

# OPP: OTHERS

## Age and income influence the digital proficiency of northeastern Brazilian older people

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**Purpose** In Brazil, older people are those aged 60 or older, comprising 32,113,490 people (15.6% of the population), a 56,0% increase from 2010, when they were 20.590.597 (10.8%) (IBGE, 2022). Population aging is a global phenomenon. This change can also be seen in the age composition of the Brazilian poor population, especially in the Northeast. In 2020, 69% of older Brazilians had a personal monthly income of up to 2 minimum wages (MW) (SNF, 2021). The fast progress of technologies is also a global phenomenon. Technology is inserted in many contexts of life, like health, mobility, leisure, housing, and so forth (Raymundo, 2019). Despite being a contemporary advantage, it is also a challenge for older people who have had less contact with technology throughout their lives (Raymundo, 2019) and face social exclusion. This research mainly aimed to verify whether age and income impair older people's proficiency with mobile phone use. **Method** Cross-sectional study approved by the ethics committee. Recife – Pernambuco, Northeastern Brazil – is divided into 8 health districts (i.e., the minimum organizational units of the Brazilian health system). This research addressed sociability groups for older adults in Health District 4 (which encompasses 13 neighborhoods), with the support of the city government. Data were collected through a sociodemographic questionnaire (age range and income range) and the Mobile Proficiency Questionnaire (MPDQ), validated for Brazilian Portuguese (Raymundo, 2024). The age ranges were 60-69, 70-79, and over 80 years old. The income ranges were less than 1 MW, 1 MW, 1.1-3 MW, and more than 3 MW (1 MW = R\$ 1,412.00/US\$ 281.84 per month, or US\$ 3,382.02 per year). The MPDQ, mobile device basics (MPDQb), has 9 questions, each one scoring from 1 to 5 points (range 9-45 points). The Kruskal-Wallis test was used to compare the groups. **Results and discussion** Altogether, 311 older adults participated in the study, 268 women (86%) and 43 men (14%). Their mean MPDQb score was 30.5. People aged 60-69 (n = 159) had an MPDQb score = 31.8±8.1; 70-79 (n = 130) had an MPDQb score = 29.5±7.8; and over 80 years old (n = 22) had an MPDQb score=26.2±6.1; Kruskal-Wallis test: p = 0.0005. People aged 60-69 years have MPDQb scores significantly higher than those aged 70-79 and over 80 years; Dunn post hoc test = p < 0.05. People with an income of less than 1 MW (n = 12) had an MPDQb score = 28.9±6.9; 1 MW (n = 91) had an MPDQb score = 28.2±9.5; 1.1-3 MW (n = 133) had an MPDQb score = 29.9±7.5; and more than 3 MW (n = 75) had an MPDQb score = 34.4±5.5; Kruskal-Wallis test = p < 0.0001. People with income over 3 MW have higher MPDQb scores than those with other income ranges, Newman-Keuls post hoc test p < 0.05. Age and income influence the MPDQb, probably because people with advanced age have had less contact with technologies throughout their lives, and lower incomes increase social and digital exclusion (Raymundo, 2019).

### References

- Marquine Raymundo, T., Teixeira Gil, H., & Dias Bernardo, L. (2019). Desenvolvimento de projetos de inclusão digital para idosos. Estudos Interdisciplinares Sobre o Envelhecimento, 24(3). <https://doi.org/10.22456/2316-2171.87420>.
- IBGE – INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA (2022). <https://agenciadenoticias.ibge.gov.br/agencia-noticias/2012-agencia-de-noticias/noticias/38186-censo-2022-numero-de-pessoas-com-65-anos-ou-mais-de-idade-cresceu-57-4-em-12-anos#:~:text=Destaques,quando%20esse%20contingente%20era%20de14>.
- Marquine Raymundo, T., Facioli, M.S.B., Deodoro, T.M.S., et al. (2024). Cross-cultural adaptation of the Mobile Proficiency Questionnaire and content validity for Brazilian Portuguese. Rev Bras de Geriatria e Gerontologia.
- SNF, Secretaria Nacional da Família (2021). Idosos e família no Brasil, fatos e números. <https://www.gov.br/mdh/pt-br/navegue-por-temas/observatorio-nacional-da-familia/fatos-e-numeros/idosos-e-familia-no-brasil.pdf>.

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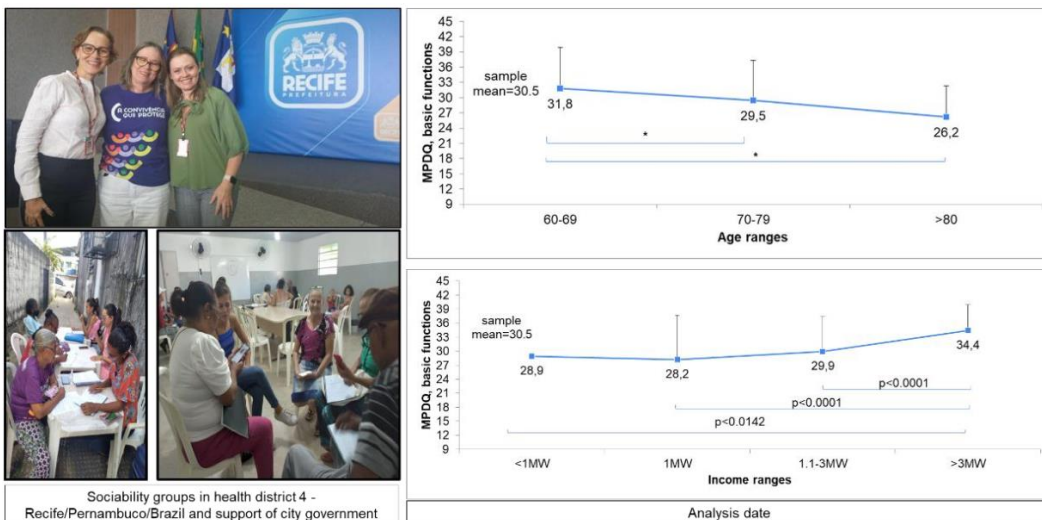


Figure 1. Overview of the proposal