Telephone-assisted pleasant-event scheduling to enhance well-being of caregivers of people with dementia: a randomised controlled trial

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KEY MESSAGES

1. is randomised controlled trial on 60 family caregivers of people with dementia examined the e ectiveness of telephone-assisted pleasant-event scheduling (TAPES) for enhancing the well-being of caregivers in terms of reducing depressive symptoms and enhancing self-e cacy.
2. Analysis of covariance was used to compare the TAPES and treatment-as-usual (TAU) groups. e TAPES group had significantly lower levels of depressive symptoms than the TAU group.
3. It is suggested that TAPES has the potential of developing cost-e ective, accessible, and sustainable intervention and support programmes for caregivers of people with dementia.

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Introduction

Social support enhances well-being and self-e cacy of caregivers of people with dementia. Nonetheless, many caregivers become socially isolated in the course of caregiving. Although psycho-education benefits caregivers, they may not have time to learn or leave their homes for this purpose.[1] us, it is important for caregivers to seek suppport and find time for themselves to enhance their well-being, without leaving their homes.

Psychological well-being is not only the absence of disorder but also the presence of subjective well-being. Positive psychology aims to cultivate individuals' positive feelings, behaviours, and cognition. Pleasant-event scheduling enhances the well-being of caregivers and works well with cognitive-behavioural treatment, particularly behavioural activation. Participants receiving behavioural activation are encouraged to engage in positive activities, recognise the consequences of their behaviours, and become active regardless of their feelings. Moreover, caregivers prefer telephone support over face-to-face contact, as it can meet the need for emotional support and education, without leaving their homes.

Pleasant-event scheduling increases the level of positive reinforcement in the daily routine. It involves a daily planner. e participant collaborates with the therapist to schedule various pleasant events at specific times in order to increase the level of reinforcement in the life of the caregiver and enhance positive mood.[2,3]

ere are few systematic studies on telephone-assisted psycho-educational programmes for caregivers of people with dementia, despite the potential benefits of improving mental health and preventing distress. is pilot study evaluated the e ectiveness of telephone-assisted pleasant-event scheduling (TAPES) on enhancing the psychological well-being of community-dwelling family caregivers. It validated a telephone-administered version of a pleasant-event module adapted from a validated face-to-face psycho-educational programme for Chinese caregivers.[1] It was hypothesised that TAPES resulted in significantly better well-being and mood level, compared with treatment-as-usual (TAU).

Methods

is study was conducted from December 2010 to August 2011. Written informed consent was obtained from each participant. Of 65 eligible caregivers of people with dementia recruited from the psychogeriatric team at United Christian Hospital, five refused to proceed with assessment and 60 were randomised to either the TAPES (n=30) or TAU (n=30) group according to the CONSORT for randomised trial of non-pharmacologic treatment. e primary full-time caregivers (for at least 6 months) were aged ≥25 years and consisted of spouses, daughters/sons, and daughter/son-in-laws of the patients. ey were able to read and speak Chinese/Cantonese. Participants with any signs of severe intellectual deficits, suicidal ideation, or psychotic disorders were excluded.

e TAU group received standard care provided by the psychogeriatric team with regular psychiatric follow-up for the care recipients and support from social workers upon request. e TAPES group received interventions administered using the Pleasant Event Scale, Activity Planning, Event Tracking, and Daily Mood Record Forms, which were validated in in-home training and group settings.[1-3]

e TAPES had three components. First, the project rationale of behavioural activation was introduced, and the Pleasant Event Schedule (revised from California Older Person's Pleasant Events Schedule) was administered. e schedule consisted of pleasant activities in which engagement frequency and pleasure were rated. Activities included socialising, relaxation, contemplation, being e ective, and doing. An information package was also distributed to advise on how to access social and psychological services in the community. Participants were then asked to decide on one or two activities that they would like to work on for the coming weeks. Second, six subsequent telephone calls of 20 minutes each (two calls per week during weeks 1 and 2 and then one call per week during weeks 3 and 4) were made. In the first phone call, participants were taught to schedule pleasant events according to the procedures of behavioural activation by working through the Pleasant Activity Planning Worksheet. To monitor individual progress, participants were asked to fill the Pleasant Event Tracking Form and the Daily Mood Record Form on a daily basis. Participants then mailed the completed progress charting forms back to the researcher.

