

GRANDFATHER INTERNATIONAL

cross-country comparison of an older people integrated assessment

Portugal and Italy

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1. INTRODUCTION

Scientists theorize that aging likely results from a combination of many factors. Genes, lifestyle and disease can all affect the rate of ageing. Studies have indicated that people age at different rates and in different ways. Frailty is a state of increased vulnerability with multisystem loss of physiologic reserves and decreased response to stressors, predicting adverse health outcomes. The phenotype of frailty is characterized by: unintentional weight loss, self-reported exhaustion, weakness (low grip strength), slow walking speed and low physical activity. From our knowledge no studies were found that relate the frailty, hearing, the executive functions of language, speech rate and also the swallowing process. The research question is as follows: Is there any relation between frailty speech, language, hearing and swallow? This study is part of a project between Italy and Portugal involving professionals from various fields:

- Aims:**
- **Characterize** the prevalence and the level of frailty in older people who attend Day Care Center
 - **Assess** speech rate;
 - **Assess** tongue strength;
 - **Assess** executive functions of language through 10 verbal fluency tasks;
 - **Assess** swallow functions through the 3oz water swallow test and the Time of Masticatory Swallowing of Solids (TOMASS)
 - **Validate** the Hearing Handicap Inventory for the Elderly - Screening Version (HHIE-S) in Portuguese and Italian;
 - **Assess** hearing with a portable audiometer;
 - **Assess** auto-perception of health status (EQ5D);
 - **Analyze** the correlation between frailty, speech, language, hearing and swallowing;
 - **Propose** the development of a multidimensional instrument to assess older people that can contribute for a better and early intervention;
 - **Compare** the Italian and Portuguese data.

2. MATERIAL AND METHODS

Study Design: It is a cross-sectional descriptive and correlational study.

Settings: Portuguese and Italian Day Care Centres for older people

Subjects: A sample of 47 subjects out of 200 in Portugal were assessed after verifying compliance with the inclusion/exclusion criteria. This is a convenience sample and the inclusion criteria established are the following: be older than 65, sign the informed consent. Subjects with any severe motor, cognitive, communication or behaviour impairment were excluded.

Instruments: The instruments used are the same for Italy and Portugal, and collects data for demographic variables, phenotype of frailty, speech rate, verbal fluency, swallow and hearing. For the objective evaluation of hearing, portable audiometers were gently provided by Resonance, through its agent in Portugal Audioclinic. The HHIE-S is being validated in this project for Italian and European Portuguese. The approval of ASHA who detains the copyrights was previously obtained.

Procedures: The instruments were applied to all the subjects who previously gave their informed consent. A multidisciplinary team of experienced professionals was organized for data collection (Medical Doctors; Physiotherapists; Speech and Language Therapists and Audiologists).

