



COST AND NUTRITIONAL VALUE OF THREE ALTERNATIVE TEXTURE-MODIFIED DIETS FOR PATIENTS WITH SWALLOWING AND/OR CHEWING DISORDERS: ABADIA STUDY

Authors: Ballesteros-Pomar MD¹, Pérez-Martín J², Mendiola MJ³, García-García JM⁴, Parrado S⁵, Caracuel AM⁶, Garcés B⁷, Comellas M⁸, Barcons N⁹

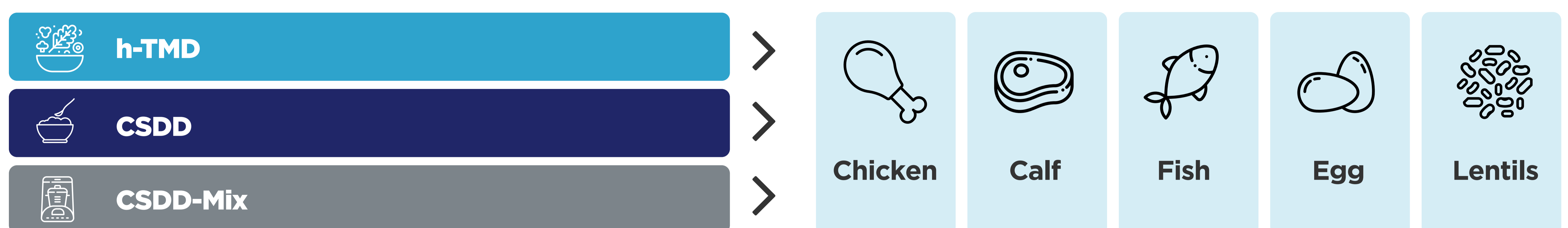
¹ Departamento de endocrinología y nutrición. Complejo Asistencial Universitario de León, León, Spain. ² Residencia de Atención a Personas Dependientes de Vigo II, Pontevedra, Spain. ³ Residencia de Personas Mayores Fundación Caja de Burgos, Burgos, Spain. ⁴ Residencia Jesán, Salamanca, Spain. ⁵ Subdirección de Gestión y SS.GG. Complejo Asistencial Universitario de León, León, Spain. ⁶ Unidad de Gestión Clínica Endocrinología y Nutrición. Hospital Universitario Regional de Málaga, Málaga, Spain. ⁷ Dietética y nutrición. Grupo AUSOLAN, Mondragón, Spain. ⁸ Outcomes¹⁰, Castellón, Spain. ⁹ Departamento Médico, Nestlé Health Science, Barcelona, Spain.

OBJECTIVES

Pureed texture-modified diets (TMD) are a common management approach for institutionalized elderly with oropharyngeal dysphagia and/or chewing disorders¹⁻³. Home-made preparation TMD (h-TMD) can be a burdensome process for the kitchen staff. TMD based on concentrated nutrient-dense commercial food products for dysphagia (CSDD) could be a suitable alternative. However, their added nutritional and economic value may not be fully known. The aim of this study was to describe costs, microbiological safety and nutritional value of 3 different TMD preparation approaches: h-TMD, hand blended CSDD, and CSDD prepared with an automatic food mixer (CSDD-Mix).

METHODS

An observational study was conducted to compare h-TMD, CSDD, and CSDD-Mix in 3 Spanish nursing homes. Five different TMD recipes were used for this study with chicken, calf, fish, egg and lentils.



The main variables of this study were focused on 3 areas:

1. RESOURCES AND COSTS

- Mean time/portion** based on pre-preparation, preparation, homogenization, serving and cleaning time.
- Mean cost/portion** based on average salary by professional category, time required for each phase of the process (minutes), average wholesale price of ingredients and energy resources required for ingredients storage and meal preparation (€/KWh).
- Mean cost/100 kcal** based on mean cost/portion and nutritional value analysis.

2. SECURITY

Microbiological analysis*: *Staphylococcus* coagulase+, *Salmonella* spp, *Escherichia coli* β-glucuronidase+, *Listeria monocytogenes*. According to UNE-EN ISO/IEC 17025: 2005.

3. NUTRITIONAL VALUE ANALYSIS

Nutritional value analysis*: kcal/100 g.

* Conducted by an accredited external laboratory. n=15 (5 TMD types x 3 replicates different days).

