

Sunfrail+: a New Digital Tool to Assess Frailty in Older Adults

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Abstract. This study explores the use of digital technologies in assessing frailty and Quality of Life (QoL) in older adults within the Italian healthcare system. The “Prevention Days for Healthy Ageing” organized by the Reference Site “Roma – Tor Vergata” employed online tools, Sunfrail+ and SF-12, for assessing frailty and QoL in 136 older adults. Sunfrail+ generated an average of 2.71 positive alerts at baseline and 0.77 in the 2-level. Associations were found between positive alerts and SF-12 physical/mental indexes. Correlations existed between Sunfrail secondary tools (e.g., Time Up and Go) and QoL indexes. Sunfrail+ is a valuable tool for Family and Community Nurses and proposes future integration into a streamlined app for self-administration by seniors, promoting timely interventions.

Keywords. frailty, assessment tool, Sunfrail+, SF-12, Quality of Life

1. Introduction

Older adults are often associated with a condition of frailty. Many studies in literature highlight how timely multidimensional assessments and early detection of frail states can prevent adverse outcomes [1]. The digital transformation of the Italian healthcare system could be useful in improving health outcomes, but this processes advances slowly. The main goal is to implement digital technologies, i.e., online assessment tools to identify frailty and evaluate Quality of Life (QoL) in older adults. Currently, except the Sunfrail questionnaire, no instrument is available to determine frailty on such a broad, multidimensional basis with so few questions [2].

2. Methods

The Reference Site “Roma – Tor Vergata” as a partner of the European Reference Site Collaborative Network (RSCN) organised the “Prevention Days for Healthy Ageing” to assess frailty in community dwelling older people in Rome. The choosen questionnaire are: a) Sunfrail+, with good reported validity demonstrated in literature [2,3], a tool made up of 9 items which can activate 1-level alerts leading to secondary test sets, which can trigger 2-level alerts; b) SF-12 for QoL assessment. These questionnaires were carried out in an easy-to-use online tool that quickly calculates the final score for each test. We performed a cross-sectional analysis in 136 older adults.

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3. Results

The sample (43 male, 31.6%, and 93 female, 68.4%) is made up of 32 people aged <75, 75 aged 75-85 and 29 aged >85. In Sunfrail an average of 2.71 positive alerts were generated with the baseline items and 0.77 in the 2-level. Comparing to the SF-12 physical and mental indexes there is an association with the number of positive warnings at the 2-level with a $X^2=19.2$ ($p<0.001$) and $X^2=16$ ($p<0.05$). There is a correlation between Sunfrail secondary tools that study the physical sphere such as the Time Up and Go (TUG) and QoL's physical index (Spearman's Rho (rs) = -0.477, $p<0.05$) and between tools that study the cognitive sphere such as the Quick Mild Cognitive Impairment (QMCI), the Geriatric Depression Scale (GDS) and QoL's mental index ($rs=0.229$, $p<0.05$; $rs= -0.527$, $p<0.001$).

4. Conclusions

The tool proves to be a valuable aid for Family and Community Nurses to identify a frailty status and QoL. The future goal is to implement the online tool's ability to immediately highlight these associations for practitioners, while simplifying and streamlining the questionnaires on an app so that seniors can self-administer the questionnaire and, if the alert is triggered, contact their nurse.

References

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