The Applicability of the Decisional Conflict Scale in Nursing Home Placement Decision Among Chinese Family Caregivers: A Mixed Methods Approach

Asian/Pacific Island Nursing Journal
Volume 2(3): 110-120

http://digitalscholarship.unlv.edu/apin/

Yu-Ping Chang[a], Loralee Sessanna[a], and Joanne Kraenzle Schneider[b]

Abstract

This study aimed to 1) examine relationships between uncertainty, perceived information, personal values, social support, and filial obligation among Chinese family caregivers faced with nursing home placement of an older adult family member with dementia; and 2) describe the applicability of the Decisional Conflict Scale in nursing home placement decision making among Chinese family caregivers through the integration of quantitative and qualitative data.

We used a mixed-methods approach. Quantitative data analysis consisted of descriptive and correlational statistics. We utilized a thematic analysis for the qualitative data. Data transformation and data comparison techniques were used to combine qualitative and quantitative data.

Thirty Chinese family caregivers living in Taiwan caring for an older adult with dementia participated in this study. We found a significant association among the quantitative findings, which indicated that perceived information, personal values, social support, and filial obligation, and nursing home placement decisional conflict. Mixed-method data analysis additionally revealed that conflicting differences existed between the traditional role of Chinese family collective decision making and the contemporary role of single family member surrogate decision making. Although the Decisional Conflict Scale can be utilized when exploring nursing home placement for an older adult with dementia among Chinese family caregivers, applicability issues existed regarding cultural beliefs and values related to filial piety and family collectivism. Findings strongly support the need for researchers to consider cultural beliefs and values when selecting tools that assess health-related decision making across cultures. Further research is needed to explore the role culture plays in nursing home decision making.

Keywords: Decisional Conflict Scale, nursing home placement, mixed methods, Chinese filial piety, dementia family caregiver, Taiwan

Among family caregivers, the decision to place an older adult family member into a nursing home can be both emotionally challenging and draining. Study findings reveal that the nursing home placement decision-making process is multifaceted and complex with Chinese family caregivers reporting intense feelings of ambivalence, relief, stress, guilt, shame, sorrow, and frustration (Chang, Schneider, & Sessanna, 2011). According to Cheek and Ballantyne (2001), family caregivers not only experienced mixed feelings of guilt, anger, helplessness, and relief during the nursing home placement decision-making process, they also experienced these conflicting feelings post nursing home placement. Unfortunately, family caregiver mixed feelings and fears are frequently left unexpressed and often go

[a]*SUNY University at Buffalo, USA*
[b]*Saint Louis University, USA*

Corresponding Author:
Yu-Ping Chang PhD., RN, FGSA
Patricia H. and Richard E. Garman Endowed Professor
Associate Dean for Research and Scholarship
Associate Professor
School of Nursing
The State University of New York, University at Buffalo
Email: yc73@buffalo.edu

unnoticed by health care providers (Blasinsky, 1998; Cheek & Ballantyne, 2001). Further compounding this finding is the lack of sufficient information and available resources to help guide family caregivers both during the nursing home placement decision-making process and after nursing home placement (Blasinsky, 1998; Cheek & Ballantyne, 2001). These findings strongly suggest that caregiver decisional conflict and negative emotional response exist both during the nursing home placement decision-making process as well as post nursing home placement.

Taiwan's Older Adult Population

Currently, approximately 14.5% of Taiwan's total population is comprised of adults aged 65 years and older (National Development Council, Executive Yuan, 2016). By the year 2026, adults aged 65 years and above will account for an estimated 20.5% of Taiwan's total population (National Development Council, Executive Yuan, 2016). Compounding the rapidly growing older adult population is an increased incidence of dementia among Taiwanese older adults. According to the Taiwan Alzheimer's Disease Association (2016), the prevalence of dementia among Taiwan's aging population is estimated at 7.98%, ranging from 3.4% in older adults aged 65-69 years to more than 36% in older adults aged 90 or above. Many Taiwanese older adults living in the home have dementia with care provided to them by family members including spouses, adult children, and daughters-in-law (Taiwan Alzheimer's Disease Association, 2016). Multiple and unforeseen family caregiver challenges are beginning to surface as a direct result of Taiwan's rapidly growing older adult dementia population. Taiwanese family caregivers are faced with contemporary older adult care options that drastically conflict with traditional Chinese tradition, beliefs, and values during a period of time where major changes are taking place in Taiwan's social, economic, and family structure (Chang et al., 2011).