RESULTS

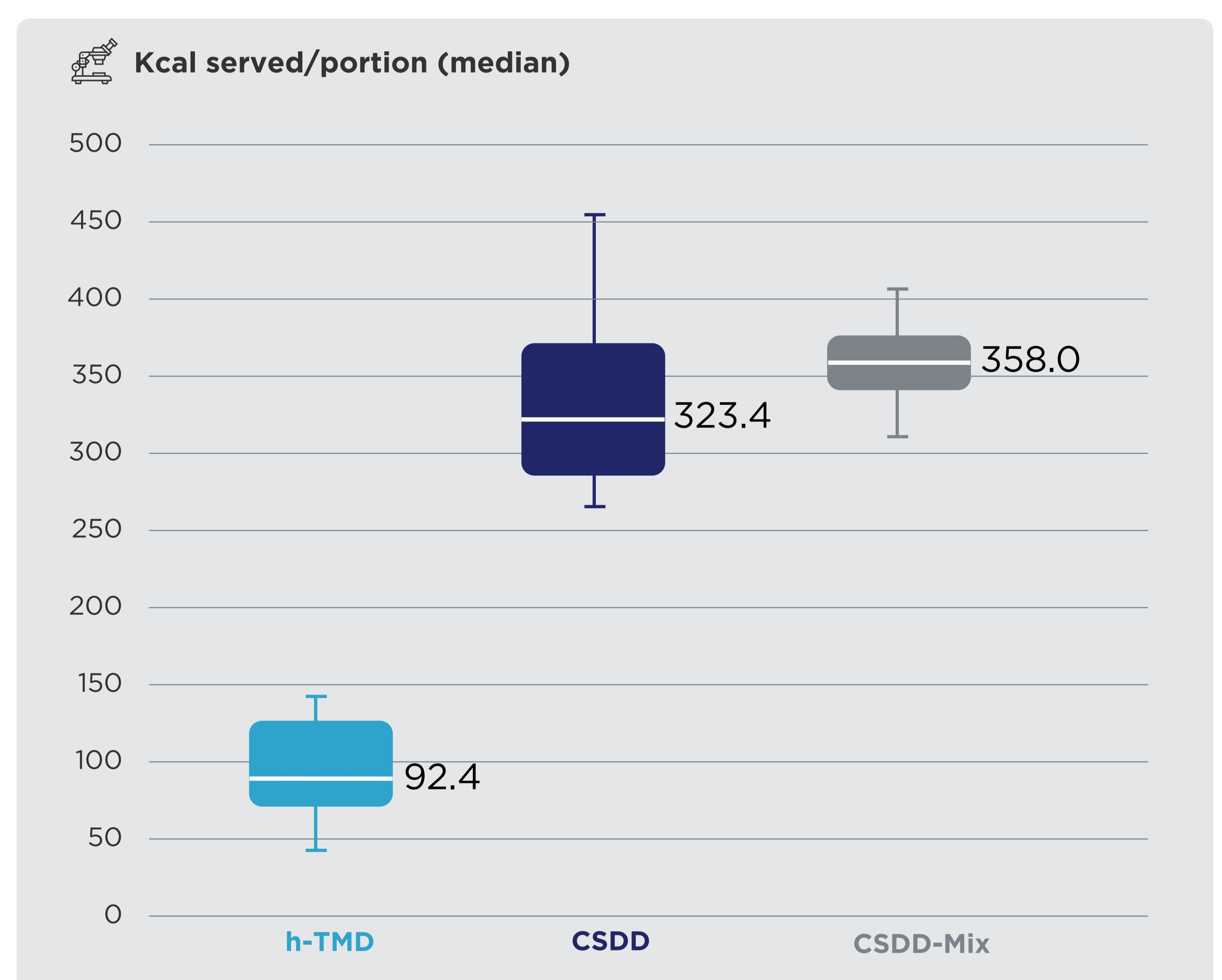
The average number of **portions prepared** per day were **28.2 (h-TMD)**, **26.0 (CSDD)** and **70.0 (CSDD-Mix)**.

	Mean time/portion elaboration.	Mean cost/portion.	Mean cost/100 kcal.
h-TMD	11.3 minutes	2.33€ [SD 0.63]	2.80€ [SD 1.32]
CSDD	1.7 minutes	2.01€ [SD 0.39]	0.62€ [SD 0.18]
CSDD-Mix	1.6 minutes	2.00€ [SD 0.33]	0.58€ [SD 0.13]

SD: standard deviation

No pathogenic microorganisms were detected.

Median kilocalories served/portion was: **92.4 [IQR:75.6-128.1] (h-TMD)**, **323.4 [IQR:284.2-375.3] (CSDD)** and **358.0 [IQR:344.0-372.1] (CSDD-Mix)**.



CONCLUSIONS

CSDD-based TMD, particularly those prepared with an automatic food mixer, are an inexpensive, quick to prepare and safe alternative to elaborate high-caloric diets for patients with dysphagia and/or chewing disorders.

REFERENCES

- Ilhamto N, et al. J Nutr Gerontol Ger 2014; 33: 210-228
- Velasco C, et al. Nutr Hosp 2014; 29 (3): 465-469
- Rocamora JA, et al. Nutr Hosp 2014; 29 (4): 873-979

ISPOR Europe - November 2019

Sponsored by:

