

LETTERS

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Internet video chat (Skype) family conversations as a treatment of agitation in nursing home residents with dementia

The behavioral symptoms that often accompany dementia (for example, pacing, calling out, and resistiveness) are stressful to carers and greatly increase the risk of institutionalization. While psychotropic medications are commonly prescribed, their efficacy is limited. There is great interest, therefore, in developing non-pharmacological strategies to alleviate the distress that underpins many behavioral symptoms (O'Connor *et al.*, 2009).

In a previous study, we found that taped family messages reduced nursing home residents' agitated behaviors more effectively than non-personalized social interaction, with a moderate treatment effect size of 0.45 (Garland *et al.*, 2007). In subsequent studies and systematic reviews, any sort of social interaction proved substantially more effective than "usual care." Interaction that was tailored to residents' backgrounds and former interests proved more effective still (O'Connor *et al.*, 2009; van der Ploeg *et al.*, 2013).

It is impracticable, though, for nursing home staff members to provide sustained personal attention to every resident, making it necessary to consider other sources of personal and sensory input. Family members sometimes make telephone calls to residents between visits and they might do so more often if their calls proved therapeutic. This beneficial effect might be enhanced further if people with dementia are presented with maximal sensory input by means of modern communication technology. It is possible that confused, disoriented residents will derive greater benefit if they can see and hear their family member using internet-chat video applications that are now readily available and free of charge. In a small qualitative study of seven Swedish family carers who spoke by video phone to a relative in nursing homes, family members felt more involved with the care process and some perceived their conversations to be more focused and of better quality than face-to-face interaction (Sävenstedt *et al.*, 2003).

To further gauge the potential of these technologies, we conducted a pilot randomized cross-over, repeated measures study of internet video calls (Skype) versus standard landline telephone calls as a treatment of agitated behavior in nursing home residents with dementia. The study

was approved by the Monash University Health Research Ethics Committee.

The study was conducted in a convenience sample of five nursing homes in Melbourne, Victoria, over a 12-month period. To qualify, participants needed a file diagnosis of dementia; adequate sensory and language capacity; one or more high frequency physically agitated behaviors on the Cohen-Mansfield Agitation Inventory (Cohen-Mansfield, 1986) at times other than during nursing interventions; a family member who was able and willing to engage in the study; an assessment by regular nursing and medical staff that agitated behaviors were not due to remediable physical or psychiatric morbidities, and a judgment by staff that psychotropic medications were unlikely to be changed over the course of the study.

Participants were allocated to either the Skype or landline telephone condition by an independent researcher using an online random number generator. Four 20-minute conversations were booked with a family member at convenient times over a two-week period, after which conditions were switched. Calls were initiated by research staff who then handed the tablet device or telephone to participants who were seated at a table. The family member conversed however they pleased, preferably for the entire 20 minutes.

A discretely positioned, trained research assistant recorded if the selected agitated behavior was present or absent at 30-sec intervals for the 40 minutes before and during the conversation giving a maximum of 80 points per session. The inter-rater reliability of behavioral observations in previous studies was very high (van der Ploeg *et al.*, 2013). Differences in the length of calls and agitation counts were analyzed using paired *t*-tests.

Nine out of seventeen eligible residents completed the study. One person died; two were too distressed to tolerate study procedures, and five family members were not available consistently. Six of the nine participants were female and all were English speaking. Their ages ranged from 83 to 93 years (mean 86.7); Mini-Mental State Examination scores ranged from 14 to 0 (mean 7.3) out of 30 (Folstein *et al.*, 1975), and Cohen-Mansfield Agitation Inventory scores ranged from 25 to 110 (mean 50.2) out of 174 (Cohen-Mansfield, 1986).

Skype conversations lasted longer than landline telephone calls (12.0 vs. 10.3 minutes; $t = -1.992$, $df = 8$, $p = 0.082$) and mean agitation counts fell by 24.1 from baseline during Skype calls compared with 12.9 during standard calls ($t = 1.208$, $df = 8$,

$p = 0.262$). Neither difference proved statistically significant.

We had hoped to recruit much larger numbers of residents and family carers but our strict inclusion criteria proved an obstacle. This greatly limited the study's statistical power. These pilot study results look promising nonetheless and warrant further exploration.

Older people make increasing use of the internet and many nursing homes now provide internet access to residents' rooms (Australian Bureau of Statistics, 2014). It makes sense therefore to harness new digital technology to help cognitively impaired residents engage more fully with family members between visits. Volunteers might also play a role as "communication therapists" (van der Ploeg *et al.*, 2014). Our findings suggest, but do not prove, that combining visual with auditory sensory inputs captures attention and reduces agitated behaviors more effectively than auditory inputs alone.

Conflict of interest

None.

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Mental healthcare for older adults in rural Greece

Community mental healthcare in rural and remote areas of Greece is mostly delivered by generic Community Mental Health Teams (CMHTs), namely the Mobile Mental Health Units (MMHUs). In Epirus, north-west Greece, one of the poorest regions in Europe, the MMHU of the prefectures of Ioannina and Thesprotia (MMHU I-T) has been established in 2007

and provides services to a population grossly estimated at 100,000 per size of the catchment area in remote and mostly mountainous rural areas. The establishment of the MMHU I-T and its contribution to the care of patients with psychosis has been described elsewhere (Peritogiannis *et al.*, 2011).

Here, we report on care delivery for elderly patients. In particular, we aimed to compare the type of delivered care (home- or office-based) between patients with an age-related disorder, such as dementia and patients with other diagnoses.