GLOBAL INSTRUMENT FOR COLLECTING DATA

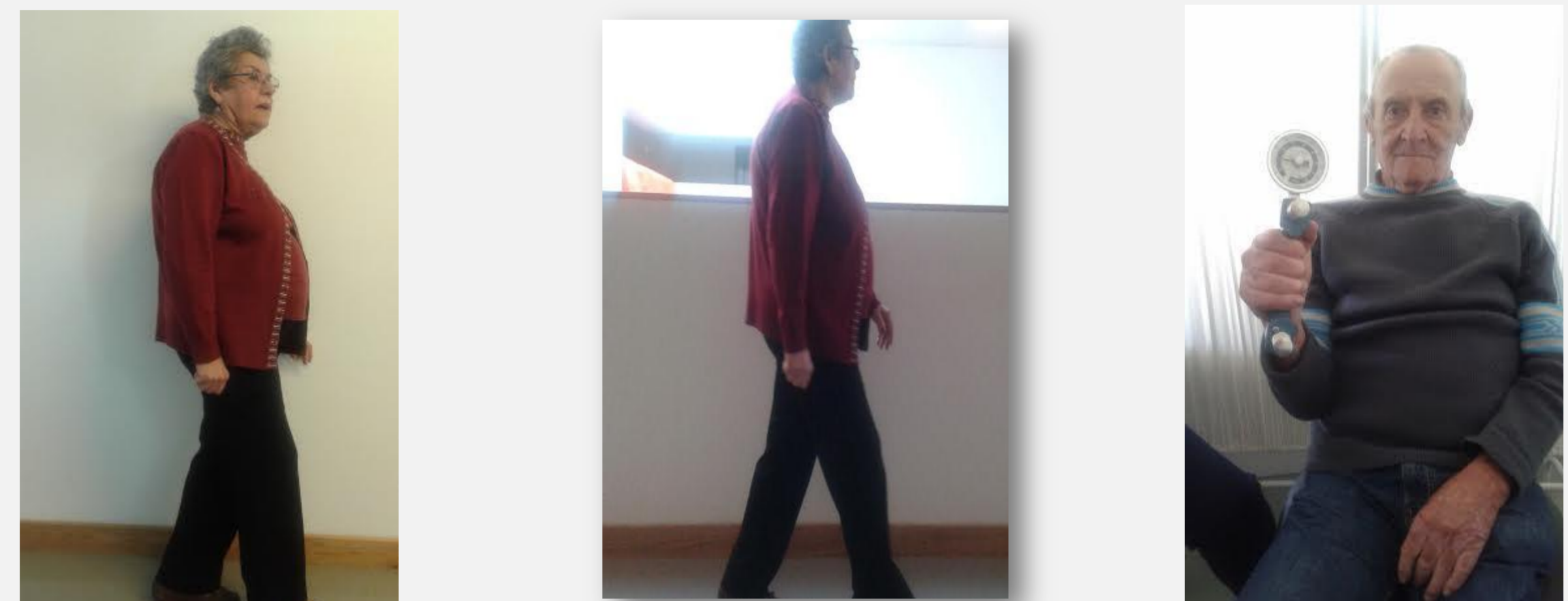
PORTUGUESE VERSION OF THE HHIE - (PT-HHIE)

3. PRELIMINARY RESULTS AND CONCLUSIONS

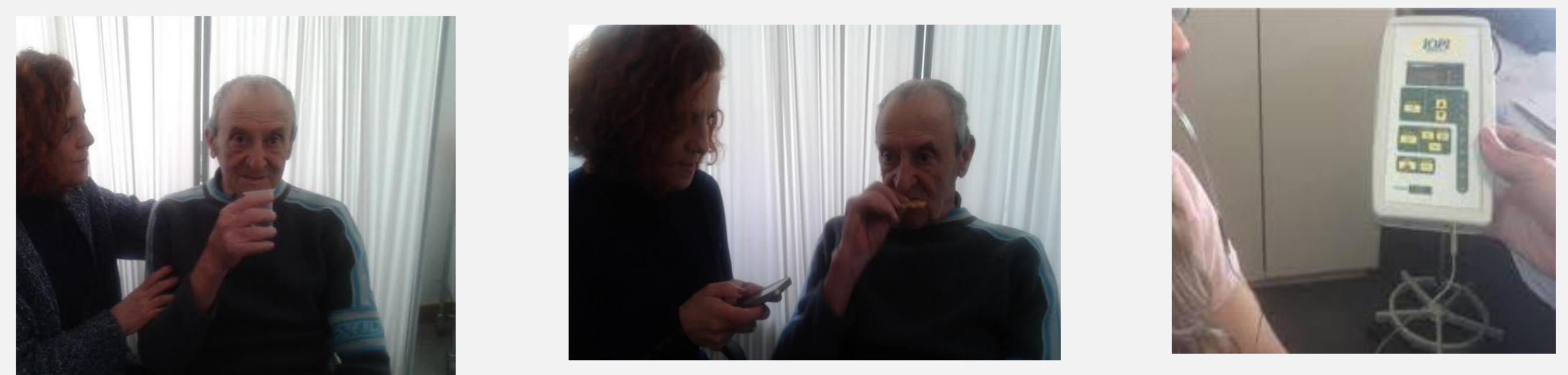
The study is in progress, however some preliminary results can be achieved:

