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Feature Article

The association between participation in social activity and depressive symptoms in institutionalized elders in Taiwan

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ABSTRACT

Depression can be a significant predictor of rapid health decline in institutionalized elders. Non-pharmacologic interventions for depression may include meaningful and enjoyable social activities. This cross-sectional, descriptive correlational study was to examine the associations between three components (frequency, meaningfulness and enjoyment) of nine types of social activities and depressive symptoms in a sample of Taiwanese elders living in long-term care facilities. Results indicated that meaningful and enjoyable activities were associated with fewer depressive symptoms among institutionalized elders. Clinically depressed elders (GDS score $\geq$ 6) were significantly less likely to report a sense of meaning in 6 of 9 social activities, or to report as enjoyable 7 of 9 social activities investigated. Findings suggest that elders' contemplate assignation of meaning of their subjective experiences with social activities, and it would behoove clinical nurses to pay attention to the essential purpose and perceived benefit of the designed social activities.

Social activities are recreational group events designed to generate social interaction and support among participants, which may include staff and fellow residents, to enhance elders' quality of life. For various reasons, nursing home residents who do not engage in social activities are 1.4 times more likely to die than those who were able to engage or were interested in social engagement.[1] Although a wide range of planned activities have been described to promote institutional elder's psychological well-being, elders have reported that few activities were meaningful or met their needs.[2,3] Given the high prevalence of depression (8.1%–52.05%) reported in long-term care communities,[4,5] there is a need to examine what types, and at what level of participation in social activities are perceived as meaningful and enjoyable, and if these activities are associated with the presence or absence of depressive symptoms in institutionalized elders.

Studies to date have indicated that reasons for elders' participation in institutional activities were due to personal interest and experiences of positive emotions.[6,7] Quantity and quality of social engagement have been correlated with depression in nursing home residents.[8,9] Recently, Jang et al[10] found that a lower level of participation in social activities was predictive of increased depressive symptoms, even after controlling for demographic characteristics and functional disability. Activities that garnered higher interest were related to fewer depressive symptoms among nursing home residents.[6] Psychosocial mechanisms that may explain reduced depressive symptoms in those who participate in and enjoy social activities include a positive feedback cycle where there is an improved mood as a result of the increased positive effects of pleasant events[6] and meaningful engagement.[11]

While some studies suggest that depressed institutionalized elders were disinclined to engage in social activities,[12] other studies suggest the opposite, that depressed elders were more likely than their non-depressed counterparts to participate in organized group activities.[6] Perhaps, simply being in an institutional environment that offered appropriate opportunities that allowed depressed elders to engage in social activities led these elders to experience a more positive mental attitude. This improved attitude may have encouraged more social engagement, and thus ended the vicious cycle of social isolation and worsening depression.[3,9] Additionally, in both community-dwelling and institutionalized elders, there have been reports that more frequent engagement in social activities led to fewer depressive symptoms.[9,13,14] While there is a significant body of research that has examined meaningful social activities for institutionalized elders with dementia,[7,15] there remains limited research on meaningful and enjoyable social activities in depressed institutionalized elders. Additionally, there has been little empirical evidence linking institutionalized elders'

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perceptions of the quality of social activities provided by the facility and the relationship to the incidence of depression among elders who live in long-term care facilities. Therefore, the aims of this study were twofold. The first was to examine the relationships between three components (frequency, meaningfulness and enjoyment) of nine types of social activities and depressive symptoms. The second was to compare elders who either met or did not meet criteria for the presence of depression and examine how they differed in levels of participation in social activity as well as their perceptions (meaningful and/or enjoyable) of social activities offered.

Methods

The study design was a cross-sectional, descriptive and correlational. It was reviewed and approved by the Chang Jung Christian University Institutional Review Board in Southern Taiwan.

Settings

The study was conducted in thirteen mid-sized, private-pay, long-term care facilities, including six intermediate care facilities and seven nursing homes. In Taiwan, intermediate care facilities usually have both a long-term care component and a skilled nursing component. Both intermediate care facilities and nursing homes provide supervision, supportive and health care services to individuals with partial to complete functional dependency. However, residents in nursing homes generally require more assistance with daily activities due to less mobility and cognitive function than those residing in intermediate care facilities. For this study, the more inclusive concept, long-term care facilities (LTCF) was used.

