Factors Related to Meaning in Life Among Residents of Long-Term Care Institutions

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ABSTRACT

Background: Meaning in life plays an important role in, and is associated with all dimensions of, well-being. Finding meaning in life has been shown to increase life satisfaction in residents of long-term care (LTC) institutions, whereas social support has been found to relate positively with meaning of life. Interactions with LTC staff are the main source of social support for LTC residents.

Purpose: The purpose of this study was to explore the factors related to meaning in life in LTC residents, especially those associated with interactions between nursing assistants and residents.

Methods: A cross-sectional study design was applied to interview participants from October 2015 through July 2016. One hundred fifty-four residents from six LTC institutions participated in this study. The Staff–Patient Interaction Scale and Meaning-in-Life Scale were used to collect data. The statistical methods of t test, Pearson's correlation, and stepwise regression of forward selection analysis were used to explore the factors related to meaning in life in the study population.

Results: The participants were found to perceive a moderate level of meaning in their lives, with a Meaning-in-Life Scale average total score of 42.75 (range: 17–63, SD = 10.19). Staff–patient interaction (β = .50), financial support from government subsidies and social assistance (β = −.41), and number of medical diagnoses (β = −.18) were the three most important factors related to meaning in life, explaining 44.2% of the variance.

Conclusions/Implications for Practice: Improving the quality of interactions between nurse assistants and residents and health promotion may increase meaning in life in LTC residents.

Key Words: meaning in life, related factors of meaning in life, long-term care facilities.

Introduction

As a result of population aging, the demand for long-term care (LTC) is gradually increasing, and the number of people using either nursing facilities or alternative residential care facilities has increased. About 18% of people with disabilities are living in LTC facilities in the United States. (U.S. Department of Health and Human Services, 2021). In Taiwan, 21.6% of people with disabilities received institutional LTC services in 2020 (Ministry of Health and Welfare, Taiwan, ROC, 2021). Older adults with disabilities are admitted to different types of LTC institutions based on their care needs. According to the Ministry of Health and Welfare of Taiwan, persons with disabilities having stoma such as tracheotomy or gastrostomy must be admitted to nursing homes, whereas those with disabilities affected by nasogastric tubes or urinary tubes only are admitted to community-based LTC institutions. Older adults able to care for themselves live in assisted living facilities.

During the daytime, for example, the respective ratios of nurses and nursing assistants to residents in the three different types of LTC institutions are 1:5 for nursing assistants and 1:15 for nurses at nursing homes (Laws and Regulations Database of the R.O.C., 2020) and then 1:8 for nurses and 1:20 for nurses at community-based LTC institutions, and for assisted living facilities, only one nurse is required to be on duty, whereas the required nonprofessional manpower ratio is 1:15 (Laws and Regulations Database of the R.O.C., 2012). Older adults desire well-being and respect regardless of their declining physical and mental capacities (World Health Organization, 2020). In providing care, LTC institutions should meet the basic rights and interests of their older adult residents. Meaning in life plays an important role in well-being and is associated with all related dimensions (Haugan, 2014b). Thus, maintaining or finding meaning in life may positively impact life satisfaction in residents of LTC institutions (Y. Lin et al., 2020).

Meaning in life may be defined as the extent to which people understand and perceive meaning of their lives and the extent to which they self-perceive as having goals or overall goals in life (Damásio & Koller, 2015). An individual's interpretation of meaning in life is dependent on personal experience and is measured based on various aspects across different stages of life (Bronk & Bronk, 2014). Tsai (2004) interviewed older adults and found that their opinions regarding meaning in life included self-evaluation, family well-being, self-expectancy, and self-realization.

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Residents of LTC institutions typically have a low sense of meaning in life (Haugan, 2014a). Sense of meaning in life is related to one’s physical health (Czekierda et al., 2017). Previous studies have found that residents of LTC institutions often have chronic diseases and are dependent on others for their activities of daily living (ADLs; Kuo et al., 2015). The reduced living ability of these residents makes them unable to perform daily activities, thus affecting their sense of meaning in life (Welsh et al., 2012). Relocation to LTC facilities is a major life event that decreases meaning in life in older adults (Fraher & Coffey, 2011). They experience separation from their family and familiar environments. Family interaction is important to the residents of LTC institutions, but family members cannot stay with them always (J. Lin et al., 2014). Residents living in LTC institutions have limited physical functions and cannot interact with other people, so they feel that life is lonely and meaningless (James, Blomberg, & Kihlgren, 2014). Lost meaning in life increases the likelihood of depression in older people significantly (Volkert et al., 2019) and affects global well-being in LTC residents (Haugan, 2014b).

