

## *Supplementary Materials*

### 1 Supplementary Tables

**Table 1.** A summary of the methodological features of the selected studies

<b>Study</b>	<b>Sample</b>	<b>Study design</b>	<b>Assessment objective</b>	<b>Assessment Indicators (Method)</b>	<b>Benefits of video call use</b>	<b>Impact on maintaining social interactions</b>
Mickus and Luz (2002) (22)	Healthy and MCI (n=10)	Exploratory Qualitative	Feasibility and technology acceptance (Quality and frequency of calls)	Frequency of calls, Perceived usefulness, Ease of use, Satisfaction (Likert scales and open-ended questions)	Satisfaction with videophone use	Enhanced the quality of social interactions, adding a new value (video)
Sävenstedt <i>et al.</i> (2003) (45)	Dementia (n=7)	Exploratory Qualitative	Technology acceptance (Quality of communication)	Experiences with video-phone (interviews)	- Facilitated and enhanced social interactions - Reduced negative feelings (guilt) (FMs)	OAs more focused and involved during conversations
Hensel <i>et al.</i> (2007) (39)	Mobility limitations (n=1)	Case study	Technology utility and usability	Perceived advantages and disadvantages, Experiences of family members in NH placement	- Increased social presence - Enhanced the quality of social interactions - Enjoyment	- Increased social presence (video) - Enhanced affective communication

				(semi-structured interview)	- OAs more involved in the family life	
Demiris <i>et al.</i> (2008) (40)	NP but “mentally competent” (n= 4)	Exploratory Qualitative	Technology acceptance (psychosocial impact), usability, utility	Technical quality, Usability (questionnaire), Perceived utility, Type of conversations, Quality and frequency of communication, Stress, Isolation and Loneliness (semi-structured interview)	- Reduced negative feelings (guilt) (FMs) - Enjoyment	- Enhanced social presence and quality of social interactions, connectedness - Helped to reduce feeling of isolation and loneliness
Tsai <i>et al.</i> (2010) (27)	Healthy and cognitive impairment ( IG n=24; CG n=33)	Quasi Experimental (CG: Receive regular visits)	Clinical impact (psychological impact)	Social support (SSBS), Loneliness (UCLA Loneliness Scale), Depressive status (GDS), Number of calls, number of visits	- Enhanced emotional and appraisal social support - Reduced loneliness - Less depressive symptoms	- Helped to reduce feeling of loneliness
Tsai and Tsai (2011) (23)	Healthy and cognitive impairment ( IG n=40; CG n=50)	Randomized longitudinal trial (CG: Receive regular visits)	Clinical impact (psychological impact)	Social support (SSBS), Loneliness (UCLA Loneliness Scale), Depressive status (GDS), Number of calls, number of visits	- Enhanced emotional and appraisal social support - Reduced loneliness - Less depressive symptoms	- Helped to reduce feeling of loneliness - Enhanced social presence

Siniscarco <i>et al.</i> (2017) (24)	Healthy and cognitive impairment (n=8)	Exploratory quantitative & qualitative	Clinical impact (impact on loneliness)	Companionship, emotional loneliness, social isolation, opportunities of nurturance, emotional support, informational support, geriatric depression, video conferencing use (scales)	- Happiness - More involved in the family life	NA
Zamir <i>et al.</i> (2018) (25)	Healthy, cognitive impairment, non-verbal (no dementia) (n=18)	Collaborative Action Research (CAR)  Ethnographic	Feasibility and acceptance	Usability, SoW aesthetics, attitudes, care environment, loneliness and social isolation (observation, unstructured interview, form, memo writing, reflective diary)	- OAs more involved in the family life - Enjoyment	NA
Chiu and Wu (2019) (41)	NP but no dementia (CG n=17; Group 1 n=19; Group 2 n=18)	Randomized trial (CG: Receive conventional care)	Clinical impact (social support, psychological well-being, quality of life) and user experience	Health-related quality of life (SF-12), Social support (TISSB), Happiness (CHI), Depression (CES-D), Cognitive function (SPMSQ), Physical	- Better quality of life (better in Group 2) - Better social support - Happiness - Less depressive symptoms	Better social support with family, friends and staff members

				functional status (IADL)		
Moyle <i>et al</i> (2019) (47)	Healthy and cognitive impairment (no dementia) (n=6)	Exploratory qualitative	Feasibility	User Experience and usability (post-intervention semi-structured interview)	NA	NA
Niebler <i>et al.</i> (2019) (26)	Cognitive impairment (n=41)	Exploratory qualitative	Acceptability	User Experience (Semi-structured interviews)	- Reduced negative feelings (FMs) - Enjoyment - Enhanced patient-relative relationship	NA
Tsai, <i>et al.</i> (2020) (42)	Healthy and cognitive impairment (no dementia) (IG n=32; CG n=30)	Randomized trial (CG: Receive regular visits)	Clinical impact	Feelings of loneliness (UCLA Loneliness Scale), Depressive symptoms (GDS), Quality of life (SF-36)	- Reduced loneliness - Better quality of life (pain, vitality, physiological health)	Enhanced quality of social interactions
Sacco, <i>et al.</i> (2020) (44)	Healthy and cognitive impairment (n=132)	Cross-sectional	Utility, usability and acceptance	Ability to establish communication (observation), Preferred virtual communication mode, Satisfaction (Likert scale)	NA	NA

Carcavilla <i>et al.</i> (2020) (43)	Healthy (IG n=21; CG n=25)	Randomized trial (CG: Participate in social activities)	Clinical impact	Self-esteem (Likert scale), Positive and negative affects (Scale)	Improves self-esteem	NA
Zamir <i>et al.</i> (2020) (46)	Healthy and cognitive impairment (n=22)	Collaborative Action Research (CAR)  Ethnographic	Clinical impact, Feasibility and Acceptability	Description of calls, Quality of the intervention (feedback form, observations, semi-structured interview)	<ul style="list-style-type: none"> <li>- OA with dementia remembered some faces, conversations and the activity</li> <li>- Happiness</li> <li>- Enhanced social interactions</li> <li>- Overcome boredom</li> <li>- Increases social connectedness (among residents, SMs, residences)</li> </ul>	<ul style="list-style-type: none"> <li>- Enhanced quality of social interactions</li> <li>- Increased social connectedness (between residents, SMs, residences)</li> </ul>
<p>*CES-D = Center for Epidemiologic Studies Depression scale; CHI = Chinese person's Happiness Inventory; FMs = Family Members; GDS = Geriatric Depression Scale; IADL = Instrumental Activities of Daily Living; MCI = Mild Cognitive Impairment; n = number; NA = Not Applicable; NH = Nursing Home; NP = Not Precised; SF-12 = 12-item short form health survey; SF-36 = 36-item short form health survey; SMs = Staff Members; SoW = Skype on Wheels; SPMSQ = Short Portable Mental Status Questionnaire; SSBS = Social Support Behaviors Scale; TISSB = Taiwanese Inventory of Social Supportive Behavior; UCLA = University of California Los Angeles</p>						