

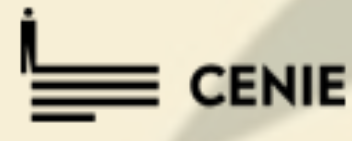
# Adherence to the Mediterranean Diet and the Risk of Metabolic Syndrome: A Preliminary Study



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## Introduction/ Background

The aging population is facing an increase in chronic diseases, particularly Metabolic Syndrome (MetS), which raises the risk of cardiovascular disease and diabetes<sup>1,2</sup>. Effective prevention strategies are essential.

The Mediterranean diet, rich in vegetables, fruits, whole grains, and healthy fats, has been shown to improve metabolic health and reduce these risks, especially among older adults<sup>3,4</sup>.

## Objectives

To explore the association between adherence to the Mediterranean Diet and health-related risk factors among older adults

## Materials and Methods

### Population

- Participants aged 18 or above
- Multicomponent exercise training program

### Methodology

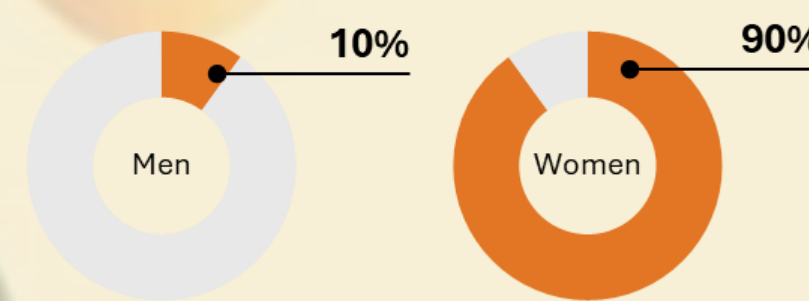
- Cross-sectional
- Sociodemographic questionnaires
- Blood samples collected following WHO guidelines
- MetS evaluated according to ATP III<sup>5</sup>
- PREDIMED<sup>6,7</sup>

### Ethics

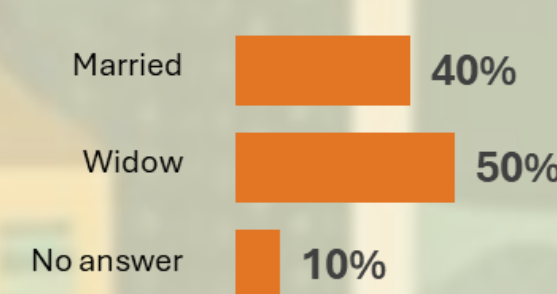
- Informed consent was obtained from all participants
- Approved by Conselho Ético da Unidade Local de Saúde do Nordeste, N<sup>o</sup>41/2024

## Results

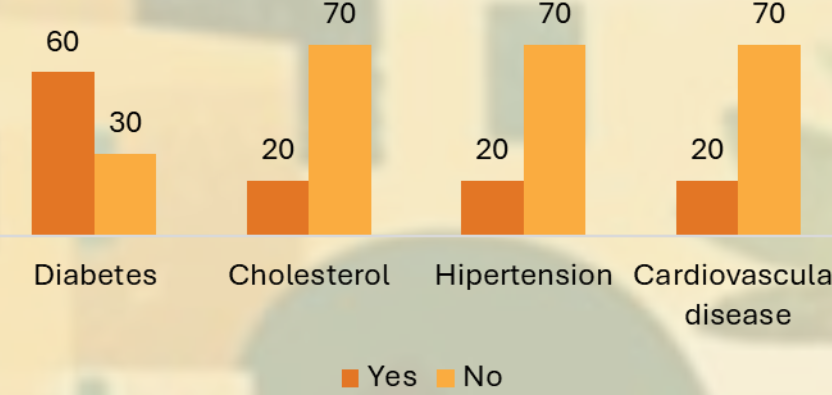
### Gender



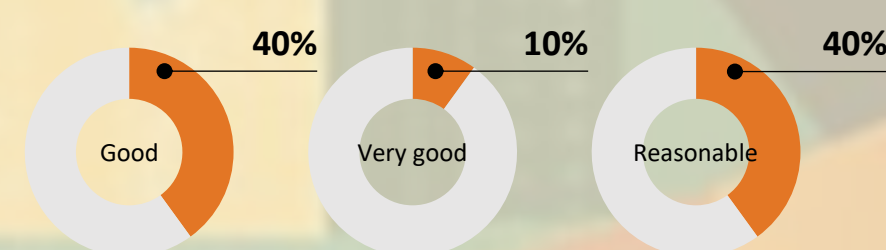
### Marital Status



### Chronic Diseases



### Health Status



No participants met the diagnostic criteria for Metabolic Syndrome (MetS).

Strong positive correlation between Mediterranean Diet (MedDiet) adherence and lower chronic disease burden ( $r = 0.869, p < 0.01$ ).

Inverse association between MedDiet score and the number of MetS criteria ( $r = -0.707, p < 0.05$ ).

Higher MedDiet scores were associated with lower cholesterol levels ( $r = -0.740, p < 0.05$ ).

## Discussion and Conclusion

- Meta-analyses have shown a strong association between Mediterranean Diet adherence and reduced incidence of metabolic syndrome<sup>11</sup>.
- The PREDIMED trial found:
  - 30% lower risk of developing type 2 diabetes
  - Improvements in central obesity and glycemic control<sup>12</sup>

### Current Study Highlights

- No participants met full diagnostic criteria for Metabolic Syndrome.
- Higher adherence to the Mediterranean Diet was linked to:
  - Fewer metabolic risk factors
  - Lower chronic disease burden
  - Better overall metabolic health

These preliminary results reinforce the potential protective role of the Mediterranean Diet in older adults.

They highlight the importance of healthy dietary patterns in reducing metabolic risk and support the need for larger, longitudinal studies to confirm these associations.

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