Social support from others is considered helpful in enhancing meaning in life for LTC residents (Krause & Rainville, 2020). Kim et al. (2012) pointed out social support as an emotional and instrumental aid that individuals derive from interpersonal relationships. Family, friends, and others are sources of social support (Wang et al., 2018), and seeking supportive relationships from others relates to the level of meaning one perceives in life (Brandburg et al., 2013).

Nurse assistants play an intimate and important role in supporting LTC residents. They form a close bond with the residents and provide physical and emotional care (Carland, 2018). Nursing assistants help facilitate most of the ADLs of and spend significant time with LTC residents, making them the most reliable care providers (Carland, 2018). James, Fredriksson, et al. (2014) revealed that affection and reciprocity between staff and residents through joking with each other or sitting down and talking for a while can increase meaningful daily life in LTC institutions. Nursing assistants provide emotional support through listening, respect, and verbal interaction during the care process (James, Fredriksson, et al., 2014). However, the author has witnessed inappropriate jokes and attitudes between nursing assistants and residents in the research field, which may relate to a lack of good interactive skill courses in the nursing assistant training process (Heliker & Nguyen, 2010). Nursing assistants may obtain a Grade 3 certificate after 90 hours of training, out of which only 2 hours involve interaction skills (Ministry of Health and Welfare, Taiwan, ROC, 2017). This is why the impact on the perceived meaning in life of LTC residents of their interactions with nursing assistants is an important issue to explore. Haugan et al. (2012) pointed out that interactions with nurses helped the residents of LTC institutions attain internal transcendence, accept their reduced physiological capabilities, discover meaning in the earlier periods of their lives, and feel satisfied with their current life. However, few studies have examined the impacts of these interactions on residents’ self-perceived meaning in life. Thus, this study was designed to explore the related factors, especially in terms of interactions with nursing assistants, among residents of LTC institutions.

Methods

Design and Participants
A cross-sectional design was used in this study to elucidate the relationships between, respectively, the interpersonal relationships, health status, institutional data, and demographic characteristics of the participants and their meaning in life. The conceptual framework of this study is shown in Figure 1. Data were collected from October 2015 to July 2016, and participants were selected using convenience sampling. Individuals who met the following criteria were invited to participate: able to communicate in Mandarin or Taiwanese, no medical diagnosis of dementia, no antidepressant medication use, and resident in an LTC institution for at least 1 month.
One hundred fifty-four residents enrolled as participants. Of these, 32 lived in one of four community-based LTC institutions that accommodated 49 or fewer residents, and the remaining 122 lived in one of two LTC institutions that accommodated an average of 150 residents, one of which had a predominantly male population (66%).

Data Collection
Structured questionnaires were used to measure sample characteristics, including demographic data (gender, age, educational level, marital status, number of children, and source of financial support), health status (medical diagnoses and ADLs), institutional data (type of facilities, duration of stay), interpersonal relationships (using the Staff–Patient Interaction Scale [SPIS], whether conversing with staff, and whether conversing with other residents), and meaning in life (using the Meaning-in-Life [MIL] Scale). The variable “whether conversing with other residents” queried residents whether they had close friends to talk to every day in their institution. The first author of this study used the face-to-face interview method and chart reviewing to collect data for this study.

Ethical Considerations
Informed consent was obtained from participants after the institution staff made introductions. Before data collection, the study’s procedure and objectives were explained to the residents in detail; and they signed the consent form after confirming their willingness to participate. Ethical approval was obtained from the institutional review board of the National Yang Ming University in Taipei (registration number: YM104112E).

Validity and Reliability of the Study Instruments
The MIL Scale used in this study was revised by Cheng and Lai (2007). The scale includes 15 questions that address the three constructs of self-evaluation, self-actualization, and self-integration. The questionnaire was previously applied in Cheng and Lai’s study in a sample of 424 community-dwelling older adults, achieving a Cronbach’s α value of .82. Scores ranged between 15 and 75, with higher scores indicating a stronger self-perceived level of meaning in life (Cheng & Lai, 2007). In this study, the MIL Scale contained 15 questions, each scored between 1 and 5, with higher scores representing higher perceived meaning in life (range: 15–75). Five experts evaluated the scale, with their assessments indicating the content validity index value of the MIL Scale as greater than .96 and the Cronbach’s α value as .86.

