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

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Investigators

Eva S. Van Der Ploeg¹, Barbara Eppingstall¹ and Daniel W. O’Connor¹,²
¹ Department of Psychiatry, Monash University, Melbourne, Victoria, Australia
² Institute of Health and Ageing, Australian Catholic University, Melbourne, Victoria, Australia

Conflict of Interest

None.

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The views expressed in this work are the views of its author/s and not necessarily those of the Australian Government.
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The behavioural symptoms that often accompany dementia (e.g. 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 behavioural symptoms (O’Connor et al., 2009).

In a previous study, we found that taped family messages reduced nursing home residents’ agitated behaviours 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. The 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 maximal 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 (Savenstedt et al., 2003). To further gauge the potential of these technologies, we conducted a pilot randomised cross-over, repeated measures study of internet video calls (Skype) versus standard telephone calls as a treatment of agitated behaviour in nursing home residents with dementia. The study was approved by the Monash University Health Research Ethics Committee.

To qualify, residents needed a file diagnosis of dementia; adequate sensory and language capacity; one or more high frequency physically agitated behaviours on the Cohen Mansfield Agitation Inventory (Cohen Mansfield, 1986) at times other than during nursing interventions; an assessment by regular nursing and medical staff that behaviours were not due to remediable physical or psychiatric morbidities; a stable regime of psychotropic medications; and a family member who was able and willing to engage in the study.

Participants were allocated to either the Skype or control 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 behaviour was present or absent at 30-second intervals for the 40 minutes before and during the conversation giving a maximum of 80 points per session. Inter-rater reliability in previous studies was very high (van der Ploeg et al., 2013). Nine out of 17 eligible residents completed the study. One other person died; two were too distressed to tolerate 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 zero (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 telephone calls (12.0 versus 10.3 minutes) and mean agitation counts fell by 24.1 from baseline during Skype calls compared with 12.9 during telephone calls. Neither difference proved significant on paired sample t-tests.

Our pilot study results look promising, therefore, and warrant further exploration. We hoped to recruit much larger numbers of residents and family carers but our strict inclusion criteria proved an obstacle. This greatly limited our statistical power.

Older people make increasing use of the internet and more nursing homes 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 (van der Ploeg et al., 2014). Our findings suggest, but do not prove, that visual and auditory sensory inputs capture attention and reduce agitated behaviours more effectively than auditory inputs alone.

References