- ✓ 47 subjects were evaluated;
- ✓ 51% were considered frail;
- ✓ Speech rate (ex: pa): < 1/s (normal +/-5)
- ✓ Total score for verbal fluency (semantic) = 88 (cut point for normality +/- 115, 24)
- ✓ TOMASS : total time for eating an half cracker = 65,88 (mean for normality 45,3)
- ✓ PT-HHIE-S : 56% have no auto perception of hearing problems
- ✓ Intelligibility and hearing thresholds : no sufficient data were collected so far, to achieve preliminary conclusions

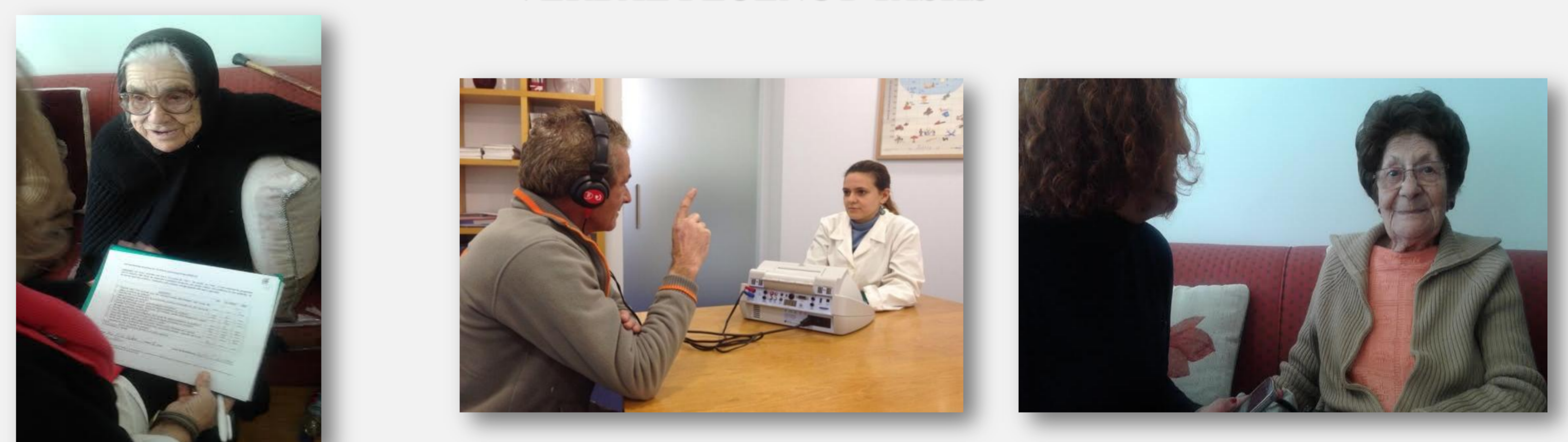
BODY MASS INDEX; WALKING SPEED; GRIP STRENGTH



WATER SWALLOW TEST; TOMASS; TONGUE STRENGTH



AUTO PERCEPTION OF HEARING PROBLEMS (PT-HHIE-S) ; AUDIOMETRY; VERBAL FLUENCY TASKS



2.DISCUSSION

The study is in progress both in Portugal and in Italy. However, the target population (using the daily support of Day Care Centres for Older People) showed, as a preliminary results, a moderate decline in all areas. The dimension of the sample that was collected so far doesn't allow very strong conclusions. However, authors hope to have them in a very near future. Improvement of global functionality is possible in older people with Frailty Syndrome and the increase of functionality is due to the interaction between the motor and sensory system. As such, and regarding the intervention programs with frail older people, we recommend that multidisciplinary strategies should be envisaged. This study intends to contribute for a multidimensional evaluation that will permit to identify signs and symptoms of decline, that should have benefits from early multidisciplinary interventions.

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