The SPIS was developed by Haugan et al. (2012) to examine the interactions between nurses and residents in nursing homes. This questionnaire was translated by an expert proficient in both Chinese and English who is familiar with the field of LTC. The back-translation was done by another expert, and the first author of this study was responsible for checking the translation for clarity and appropriateness twice. In this study, “working staff” were defined as nursing assistants who provided direct-care services to residents. The SPIS includes the following items: having trust and confidence in nursing assistants; having experience of being taken seriously, respected, and recognized as a person; and being listened to and feeling good in nursing assistant–patient interactions. The scale had good reliability, with a Cronbach’s α value of .91 (Haugan et al., 2012). In this study, five experts evaluated the content validity, and three items were suggested to be separated because of addressing concepts that differed from the original questions (e.g., “I often get hurt or sad because of how the nursing assistants interact with me”). The version used in this study comprised 17 questions. Scores ranged from 1 to 10 for each question, and the possible total score range was 17–170, with higher scores indicating a more positive interactional relationship. Each item's content validity index was higher than .90, and the Cronbach’s α value was .91. Ten participants were interviewed by the first author for the pilot test to ensure the content validity, clarity, and relevance of the SPIS and Nurse-Patient-Interaction Scale measures. The critical ratio of the SPIS in the higher score group and lower score group was 6 in the pilot test.

Data Analysis
IBM SPSS Statistics 20.0 (IBM Inc., Armonk, NY, USA) was used to analyze the data. Statistical methods, including t test, Pearson’s correlation, and stepwise regression of forward selection, were used. The factor of interaction with nursing assistants (a component of interpersonal relationship) was entered first into the regression model. Interpersonal relationship was presumed to be a significant predictive factor of meaning in life in this study.

Results
Characteristics of Participants
This study included more male participants (n = 86) than female participants (n = 68). Participants had an average age of 79.72 years (SD = 7.74), most (50%) had a primary school education, 24.7% were married, and 47.4% did not have children. The main sources of financial support for 66.9% of participants were government subsidies and social assistance. Only 18.8% reported having financial difficulties. The most prevalent chronic disease was hypertension (51.2%). The ADL scores of 61.7% of the participants were above 80. The average duration of stay in the institution was 71.35 months (range: 1–467 months; Table 1).

Participants’ Perception About Interactions Within the Institution
Residents living in LTC institutions typically have less verbal interaction with others. The results showed that nearly half of the participants did not have friends or other residents with whom they could converse within their institution. In this study, the average total score on the SPIS was 109.61 (range: 23–164), with an average score of each item of 6.33
indicating a “moderate” level of interaction. The participants who lived in community-based LTC institutions had significantly more interaction with nursing assistants than those who lived in larger institutions (means = 127.06 and 105.04, respectively; t = 5.07, p < .001).

Residents' Perceptions of Meaning in Their Lives

The participants showed a moderate level of self-perceived meaning in their lives, with an average total score of 42.75 (range: 17–63, SD = 10.19). Item 6, “resident’s satisfaction with his or her children’s behavior,” was excluded from the score if a participant had no children and earned the lowest score (mean = 2.90) for self-actualization among all constructs of the MIL Scale (Table 2). Conversely, Item 6 earned the highest score (mean = 3.93) based on the responses of the 76 participants with children. The item with the second-highest score was “I like helping others” (mean = 3.70), and the lowest score was “My life always has a clear purpose” (mean = 2.53).

Regarding the relationship between demographic attributes and self-perceived meaning in life, the level of perception was stronger in participants with children (t = –3.44, p = .001). Regarding the relationship between health status and the perception of meaning in life, residents with heart disease reported a weaker level of perception (t = 2.34, p = .023). No significant correlation was found among self-perceived meaning in life, ADLs, and age. Perceived meaning in life was found to be significantly and negatively correlated with duration of stay in an institution (p = .024) and significantly and positively correlated with number of children (p < .001).

The average MIL Scale score was 48.56 among the participants residing in community-based small-scale facilities and 41.23 among those residing in large-scale institutions, thus showing a significant difference (t = 4.64, p < .001). Self-perceived meaning in life was found to be significantly affected by having friends (residents) to converse in LTC institutions or not (t = –2.02, p = .045; Table 3). Meaning in life was positively correlated with staff-patient interaction in this study (p < .001; Table 4).

Self-perceived meaning in life was set as the dependent variable, and interpersonal relationship Staff–Patient Interaction Scale (SPIS), health status, institutional data, and demographic data were set as the independent variables. A stepwise regression of forward selection analysis was conducted. The results revealed that SPIS (β = .50), financial support from government subsidies and social assistance (β = –.41), and number of medical diagnoses (β = –.18) each significantly related to self-perceived meaning in life, accounting for 44.2% of the total variation (R² = .44). The SPIS was

