systematic review is to investigate and synthesize the methodological characteristics of studies using video-technology for measuring interactions between the older persons with dementia and staff in long-term care facilities. We searched Medline, Embase and CINHAL databases for published articles in English using a video-recording method for both staff and persons with dementia. Quantitative research design studies (e.g., descriptive studies or an experimental studies) were included. Among 5,605 searched papers, a total of 20 studies were selected for this review. Situations of video-recording were providing personal care (n=12), mealtime (n=6), and conversation (n=3). Concepts of measuring by video-recording were classified into two groups: 1) Staff [care practice by staff (n=13) and communication by staff (n=11)] and 2) residents [communication by resident (n=4), activities of daily life function of resident (n=8), and behavioral and psychological symptoms of dementia (n=10)]. This review demonstrates that video technologies are actively used to evaluate the relationship between quality of care and health outcomes of the elderly with dementia in many international nursing studies. This study provides the foundation for a future research using video-recording technologies to examine the interactions and relationship between staff and the residents in long-term care settings.

EXPLORING TECHNOLOGY-ENABLED ASSESSMENTS OF SYMPTOMS EXPERIENCE BY INFORMAL CAREGIVERS

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For community-dwelling older adults with chronic conditions, effective symptom management is a determinant of quality of life. Providers often have poor knowledge of an individual's symptoms experience, especially when contact is infrequent, leading to suboptimal symptom management. Many older adults receive frequent care and contact from family, friends, and other informal caregivers (ICGs). Subjective observation by ICGs is an underexplored information source, but faces barriers including ICG burden and lack of ICG knowledge. It is unclear what relevant information might be collected by ICG observations. We conducted a pilot evaluation of Philips CarePartners Mobile (CPM), a prototype smartphone application that provides communication and coordination support to a "circle" of ICGs assisting an older adult. CPM includes features enabling ICGs to share semi-structured observations. 19 caregivers (in 8 circles) used CPM for 12 weeks, contributing 397 observations and participating in interviews and other assessments. We performed a qualitative analysis of the observations, coding for presence of content relevant to dimensions in the UCSF Symptom Management Theory (perception of, evaluation of, and response to symptoms). Relevant content was found in 150 observations, with perception and assessment more common (141) than response (32). Common symptoms included mobility difficulty (31), fatigue (23), dizziness (21), pain (19), and confusion (18). Among observations without symptom-relevant content, many reported on overall mood (92), and reference to social activities was frequent. These results demonstrate that symptoms experience can be assessed using caregiver observations, although further work may be needed to enable caregivers to provide a comprehensive assessment.

EHEALTH ON FRAILTY: FRAILSURVEY, A RELIABLE SMARTPHONE APPLICATION FOR SELF-ASSESSMENT OF FRAILTY

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Frailty is a clinical syndrome whose signs and symptoms are predictors of health complications, making this a major public health problem. FRAILSURVEY, which was considered a good practice by several entities, is a smartphone application that allows an easy assessment of frailty, available in Portuguese, English and Italian, on both iOS and Android stores. Smartphone-based assessment has been proven to be a useful diagnostic tool for patients, although few applications have demonstrated reliability. With this work we aimed to test the reliability of FRAILSURVEY as a tool to assess frailty, and to study people's preference on which way to assess frailty. FRAILSURVEY is a questionnaire that comprises two sets of questions: 19 about sociodemographic data, social resources, self-perception of health, nutrition, medication, psycho-social and cognitive status, and time occupation, plus a set of 15 used to assess frailty status, the Groningen Frailty Indicator (GFI). Including 427 older adults in this study, a randomized repeated measures crossover design was employed using the FRAILSURVEY questionnaire both in paper and in application, with a week of interval to reduce carryover effects. Reliability was assessed through the GFI scores obtained by the same person between the paper and application. There were no significant differences between the results on frailty assessment using the questionnaire on both paper and application. A significant correlation was noted in the total group (ICC=.794, $P<0.01$). Our work shows that FRAILSURVEY is a reliable mobile application for frailty assessment, that can be used by older adults, caregivers, and health professionals.

DEVELOPMENT AND TESTING OF AN ACCELEROMETER-BASED POSITIONAL MONITORING SYSTEM

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