Finding the right outcome measures for care home research

SIR—Hoppitt, Sackley and Wright (Age and Ageing January 2010) report the results of their trial of therapy for UK care home residents, concluding that there is a lack of appropriate outcomes available for the care home population, and a need for validation of existing measures and development of alternatives in this population.

These conclusions were based on the response rates at three time intervals for measurements of hand grip strength, the Timed Up and Go test, the Falls Efficacy Scale and calcaneal ultrasound densitometry. These measures all had lower response rates than those for the Barthel Index and Rivermead Mobility Index, both of which were completed by proxy where required. Response rates for handgrip varied from 60% (intervention group) and 66% (control group) initially, reducing to 46% and 51% for each group at the third time interval. The authors state that cognitive impairments made it impossible to follow the instructions, while physical impairments meant that some participants were unable to attempt the hand grip.

We recently evaluated the feasibility and acceptability of hand grip strength measurement using a Jamar handheld dynamometer among residents of care homes in Hampshire (BUPA and privately owned). A total of 64/133 (48%) residents from three nursing homes and one dementia registered residential care home participated [mean age 86 years (range 70–98); 18 men, 46 women]. Sixty-two (47%) potential participants were excluded because severe dementia precluded informed consent for the trial, but those with mild to moderate dementia were able to participate (mean Mini-Mental State Examination score 19/30 points, range 6–30). Three (2%) participants were excluded for physical reasons: total deafness (two) and advanced motor neurone disease (one).

Sixty-three of 64 (99%) participants were able to have grip strength measured and hold the dynamometer with both hands; the remaining participant had a fractured arm. Sixty participants answered questions on the acceptability of hand grip assessment, of which 56 (92%) were definitely prepared to repeat, although four (7%) found it painful and 10 (17%) tiring. Additional in-depth interviews with four residents revealed that they found the test straightforward to carry out and had squeezed the dynamometer as hard as they could.

We agree with the authors’ conclusions that researchers should select outcome measures that are appropriate for use in the intended population, but our research suggests that assessment of hand grip strength is acceptable and feasible in care home populations. Further research is required to fully evaluate the utility of this measurement.

Conflict of interest

The research was supported by a grant from BUPA Giving.

Reply to Roberts et al.’s response

SIR—We are writing in response to Roberts et al.’s (Age and Ageing E-letter 2010) reaction to our article ‘Finding the right outcome measures for care home research’. Our original article concluded that outcome measures should be selected that have been validated in the population being studied, and that there is a lack of appropriate outcome measures for use with care home populations. Although Roberts et al. concurred that measures appropriate to the population should be selected, based on their findings and contrary to our research, they argued that the assessment of handgrip is acceptable and feasible in care home populations. They reported response rates of 99% being able to complete grip strength measurements with both hands. Furthermore, they reported that whilst 7% and 17% found the measure painful and tiring, respectively, 92% were prepared to repeat the measure. Roberts et al. suggest that their results show grip strength assessment is acceptable and feasible in care home populations. However, we suggest that in reality, the response rates reported in their research are comparable to those observed in our study. Our study achieved completion rates ranging from 45 to 70% across all assessment time points taking into account both hands assessed. These rates were reported from the total sample size randomised. Unlike Roberts et al., we did not exclude anyone from attempting to complete this measure based on cognitive or physical impairment. Informed assent was gained for those unable to provide consent. Roberts et al. excluded 47% of potential participants due to severe dementia precluding informed consent, and a further 2% as a result of physical limitations. The response rate based on their total sample size was 64/133 (48%), which is comparable to the completion rates we found at follow-up assessment. We conclude that whilst Roberts et al.’s suggestion, that hand grip is feasible in care home populations, is accurate for those residents without major cognitive or physical impairments, it does not enable assessment of the general care home population due to the high prevalence of such impairments in this setting.

Conflict of interest

None declared.

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doi: 10.1093/ageing/afq063
Published electronically 25 May 2010