| Table 1 |
| --- |
| **Participants Characteristics (N = 154)** |
| | Variable | n | % |
| Gender | Male | 86 | 55.8 |
| | Female | 68 | 44.2 |
| Age (years; mean and range) | 79.72 | 64–99 |
| Educational level | Illiterate | 35 | 22.7 |
| | Self-taught or primary school | 77 | 50.0 |
| | Junior high school or higher | 42 | 27.3 |
| Marital status | Married | 38 | 24.7 |
| | Not married (single, widowed, divorced, or separated) | 116 | 75.3 |
| Children | No | 73 | 47.4 |
| | Yes | 81 | 52.6 |
| Source of financial support | From children and/or friends | 40 | 26.0 |
| | From savings | 11 | 7.1 |
| | Government subsidies and social assistance | 103 | 66.9 |
| Number of medical diagnoses (comorbidities) | None | 28 | 18.2 |
| | 1 | 55 | 35.7 |
| | 2 | 52 | 33.8 |
| | 3 or above | 19 | 12.3 |
| Activities of daily living (score) | 0–30 | 14 | 9.1 |
| | 31–80 | 44 | 28.6 |
| | 81–100 | 95 | 61.7 |
| | Missing data | 1 | 0.6 |
| Institution type | Community based (small scale) | 32 | 20.7 |
| | Large scale | 122 | 79.3 |
| Duration of stay (months; mean and range) | 71.35 | 1–467 |
| Have friends (residents) to converse in LTC institutions | No | 85 | 55.2 |
| | Yes | 69 | 44.8 |

Note. LTC = long-term care.

| Table 2 |
| --- |
| **Staff–Patient Interaction Scale and Meaning-in-Life Scores** |
| | Dimension | n | Mean | SD |
| Staff–Patient Interaction Scale | 154 | 109.61 | 31.53 |
| Total score of meaning in life (excluding the sixth question) | 154 | 42.75 | 10.19 |
| Self-evaluation | 154 | 3.01 | 0.91 |
| Self-integration | 154 | 3.20 | 0.68 |
| Self-actualization (excluding the sixth question) | 154 | 2.90 | 0.78 |
| Self-actualization (including the sixth question) | 76 | 3.36 | 0.67 |

Note. Some participants did not have children and thus did not complete the sixth item.
This study aimed to explore factors related to meaning in life among residents in LTC institutions. Interactions with nurse assistants were found to be the most significant predictor of self-perceived meaning in life ($R^2 = .27$). The regression model was as follows (Table 5):

Meaning in life = 34.025 + 0.160 × SPISS + 8.935 (financial support from government subsidies and social assistance) − 1.908 (number of medical diagnoses).

### Discussion

This study aimed to explore factors related to meaning in life among residents in LTC institutions. Interactions with nurses provide direct personal services. However, the average score for interaction between residents and nursing assistants in this study (109.61/17 = 6.33) was lower than that in a study by Haugan, which explored the relationship between residents and nurses (8.13; Haugan, 2014a). Nursing assistants spend more time with residents than nurses, but their interaction scores are comparatively lower, which means that the quality of nursing assistant–resident interaction does not depend on the duration of contact but rather on its process or nature. Custers et al. (2012) found that when nursing assistants provide assistance with daily care but converse very little with the residents during this activity, residents consider the interaction as negative. The ability of care providers to listen to residents respectfully can promote the development of friendships, leading to mutual empathy and meaningful daily living (Heliker & Nguyen, 2010). When interacting with residents, nursing assistants must show consideration and respect and adopt an empathetic approach (Drahošová & Jarošová, 2016). Hence, residents require warmer and more respectful verbal interactions with nursing assistants who provide direct personal services.

According to Heliker and Nguyen (2010), not providing appropriate training to nursing assistants may result in their failing to show adequate respect and consideration in interpersonal interactions while providing life care to residents. In Taiwan, according to the training standards established by the Ministry of Health and Welfare, nursing assistants may obtain a Grade 3 certificate after 90 hours of training, which includes 50 hours of in-class learning, 10 hours of teach-back training, and 30 hours of clinical practice. Only 2 hours of the entire course are focused on interpersonal relations and communication skills in the care provision environment. In other words, the proportion of hours devoted to training nursing assistants to interact with residents is minimal, and the major portion of the course is focused on physical care training (Ministry of Health and Welfare, LTC = long-term care.

Note. COPD = chronic obstructive pulmonary disease; ADLs = activities of daily living; LTC = long-term care.

