

CONCEPTUAL AND METHODOLOGICAL CONSIDERATIONS IN A DEVELOPMENTAL APPROACH TO A GERIATRIC STUDY IN PORTUGAL: HEALTH EFFECTS OF AIR QUALITY IN ELDERLY CARE CENTRES

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INTRODUCTION

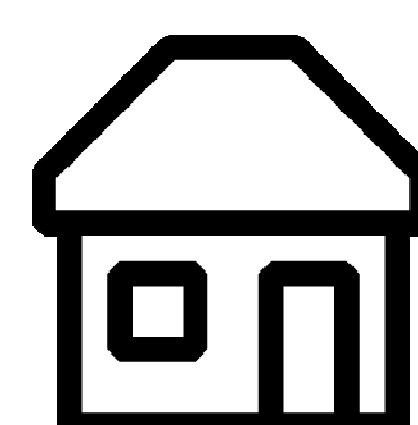
The age of European population is rising and the percentage of adults older than 65 years is projected to increase from 16% in 2000 to 20% in 2020. Older people spend about 19 to 20 hr/day indoors. For elderly residents in care centres indoor air quality (IAQ) is a special concern and a critical contributor to their health and quality of life. Aging adults, particularly the elderly, can have weakened immune systems and age-related health problems which make them more vulnerable to health complications associated with indoor air pollution.

OBJECTIVES

As the primary long-term purpose of this study is to improve the health of older persons living in elderly care centres (ECC) the following specific objectives were set:

- 1 Measure air quality and thermal conditions in ECC;
- 2 Assess effects of IAQ and thermal conditions on cardiorespiratory health of ECC residents (aged 65 years and older);
- 3 Evaluate the association of indoor air pollution in health-related quality of life of older persons thus setting the basis for preventive interventions.

METHODS



Environmental **characterisation of buildings**;



Health and quality of life questionnaires: BOLD questionnaire, St. George's Respiratory Questionnaire (SGRQ) and World Health Organization Quality of Life (WHOQOL)-BREF;

Table 1 - Estimated figures for this study

	No.
ECC in Porto	56
Elderly	1500
Indoor monitoring ^{a)}	5400
Outdoor monitoring ^{b)}	700

^{a)}Carbon dioxide (CO₂), carbon monoxide (CO), formaldehyde, total volatile organic compounds (TVOC), airborne particles (PM₁₀), bacteria (total counts), fungi (total counts and identification), thermal comfort; ^{b)}CO₂, CO, PM₁₀, TVOC, bacteria, fungi

Winter & Summer

EXPECTED RESULTS AND CONCLUSIONS

This study will provide crucial information about ECC construction characteristics and prevalence of cardio-respiratory diseases in older persons in Porto. Analyses aim to evaluate whether IAQ may affect older persons' health status, quality of life and to determine the presence of possible interactions between IAQ and respiratory infections. To our better knowledge, this is the first project conducted in Portugal aimed at assessing the effects of indoor air contaminants on health status and quality of life in older persons living in ECC.

The field work had started in September 2011 and the preliminary results are expected to January 2012.

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