ird, concepts of adaptive coping were discussed from weeks 2 to 4: active coping, passive coping, and the goodness of fit between coping and situations, problem-solving coping (eg making preparations), emotion-regulation coping (eg distancing) and using situation-appropriate strategies (eg stepping back and taking a break when no immediate solution was available). e compliance of treatment was closely monitored. Participants had to complete the preceding component first before moving on the next component. e completion of the tasks was recorded on the intervention protocol. Regular weekly meetings were carried out by the intervention team to review the progress of caregivers.

e Centre for Epidemiologic Studies Depression Scale (CES-D) and Revised Scale for Caregiving Self-E cacy (SE)[4] were administered via telephone by a blind researcher pre-intervention (1-3 days before the first intervention call), post-intervention (1-3 days after the last intervention call), and at follow-up (1 month after post-intervention).

Results

For caregivers, both the TAPES and TAU groups were comparable in terms of age, education level, gender, living arrangements, and duration of caregiving (Table 1). For care recipients, both the TAPES and TAU groups were comparable in terms of age, education level, gender, mini-mental state examination score, marital status, and number

TABLE 1. Demographics of caregivers

Demographic	Treatment (n=30)*	Control (n=30)*	*t* (x^2)	P value
Age (years)	58.1±12.4	55.1±11.3	0.962	0.340
Male	6 (21.4)	7 (22.6)	(0.000)	1.000
Female	22 (78.6)	24 (77.4)		
No. of siblings	4±3	3±2	2.343	0.023
No. of children	2±1	2±2	-1.499	0.139
Marital status			(1.367)	0.505
Single	6 (21.4)	4 (12.9)		
Married	22 (71.4)	25 (83.9)		
Live separately/divorced	2 (7.1)	1 (3.2)		
Education level			(8.805)	0.185
None	2 (7.1)	1 (3.2)		
Primary/kindergarten	6 (21.4)	12 (41.9)		
Junior secondary	6 (21.4)	2 (6.5)		
Senior secondary	8 (28.6)	10 (32.3)		
Form 6-7/vocational institutes	2 (0)	2 (6.5)		
College sub-degree	2 (7.1)	2 (6.5)		
College bachelor	4 (14.3)	1 (3.2)		

* Data are presented as mean±SD or No. (%)

TABLE 2. Demographics of care recipients

Demographic	Treatment (n=30)*	Control (n=30)*	*t* (x^2)	P value
Age (years)	80.1±6.11	79.9±8.6	0.107	0.915
Mini-mental state examination score	15.5±6.3	12.9±5.5	1.696	0.095
Relationship with caregivers			(3.735)	0.292
Spouse	12 (42.9)	11 (35.5)		
Children	15 (53.6)	14 (45.2)		
Children in laws	3 (3.6)	4 (12.9)		
Relatives	0 (0)	1 (6.5)		
Living arrangement			(3.924)	0.270
Living together	24 (85.7)	21 (67.7)		
Living at same district	2 (7.1)	3 (9.7)		
Living at different district	2 (7.1)	3 (12.9)		
Living at different region	2 (0)	3 (9.7)		
Duration of dementia (years)	3.4±2.0	3.3±2.2	0.245	0.807
Duration of caregiving (years)	3.2±2.4	3.3±2.3	-0.055	0.956
Hours of care per day	8.3±7.7	9.1±9.5	-0.328 (1.250)	0.744 (0.263)

* Data are presented as mean±SD or No. (%)

TABLE 3. Outcome measure scores

Outcome measure	Treatment (n=30)*		Control (n=30)*		ANCOVA F	P value
	Pre	Post	Pre	Post		
Centre for Epidemiologic Studies Depression Scale	16.11±10.89	12.64±11.10	12.06±8.90	14.97±8.69	4.225	0.045
Self-efficacy subscale for obtaining respite	56.92±29.34	61.59±26.41	67.27±26.72	74.41±25.96	1.731	0.194
Self-efficacy subscale for controlling upsetting thoughts about care giving	54.66±24.44	63.96±16.07	72.46±20.47	77.13±16.27	2.258	0.139

* Data are presented as mean±SD

of children (Table 2). ere were baseline group di erences in mood and self-e cacy measures: CES-D (t=1.39, P<0.05), SE for obtaining respite (*t*=1.02, P<0.05), SE for controlling upsetting thoughts about care giving (*t*=2.63, P<0.01). Analysis of covariance was used to compare the TAPES and TAU groups in terms CES-D and the self-e cacy scales. e scores on the pre-test were treated as a covariate to control for pre-existing di erences between the groups (Table 3). e TAPES group had significantly lower levels of depressive symptoms than the TAU group. However, no significant changes in the self-e cacy levels were noted.