***$p < .001$; **$p < .01$; *$p < .05$.

Table 3

| Item                          | $n$ | $M$ SD | $t/F$  | $p$  |
|-------------------------------|-----|--------|--------|------|
| Children                     |    |        |        |      |
| No                            | 73  | 39.87  | 10.20  |      |
| Yes                          | 81  | 45.35  | 9.51   |      |
| Source of financial support  |    |        |        |      |
| From children and/or friends | 48.05 | 7.79   |        |      |
| From savings                  | 50.90 | 4.80   |        |      |
| Government subsidies         | 39.83 | 10.17  |        |      |
| Scheffe test                  |    |        |        |      |
| Heart disease                 |    |        |        |      |
| No                            | 118 | 43.78  | 10.03  |      |
| Yes                          | 36  | 39.38  | 10.11  |      |
| Stroke                        |    |        |        |      |
| No                            | 125 | 43.16  | 10.33  |      |
| Yes                          | 29  | 41.03  | 9.50   |      |
| COPD                          |    |        |        |      |
| No                            | 136 | 42.81  | 10.42  |      |
| Yes                          | 18  | 42.33  | 8.48   |      |
| Cancer                        |    |        |        |      |
| No                            | 142 | 42.71  | 10.28  |      |
| Yes                          | 12  | 43.25  | 9.36   |      |
| ADLs (scores)                |    |        |        |      |
| 0–30                         | 40.50 | 10.44  | .061   | .543 |
| 31–80                        | 43.88 | 9.99   |        |      |
| 81–100                       | 42.63 | 10.32  |        |      |
| Institution type             |    |        |        |      |
| Community based (small scale)| 32  | 48.56  | 7.19   |      |
| Larger scale                 | 122 | 41.23  | 10.33  |      |
| Have friends (residents)      |    |        |        |      |
| to converse in LTC institutions | No | 85  | 41.27  | 9.84  |      |
| Yes                          | 69  | 44.59  | 10.38  |      |

Note: COPD = chronic obstructive pulmonary disease; ADLs = activities of daily living; LTC = long-term care.

***$p < .001$; **$p < .01$; *$p < .05$.

the significant predicting variable of meaning in life, accounting for 27.1% of the total variation ($R^2 = .27$). The suggestion by Noviana et al. (2016) that meaning in life originates from having significant others and good interpersonal relations that generate positive feelings about life corresponds with the findings of Haugan (2014b). Persons with disabilities rely on others physically as well as exhibit emotional dependence on others. The positive interpersonal interaction generated through the caring and trust of the caregiver may help persons with disabilities to establish meaning in their future lives (Candela et al., 2020). Thus, interactions between the residents and nursing assistants at LTC institutions are related to the residents’ perceptions of meaning in their lives.

Nursing assistants in LTC institutions spend many work hours providing direct care to residents, including moving, bathing, and changing clothes (Eaton et al., 2020). In this study, providing more verbal interactions was found to elevate residents’ positive feelings such as the feeling of being cared for, respected, and helped by the nursing assistants ($t = -2.74, p = .008$). However, the average score for interaction between residents and nursing assistants in this study (109.61/17 = 6.33) was lower than that in a study by Haugan, which explored the relationship between residents and nurses (8.13; Haugan, 2014a). Nursing assistants spend more time with residents than nurses, but their interaction scores are comparatively lower, which means that the quality of nursing assistant–resident interaction does not depend on the duration of contact but rather on its process or nature. Custers et al. (2012) found that when nursing assistants provide assistance with daily care but converse very little with the residents during this activity, residents consider the interaction as negative. The ability of care providers to listen to residents respectfully can promote the development of friendships, leading to mutual empathy and meaningful daily living (Heliker & Nguyen, 2010). When interacting with residents, nursing assistants must show consideration and respect and adopt an empathetic approach (Drahošová & Jarošová, 2016). Hence, residents require warmer and more respectful verbal interactions with nursing assistants who provide direct personal services.

According to Heliker and Nguyen (2010), not providing appropriate training to nursing assistants may result in their failing to show adequate respect and consideration in interpersonal interactions while providing life care to residents. In Taiwan, according to the training standards established by the Ministry of Health and Welfare, nursing assistants may obtain a Grade 3 certificate after 90 hours of training, which includes 50 hours of in-class learning, 10 hours of teach-back training, and 30 hours of clinical practice. Only 2 hours of the entire course are focused on interpersonal relations and communication skills in the care provision environment. In other words, the proportion of hours devoted to training nursing assistants to interact with residents is minimal, and the major portion of the course is focused on physical care training (Ministry of Health and Welfare, LTC = long-term care.

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Meaning in life = 34.025 + 0.160 × SPISS + 8.935 (financial support from government subsidies and social assistance) − 1.908 (number of medical diagnoses).
Taiwan, ROC, 2017). Thus, increased focus in the training standards on improving interaction skills is suggested.