Sample

A convenience sample of 174 elders was recruited from 13 LTCFs. Inclusion criteria were aged $\geq$65 years old, ambulatory, able to speak fluent Mandarin or Taiwanese, and cognitively intact as assessed by the Short Portable Mental Status Questionnaire (SPMSQ) with $\leq$3 response errors on 10 item questions.[16] Exclusion criteria included those who were bedridden, demonstrated severe speech or hearing impairments that interfered with normal conversation, or who carried a diagnosis of dementia or any psychiatric disorder except depression. A power analysis was performed with the G-power 3.1 statistical sample size calculator. For a two-tailed, exact distribution, with a correlational coefficient of 0.273 as reported in Meeks et al,[17] a sample size of 168 provided an error probability of 0.05 and power of 0.95.

Measures

Demographic questionnaire included sociodemographic variables (age, gender, marital status, highest educational level achieved, financial status, and religion) and institutional variables (duration of residence in months and type of LTCF).

The Barthel index was used to measure functional independence on ten activities of daily living (ADL) that included bathing, grooming, dressing, independent toilet use, and transfers.[18] Possible scores ranged from 0 to 100, with 0–20 indicating complete dependence, 21–60 for moderate dependence, 61–90 for mild dependence, 91–99 for slight dependence, or 100 for independent. In a sample of Taiwanese stroke patients with a mean age of 67.5 years,[19] this index demonstrated good reliability ($\alpha = 0.85$) and concurrent validity ($r = 0.94$).

Geriatric Depression Scale Short Version (GDS) is a screening instrument used to detect clinically significant depressive symptoms.[20,21] Unlike the original 30-item GDS, which categorizes the degree and severity of depression according to specific score ranges, the short screening version suggests depression with a score $\geq$6.[21] The 15-item GDS (Chinese version) has been shown to be reliable for older Asian adults ($\alpha = 0.90$ for Hong Kong elders[22]; $\alpha = 0.83$ for Taiwanese elders[23]). Cronbach's alpha for the GDS in this sample was satisfactory at 0.79.

Socially supportive activity inventory (SSAI)[23] was used to evaluate nine different types of social activities that the elder may have participated in since admission to the facility. To assess frequency, degree of meaningfulness and degree of enjoyment, respectively, for each type of social activity, three questions were asked, "How often did you participate in the activity?"; "How meaningful was this participation to you?" and "How much did you enjoy participating in it?" Scores for frequency ranged from 1 to 7. Scores for both meaningfulness and enjoyment ranged from 1 = 'very little' to 4 = 'very much'. The scoring was intuitive, higher frequency scores indicated greater frequency of participation in the activity; higher meaningfulness and enjoyment scores indicated higher degrees of meaningfulness to the elder and more enjoyment experienced while participating in the activity. The SSAI was validated as culturally sensitive and reliable (content validity index = 0.96; test–retest reliability = 0.76–1.00).[24] In this study, the Cronbach's alpha coefficients for each component were 0.72, 0.81, and 0.85, respectively.

Procedure

Entrance into the LTCFs was gained through an initial telephone call to the LTCF nurse managers. Once permission was granted to use the site for the study, the researchers provided inclusion/exclusion criteria to the nurse managers, who then identified and invited interested, potential participants to speak with research assistants. Trained research assistants then approached those who were interested and pre-screened for cognitive impairment using the SPMSQ[16] to confirm study eligibility. A total of 182 participants were approached and eight participants failed to pre-screening. For those eligible participants, trained research assistants explained the study and ensured that each eligible participant understood their rights to refuse or withdraw from the study any time without influencing their care. After obtaining individually informed, written consent, the research assistants administered questionnaires to participants. For those unable to read, the research assistants read the questions to the participants and recorded their responses.

Data analysis

To maximize validity across a heterogenous sample in a cluster of facilities, baseline characteristics between the elders who resided in intermediate care facilities and those who resided in nursing homes were evaluated with Chi square tests, Phi tests, and independent sample *t* tests. Spearman's rho correlation and analysis of variance (ANOVA) were used to examine the associations between depressive symptoms in institutionalized elders and potential confounding factors. Factors used were age, income, length of residence in the LTCF, and educational level. For potential barriers to participation, physical function (ADL scores) was included.[5,25,26] Factors found to have an association with depressive symptoms and those that demonstrated differences in baseline characteristics of the samples, were entered as covariates. Partial correlation coefficients were examined for significant correlations between each component of each social activity category and