidity and cognitive impairment and its association with risk of malnutrition among older adults in an urban area of Pathanamthitta

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INTRODUCTION

Population ageing is a global phenomenon. Relevant statistics includes;
 Older adults : India – 8% Kerala – 12.6%¹
 Urban Population: India – 7.9% Kerala - 12.4%²
 Population Growth:2010 – 8% 2050 – 19%³
 Multimorbidity: Affects 95% of older adults
 Dementia: 300% increase from 2001- 2040 in India

OBJECTIVES

To estimate the prevalence of multimorbidity and cognitive impairment among older adults in an urban area of Pathanamthitta and to find its association with risk of malnutrition

METHODS

Study design- Community-based cross-sectional study
Study Population- Older adults above age of 60years residing in the urban field practice area of a tertiary care hospital in south Kerala
Study tools-Questionnaires for
 (a) Socio-demographic and clinical variables,
 (b) Mini nutritional assessment (MNA) and
 (c) Mini mental state examination (MMSE)

Sample size-332
Sampling method- Systematic Random Sampling
Data Collection-

Institutional research and ethics committee approval
 Sample recruitment, informed consent
 Data collection using interview method
Data analysis-
 Data entered into Microsoft Excel and coded.
 Data analyzed using SPSS software version 25.
 Descriptive statistics: frequency and percentage
 Association between various qualitative variables: Chi-square test and Fischer exact test.
 Relation between the scores on MNA and MMSE: Pearson's correlation