Financial support from government subsidies and social assistance was another significant factor found in this study to be associated with perceived meaning in life, which is consistent with Hupkens et al. (2018). Residents accept financial support from government subsidies and social assistance because of their low-income status and insufficient financial support from their families. Chui (2018) pointed out that people with a lower socioeconomic status lack social networks and thus perceive lower meaning in life. A sense of meaning in life in older adults may be facilitated by supportive social networks (Krause & Rainville, 2020). In this study, 47.4% of the participants did not have children and thus likely had fewer social connections than their peers with children. Niu et al. (2016) emphasized that LTC caregivers should engage in greater social interactivity with LTC residents who do not have children. On the basis of the results of this study, nursing assistants should engage in more frequent, positive interactions between nursing assistants and residents, especially those who are economically disadvantaged or without children.

In this study, number of medical diagnoses was found to be a significant factor affecting perceived meaning in life, which is consistent with a previous study that found a significant association between meaning in life and physical health (Czekierda et al., 2017). Meaning in life is particularly low in LTC residents with poorer physical health status (Volkert et al., 2019). A possible reason for this may be that poorer health status leads to decreased participation in daily activities. Welsh et al. (2012) pointed out that engaging in “normal” activities is an important strategy for older adults in LTC institutions to improve their self-perceived meaning in life. Thus, on the basis of the results of this and other studies, LTC institutions should promote physical activity among their residents to improve these residents’ self-perceived meaning in life.

**Limitations**

The cross-sectional design used in this study to explore the factors that relate to meaning in life in LTC residents did not allow the examination of prospective/qualitative changes in meaning in life over time. Future studies may apply a field study method to observe interactions between nursing assistants and residents in LTC institutions. In addition, the causal relationships between the several factors need to be confirmed further using a longitudinal study. Furthermore, in future studies, the sources and quantity of social support may also be considered to examine the mediating relationships between these and meaning in life in LTC residents.

**Conclusions**

In this study, LTC residents’ interactions with nursing assistants were shown to be significantly related to their self-perceived meaning in life. Beyond monitoring the physical environment and facilities, the evaluation systems used in LTC institutions should carefully consider the quality of interactions between nursing assistants and residents. Training for nursing assistants should include not only teaching a variety of care skills but also instilling the skills and attitudes required to communicate effectively with older adults. Finally, LTC institutions should encourage interaction between nursing assistants and residents and encourage residents to engage actively in their own health promotion and maintenance.

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**Table 4**

**Correlation Among Demographics, MIL, and SPIS**

| Variable                  | ADLs  | Age   | Duration of Stay (Months) | Number of Children | MIL   | SPIS   |
|---------------------------|-------|-------|---------------------------|--------------------|-------|--------|
| ADLs                      | .1    | −.046 | .075                      | −.178*             | .031  | .200*  |
| Age                       | −.046 | 1     | .269**                    | .205*              | .072  | .013   |
| Duration of stay (months) | .075  | .269**| 1                         | −.294***           | −1.82 | −.094  |
| Number of children        | −.178*| .205* | −.294***                  | 1                  | .340**| .191*  |
| MIL                       | .031  | .072  | −.182*                    | .340***            | 1     | .524***|
| SPIS                      | .200* | .013  | −.094                     | .191*              | .524***| 1      |

Note. ADLs = activities of daily living; MIL = meaning in life; SPIS = Staff–Patient Interaction Scale.

*p < .05. **p < .01. ***p < .001.

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**Table 5**

**Predictors of Meaning in Life**

| Variable                                          | B     | SE    | β     | $R^2$ | t       |
|---------------------------------------------------|-------|-------|-------|-------|---------|
| Intercept                                         | 34.03 | 2.70  | 12.61 |       |         |
| SPIS                                              | 0.16  | 0.02  | .50   | .27   | 8.15*** |
| Financial support from government subsidies and/or social assistance | −8.94 | 1.34  | −.41  | −.14  | −6.68***|
| Number of medical diagnoses                       | −1.91 | 0.65  | −.18  | .03   | −2.95** |

Note. Excluding factors: gender, age, marital status, having children, activities of daily living, institution type, duration of stay, conversing with other residents, and financial support from savings or children/friends. SPIS = Staff–Patient Interaction Scale. Adjusted $R^2$ = .44, $F$ = 41.07, $p < .001$.

*p < .05. **p < .01. ***p < .001.
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**Author Contributions**

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Data collection: CMH  
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**References**

Brandburg, G. L., Symes, L., Mastel-Smith, B., Hersch, G., & Walsh, T. (2013). Resident strategies for making a life in a nursing home: A qualitative study. *Journal of Advanced Nursing*, 69(4), 862–874. https://doi.org/10.1111/j.1365-2648.2012.06075.x

Bronk, K. C., & Bronk, K. C. (2014). Measuring purpose. In K. C. Bronk (Ed.), *Purpose in life: A critical component of optimal youth development* (1st ed., pp. 21–46). Springer.