Discussion

Short-term telephone-assisted interventions using behavioural activation were successful in improving the mood of caregivers of people with dementia. ese findings have implications for developing cost-e ective, accessible, and sustainable intervention and support programmes for caregivers.

Many intervention programmes have been developed to support caregivers by reducing the negative aspects associated with caregiving. Few aimed to enhance the positive dimensions of their roles as caregivers. Qualitative analysis of an adapted leisure programme as a means of support for caregiver involvement revealed that the intervention had positive impacts on the caregivers, care recipients, and their family members.[5] In developing a satisfying lifestyle for both caregivers and care recipients, caregiver support was introduced by focusing on the positive aspects of caregiving rather than the burden.[5] e programme increased the caregiver's self-e cacy leading to improvements in the caregiving relationship and caregiver well-being.[5] e present study used behavioural activation to enhance the well-being of caregivers by initiating and engaging them in scheduling pleasant activities. In addition, telephone intervention could overcome barriers such as logistic problems, lack of time, unable to leave the patient alone, and caregiver health problems. Cognitive-behavioural intervention focuses on goal attainment for family caregivers of persons with dementia.[6] It aims to (1) improve the utilisation of community and professional services, (2) improve caregiver's coping and problem-solving skills, (3) modify dysfunctional thoughts, and (4) support caregivers in expressing and processing their emotions.[6] Most participants achieve these goals with good treatment compliance.[6] Intervention goals should be matched with outcome measures with appropriate sensitivity to match the type of intervention.[6] e present study aimed to improve caregiver mood through pleasant-event scheduling. e short period of intervention did not manage to teach specific skills in handling di cult situations. is may explain why no significant changes in the self-e cacy measures were noted, although significant improvement in mood was noted.

Caregiver mood is important. Depressive symptoms have a cumulative impact on health risk. Depression renders caregivers less likely to engage in pleasant events and more vulnerable to negative coping, which in turn, a ects health behaviour patterns and choices. Path analysis revealed a significant e ect of depressive symptoms as both self-e cacy for obtaining respite and self-e cacy for controlling upsetting thoughts.[7] e coping with caregiving programme successfully enhances self-e cacy and reduced depression.[7] e present study has demonstrated the e ectiveness of pleasant-event scheduling to enhance the well-being of caregivers.

e present study had several limitations. e sample size was small and there was no long-term follow-up. Moreover, the depression score at baseline was significantly higher in the intervention group, so that the significantly improved scores could represent regression to the mean. Future studies should incorporate a more comprehensive programme with specific modules on teaching coping skills in terms of feasibility and e ectiveness, and should entail longer-term follow-up.

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References

1. Au A, Li S, Lee K, et al. e Coping with Caregiving Group Program for Chinese caregivers of patients with Alzheimer's disease in Hong Kong. Patient Educ Couns 2010;78:256-60.
2. Gallagher- ompson D, Gray H, Tang P, et al. Impact of in-home intervention versus telephone support in reducing depression and stress of Chinese caregivers: results of a pilot study. Am J Geriatr Psychiatry 2007;15:425-34.
3. Gallagher- ompson D, ompson LW, Rider KL. California older person's pleasant events schedule: manual. 2004. Department of Psychiatry, Stanford University.
4. Ste en AM, McKibbin C, Zeiss AM, Gallagher- ompson D, Bandura A. e revised scale for caregiving self-e cacy: reliability and validity studies. J Gerontol B Psychol Sci Soc Sci 2002;57:P74-86.
5. Carbonneau H, Caron CD, Desrosiers J. E ects of an adapted leisure education program as a means of support for caregivers of people with dementia. Arch Gerontol Geriatr 2011;53:31-9.
6. Wilz G, Schinkothe C, Soellner R. Goal attainment and treatment compliance in a cognitive-behavioural telephone intervention for family caregivers of persons with dementia. Geropsych 2011;24:115-25.
7. Rabinowitz YG, Saenz EC, ompson LW, Gallagher- ompson D. Understanding caregiver health behaviors: depressive symptoms mediate caregiver self-e cacy and health behavior patterns. Am J Alzheimers Dis Other Demen 2011;26:310-6.