RESULTS

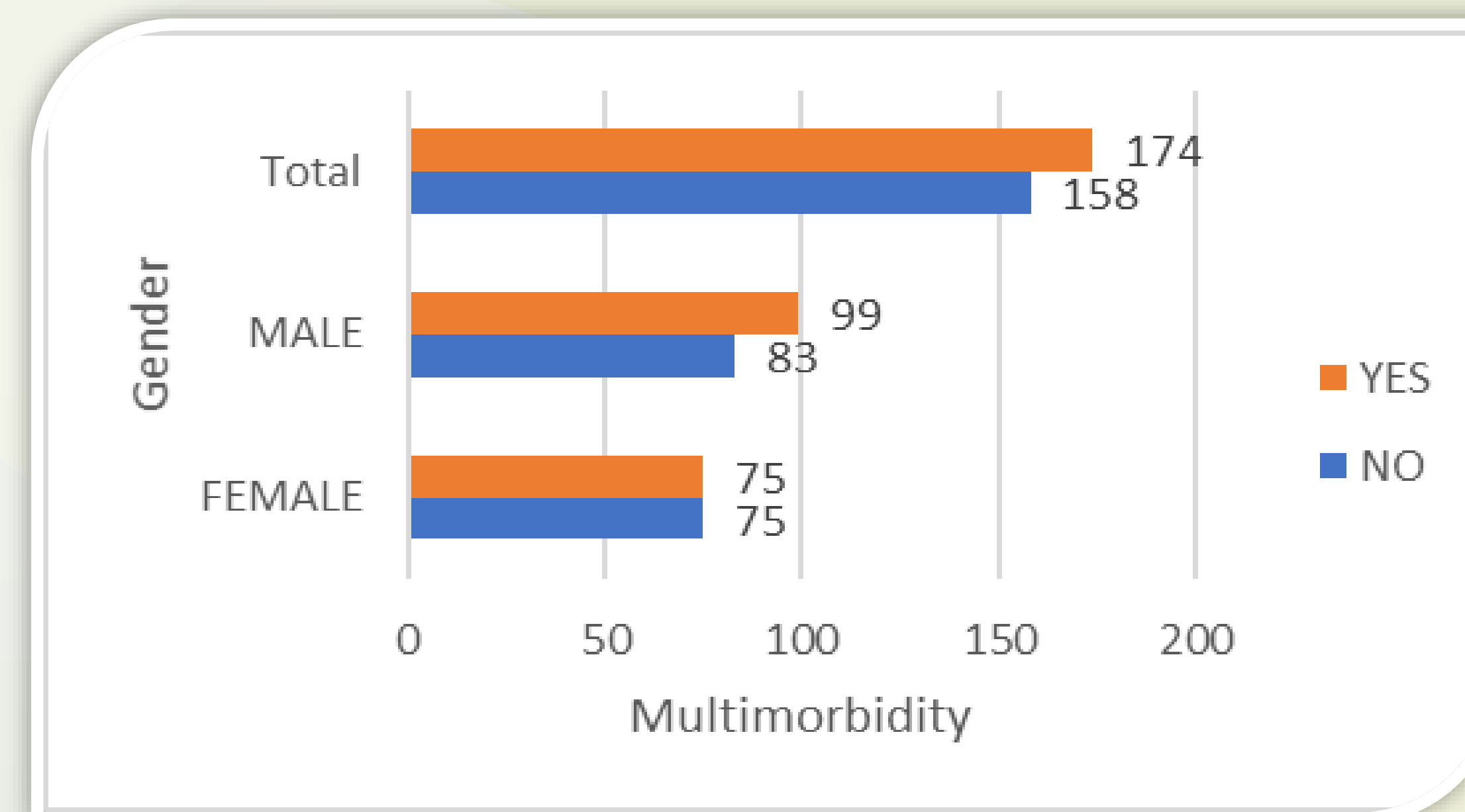


Figure 1- Prevalence of multimorbidity in the study sample by gender

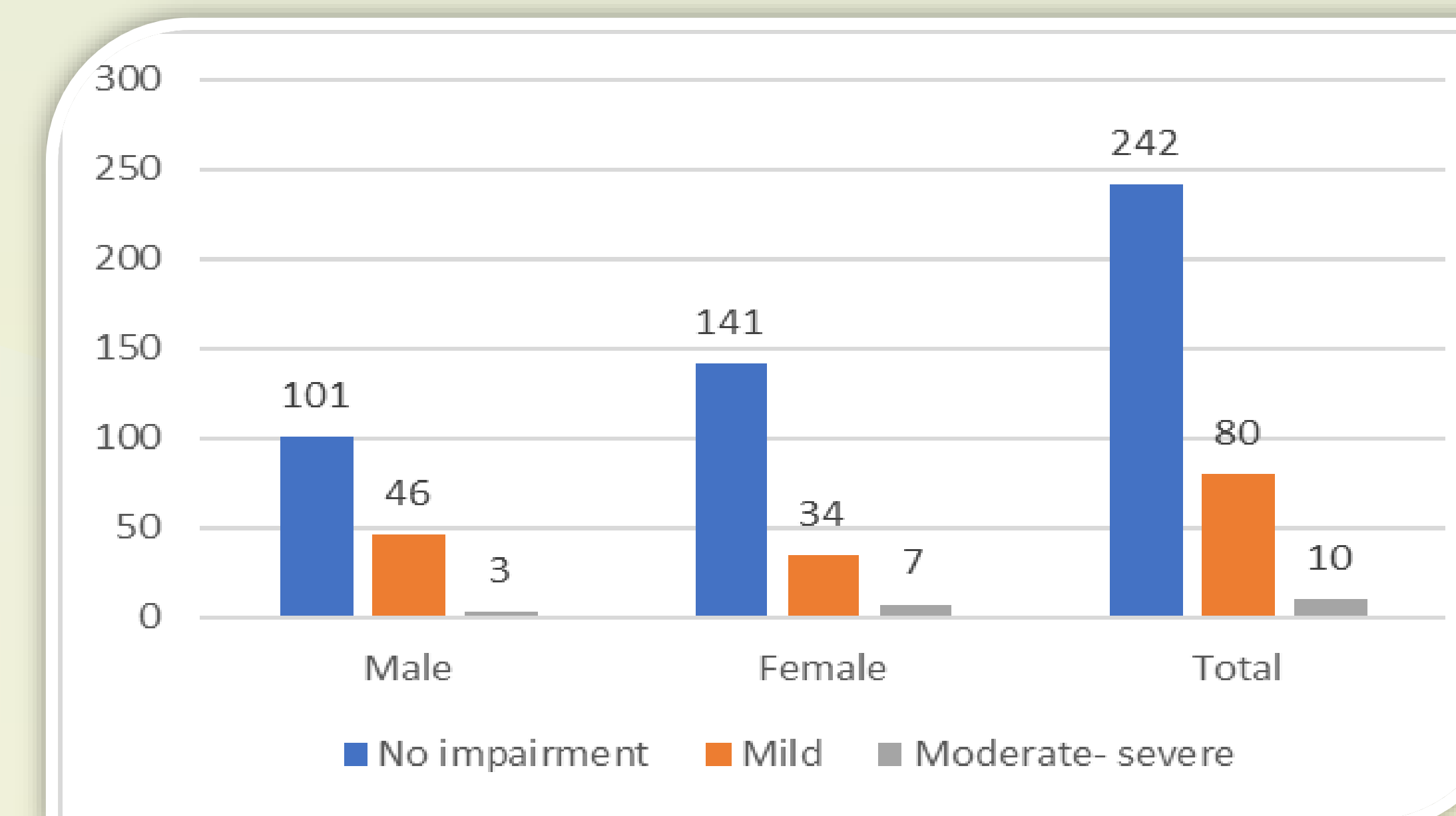


Figure 2- Prevalence of Cognitive impairment in study sample by gender

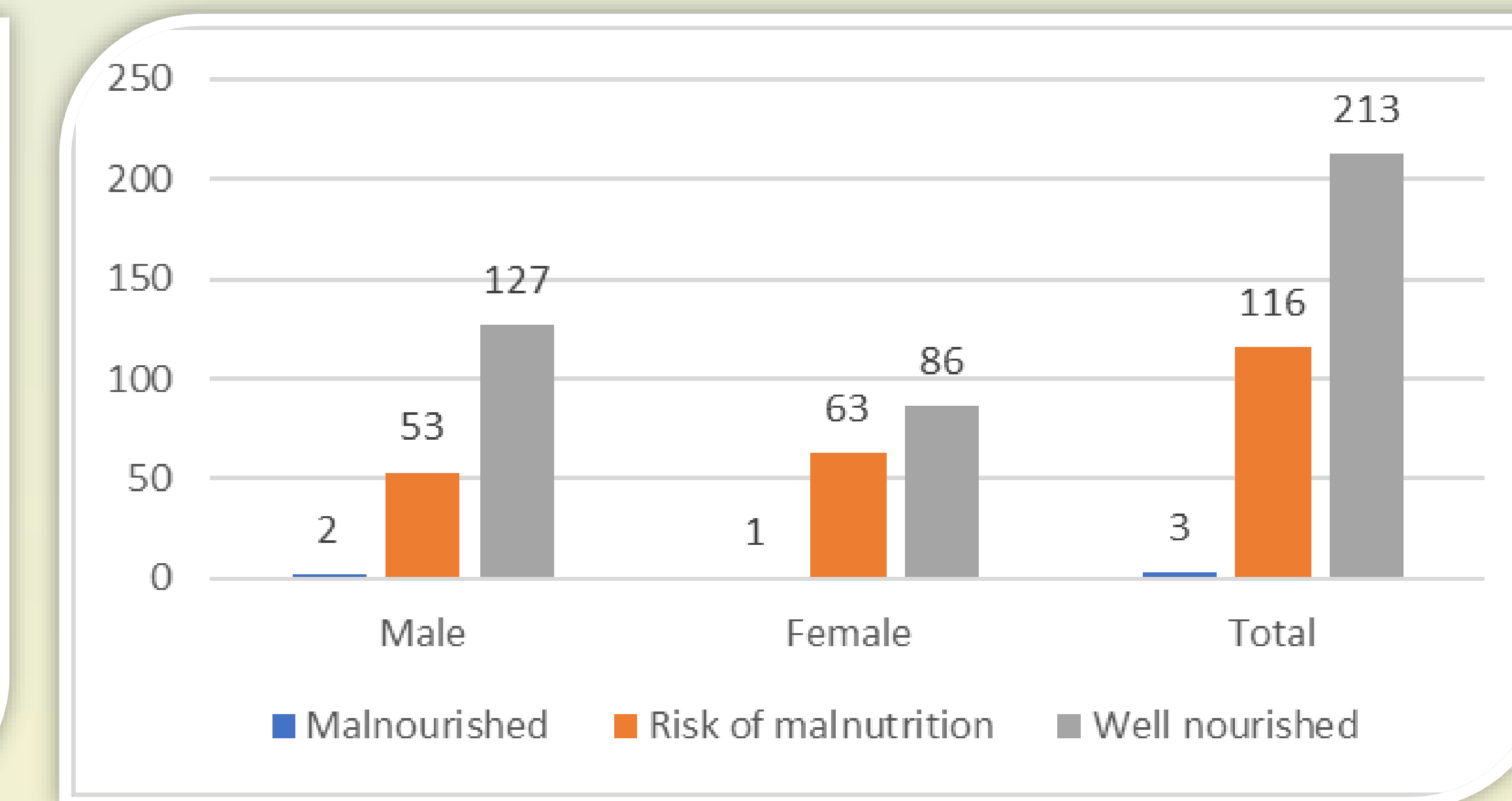


Figure 3- Nutritional status of study sample by gender

Table 1- Association of Nutritional status with cognitive impairment and multimorbidity in the study sample

Variables	Category	Nutritional Status		p-value
		Risk of malnutrition and malnourished n(%)	Well nourished n(%)	
Cognitive Impairment	Mild	47(58.8%)	33(41.3%)	<0.001
	Moderate- severe	7 (70.0%)	3(30.0%)	
	No impairment	65(26.9%)	177(73.1%)	
Multimorbidity	No	55(34.8%)	103(65.2%)	0.398
	Yes	64(36.8%)	110(63.2%)	

⁵Ramachandran et al(2019)