Candela, M. L., Piredda, M., Marchetti, A., Facchini, G., Iacorossi, L., Capuzzo, M. T., Mecugni, D., Rasero, L., Matarese, M., & De Marinis, M. G. (2020). Finding meaning in life: An exploration on the experiences with dependence on care of patients with advanced cancer and nurses caring for them. *Supportive Care in Cancer*, 28(9), 4493–4499. https://doi.org/10.1007/s00520-020-05300-8

Carland, M. D. (2018). The role of the certified nursing assistant: Caring on the front line. *Caring for the Ages*, 19(9), 16. https://doi.org/10.1016/j.carage.2018.08.012

Cheng, C. C., & Lai, K. H. (2007). The study of social support, loneliness, leisure participation and life meaning of the elderly people in elderly colleges in Taichung area. *Journal of Chaoyang University Technology*, 12, 217–254. (Original work published in Chinese)

Chui, R. C. (2018). The role of meaning in life for the quality of life of community-dwelling Chinese elders with low socioeconomic status. *Gerontology and Geriatric Medicine*, 4, Article 2333721418774147. https://doi.org/10.1177/2333721418774147

Custers, A. F. J., Westerhof, G. J., Kuin, Y., Gerritsen, D. L., & Riksen-Walraven, J. M. (2012). Relatedness, autonomy, and competence in the caring relationship: The perspective of nursing home residents. *Journal of Aging Studies*, 26(3), 319–326. https://doi.org/10.1016/j.jaging.2012.02.005

Czekiera, K., Banik, A., Park, C. L., & Luszczynska, A. (2017). Meaning in life and physical health: Systematic review and meta-analysis. *Health Psychology Review*, 11(4), 387–418. https://doi.org/10.1080/17437198.2017.1327325

Damásio, B. F., & Koller, S. H. (2015). Meaning in life questionnaire: Adaptation process and psychometric properties of the Brazilian version. *Revista Latinoamericana de Psicologia*, 47(3), 185–195. https://doi.org/10.1016/j.rlp.2015.06.004

Drahošová, L., & Jarošová, D. (2016). Concept caring in nursing. *Central European Journal of Nursing & Midwifery*, 7(2), 453–460. https://doi.org/10.15452/CEJNM.2016.07.0014

Eaton, J., Cloyes, K., Paulsen, B., Madden, C., & Ellington, L. (2020). Certified nursing assistants as agents of creative caring in long-term care. *International Journal of Older People Nursing*, 15(1), Article e12290. https://doi.org/10.1111/opn.12280

Eaton, J., Paulsen, B., & Ellington, L. (2019). Residents demand service: Understanding patient and family perspectives of care in long-term care. *Journal of Gerontological Nursing*, 45(13), 84–90. https://doi.org/10.3928/00989159-20190716-01

Fraher, A., & Coffey, A. (2011). Older people’s experiences of relocation to long-term care. *Nursing Older People*, 23(10), 23–27. https://doi.org/10.7748/nop2011.12.23.10.23.c8838

Haugan, G. (2014a). Meaning-in-life in nursing-home patients: A correlate with physical and emotional symptoms. *Journal of Clinical Nursing*, 23(7–8), 1030–1043. https://doi.org/10.1111/jocn.12282

Haugan, G. (2014b). Meaning-in-life in nursing-home patients: A valuable approach for enhancing psychological and physical well-being? *Journal of Clinical Nursing*, 23(13–14), 1830–1844. https://doi.org/10.1111/jocn.12402

Haugan, G., Rannestad, T., Hanssen, B., & Espnes, G. A. (2012). Self-transcendence and nurse–patient interaction in cognitively intact nursing home patients. *Journal of Clinical Nursing*, 21(23–24), 3429–3441. https://doi.org/10.1111/j.1365-2702.2012.04217.x

Heliker, D., & Nguyen, H. T. (2010). Story sharing: Enhancing nurse aide–resident relationships in long-term care. *Research in Gerontological Nursing*, 3(4), 240–252. https://doi.org/10.3928/19404921-20100303-01

Hupkens, S., Machielse, A., Goumans, M., & Derkx, P. (2018). Meaning in life of older persons: An integrative literature review. *Nursing Ethics*, 25(8), 973–991. https://doi.org/10.1177/0969730116680122

James, I., Blomberg, K., & Kihlgren, A. (2014). A meaningful daily life in nursing homes—A place of shelter and a space of freedom: A participatory appreciative action reflection study. *BMC Nursing*, 13, Article No. 19. https://doi.org/10.1186/1472-6955-14-13

James, I., Fredriksson, C., Wahlström, C., Kihlgren, A., & Blomberg, K. (2014). Making each other’s daily life: Nurse assistants’ experiences and knowledge on developing a meaningful daily life in nursing homes. *The Open Nursing Journal*, 8, 34–42. https://doi.org/10.2174/178743461408010034