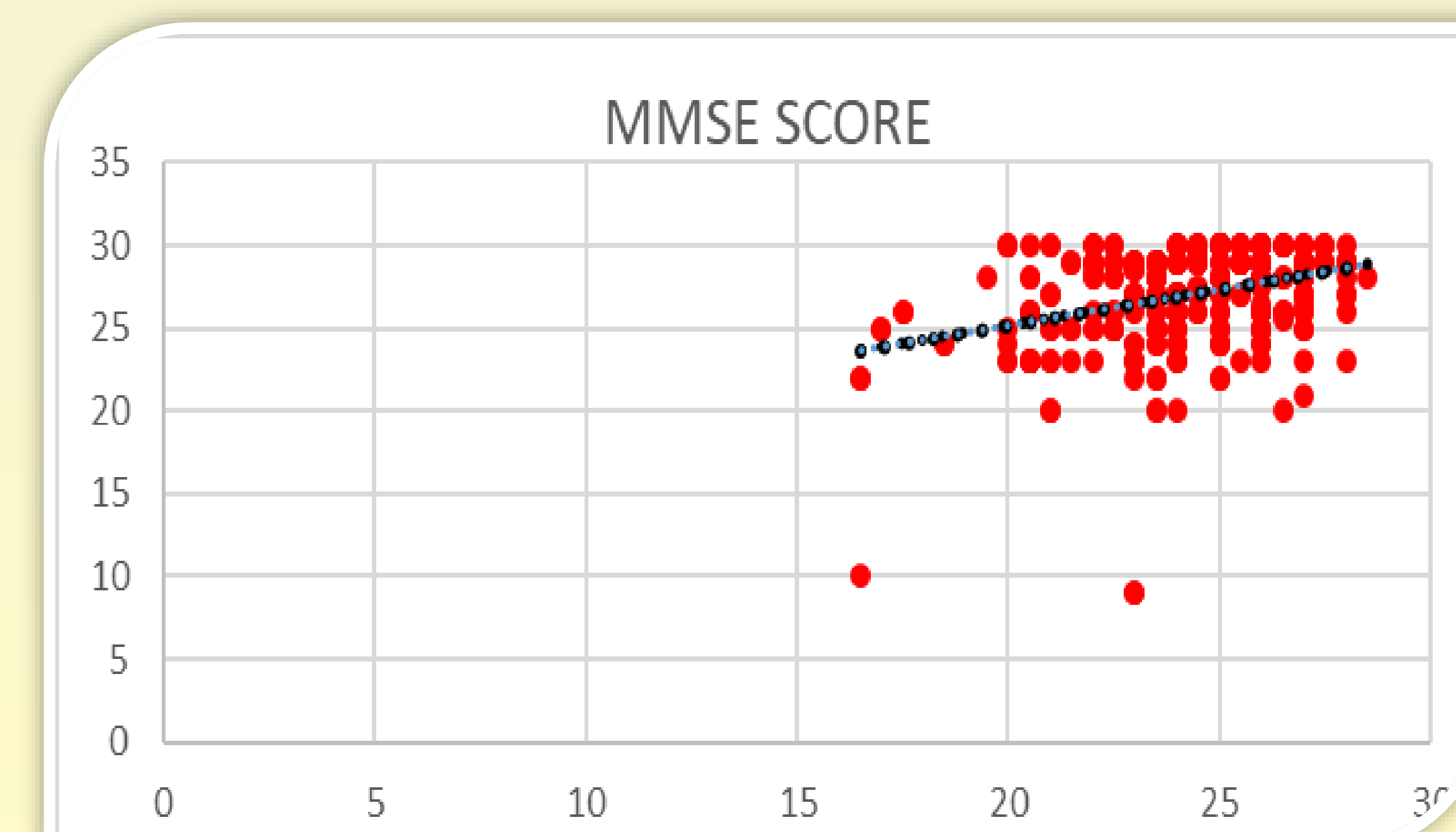


Figure 4-Correlation between MNA and MMSE scores
 MNA and MMSE scores showed a positive correlation
 (Pearson's correlation $r=0.341$, $p<0.001$)
⁴Assis et al (2020)

CONCLUSION

In the study only 0.9% of older adults had malnutrition, but 35% had risk of malnutrition. Prevalence of multimorbidity was 52.4% and prevalence of cognitive impairment, 27%. Significant association was shown between nutritional status and cognitive impairment. MNA and MMSE scores showed significant positive correlation. Gender, socio-economic status and living arrangement showed significant association while age, marital status, co-morbidity status, body mass index doesn't showed any significant association with cognitive impairment. No significant association was seen between multimorbidity and nutrition status in the present study. Interventions are required for older adults with malnutrition and risk of malnutrition for preventing the development or progression of cognitive impairment.

REFERENCES

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