Kim, B. J., Sangalang, C. C., & Kihl, T. (2012). Effects of acculturation and social network support on depression among elderly Korean immigrants. *Aging & Mental Health*, 16(6), 787–794. https://doi.org/10.1080/13607863.2012.660622

Krause, N., & Rainville, G. (2020). Age differences in meaning in life: Exploring the mediating role of social support. *Archives of Gerontology & Geriatrics*, 88, Article 104008. https://doi.org/10.1016/j.archger.2020.104008

Kuo, Y. C., Wang, L. H., & Wu, H. Y. (2015). Promoting participation of activities of the elderly at a nursing home. *Journal of Medical Health*, 4, 65–75.

Laws and Regulations Database of the R.O.C. (2012). *Standards for elderly welfare institutions*. https://law.moj.gov.tw/LawClass/LawAll.aspx?pcode=D0050039 (Original work published in Chinese)
Laws and Regulations Database of the R.O.C. (2020). Classification setting standards for nursing institutions. https://law.moj.gov.tw/LawClass/LawAll.aspx?pcode=L0020035 (Original work published in Chinese)

Lin, J., Hsiao, C.-T., Glen, R., Pai, J.-Y., & Zeng, S.-H. (2014). Perceived service quality, perceived value, overall satisfaction and happiness of outlook for long-term care institution residents. Health Expectations, 17(3), 311–320. https://doi.org/10.1111/j.1369-7625.2012.00769.x

Lin, Y., Xiao, H., Lan, X., Wen, S., & Bao, S. (2020). Living arrangements and life satisfaction: Mediation by social support and meaning in life. BMC Geriatrics, 2011, Article No. 136. https://doi.org/10.1186/s12877-020-01541-8

Ministry of Health and Welfare, Taiwan, ROC. (2017). Training program of nursing assistants. Social and Family Affairs Administration. http://e-care.sfaa.gov.tw/MOI_HMP/HMPd001/begin.action (Original work published in Chinese)

Ministry of Health and Welfare, Taiwan, ROC. (2021). List of social welfare statistics. Ministry of Health and Welfare. Retrieved February 10, 2022, from https://www.gender.ey.gov.tw/gecdb/Stat_Statistics_DetailData.aspx?sn=X3pWT%24AgN1wWUGDkYrjS1g%40%40&d=194q2o4!otzoYO!8OAMYew%40%40 (Original work published in Chinese)

Niou, C. C., Huang, H. M., Hung, Y. Y., & Lee, H. L. (2016). A study of interpersonal intimacy and meaning of life among elderly institutionalized veterans. The Journal of Nursing Research, 24(4), 311–320. https://doi.org/10.1097/jnr.0000000000000130

Noviana, U., Miyazaki, M., & Ishimaru, M. (2016). Meaning in life: A conceptual model for disaster nursing practice. International Journal of Nursing Practice, 22, 65–75. https://doi.org/10.1111/ijn.12441

Tsai, K.-L. (2004). A study on the meaning of life: The attitude toward death and the objective well-being among Hsiao-Liu-Chiu elders in Taiwan [Master’s thesis, Nanhua University]. National Digital Library of Theses and Dissertations in Taiwan. http://handle.ncl.edu.tw/11296/ndftd/18006805617030715041 (Original work published in Chinese)

U.S. Department of Health and Human Services. (2021). Caregiver resources & long-term care. Author. https://www.hhs.gov/aging/long-term-care/index.html

Volkert, J., Härter, M., Dehoust, M. C., Ausin, B., Canuto, A., Da Ronch, C., Suling, A., Grassi, L., Munoz, M., Santos-olmo, B. A., Sehner, S., Weber, K., Wegscheider, K., Wittchen, H. U., Schulz, H., & Andreas, S. (2019). The role of meaning in life in community-dwelling older adults with depression and relationship to other risk factors. Aging & Mental Health, 23(1), 100–106. https://doi.org/10.1080/13607863.2017.1396576

Wang, J., Wang, J., Cao, Y., Jia, S., & Wu, B. (2018). Perceived empowerment, social support, and quality of life among Chinese older residents in long-term care facilities. Journal of Aging & Health, 30(10), 1595–1619. https://doi.org/10.1177/0898264318795724

Welsh, D., Moore, S. L., & Getzlafl, B. A. (2012). Meaning in life: The perspective of long-term care residents. Research in Gerontological Nursing, 5(3), 185–194. https://doi.org/10.3928/19404921-20120605-05

World Health Organization. (2020). Long-term-care systems. https://www.who.int/ageing/long-term-care/en/