Chinese Filial Piety

According to civil and criminal law, Chinese adult children are obligated to support and care for aging parents or cohabitating parents-in-law in the home when they are no longer able to support and/or care for themselves. This elder care arrangement is based on filial piety or *xiao*, an ancient Chinese tradition and value that governs intergenerational relationships among Chinese families. Traditional Chinese filial piety is based on the belief that it is the expected duty and responsibility of adult children to care for their older adult parents and parents-in-law in the home with absolute honor, reverence, and obedience (Chow, 2001; Zhan, 2004). Adult children violating this tradition are accused of committing elder abandonment, a crime that carries an imprisonment sentence of up to 10 years. This criminal and civil law not only reflects the significant and important role of family beliefs and values among Chinese families, it also reflects a strong desire among Chinese families to preserve the tradition of filial piety.

Taiwan's Changing Social, Economic, and Family Structure

Over the past several decades, Taiwan's shift from a mainly agricultural society to a more modernized industrial and business society has resulted in major social, economic, and family structure changes. Major social and economic changes include growing urbanization, decreased birth rates, and increased life expectancy (Chang et al., 2011). The financial need for women to work outside the home as paid employees instead of working in the home as family caretakers, the need for working adult children to utilize affordable in-home elder care alternatives, and the need for nursing home placement when alternative in-home elder care options have failed, contribute to the struggle for families to preserve the fundamental responsibilities and duties inherent in Chinese filial piety (National Development Council, Executive Yuan, 2016). In-home elder care arrangements have been modified to include care provided by non-family members paid by private or public funds who assume the family caretaker role as filial agents. Use of filial agents for in-home elder care has been described as "subcontracting filial piety." This type of elder care arrangement reflects the intention among Chinese adult children to maintain the cultural ideal of filial piety by negotiating traditional responsibilities and duties in response to current economic and familial changes (Chang & Schneider, 2010; Lan, 2002).

Nursing Home Placement Decisional Conflict

Research findings suggest that filial piety plays a significant and influential role in the decision-making process among Chinese adult children contemplating nursing home placement of an older adult family member (Chang & Schneider, 2010; Kao & McHugh, 2004). For those adult children who cannot afford alternative in-home care for aging parents with functional and cognitive decline, the nursing home placement decision is unavoidable and often accompanied by tremendous and overwhelming decisional conflict. In Taiwan, the decision for nursing home placement is clearly evident by the growing number of nursing home facilities which have dra-

matically increased from seven in 1995 to 322 in 2007 (Taiwan Association of Long-term Care Professionals, 2008).

The Chinese consider themselves a collective society. Collectivism, or in-group or "we" thinking, is the foundation for health care decision making in Chinese families. Conversely, appointing one health care surrogate decision maker, a common westernized practice, strongly contradicts the ideals of Chinese collectivism. A health care surrogate decision maker is a trusted family member or friend appointed by an individual to make health care decisions on their behalf when it is medically determined that that individual is no longer able to make health care decisions for either him or herself (Dellasega, Mastrian, & Weinart, 1995; Penrod & Dellasega, 1998; Ryan & Scullion, 2000). For many Chinese families, appointing a single surrogate to make health care decisions for an aging parent independent of collective family decision making strongly defies and violates the traditional value of filial piety resulting in caregiver decisional conflict as well as feelings of inner conflict and regret (Chang & Schneider, 2010).

Decisional Conflict Theory

Decisional conflict, a state of uncertainty regarding a course of action, commonly occurs when making difficult decisions especially in the context of medical decision making (O'Connor, 1995; O'Connor & Jacobsen, 2007). Decisional conflict resulting from medical decision making can increase psychological distress and/or cause individuals to regret the health care decisions they have made (Brehaut et al., 2003; Janis & Mann, 1977). O'Connor (1995) suggested that decisional conflict results from the following three factors: 1) a lack of information about decision alternatives and their consequences, 2) unclear personal values resulting from uncertainty regarding the importance of pro and con decision outcomes and any implicit tradeoff made when selecting an alternative, and 3) inadequate social support. Decisional conflict is more likely to occur when an individual is confronted with decisions involving risk or uncertainty when high-stake choices with significant potential gains and losses are entertained, when value tradeoffs are needed to select a course of action, or when anticipated regret over the positive aspects of rejected options arise (O'Connor, 1995). Research findings support that when health care professionals, family members, and/or friends provide individuals with appropriate health care information, time to contemplate both pros and cons of information received, and adequate social support from, their medical decisions closely align with personal beliefs and values and are made with decreased decisional conflict (O'Connor, 1995).

The Decisional Conflict Scale

The Decisional Conflict Scale (DCS) is the most widely used tool for measuring decisional conflict. The DCS, developed by O'Connor and colleagues in 1995, has been utilized to explore medical decision-making across various patient populations including health care decision making related cancer treatment and hormone replacement therapy. The DCS can be used either as an assessment tool or as an outcome measure in interventional studies. Although the DCS has been extensively used with established desirable reliability and validity, its utility in family caregiver decision making from a diverse cultural perspective remains underexplored and questionable. According to Stewart (1985), when decision-making theories derived from Western individualist societies are applied cross-culturally, cultural differences are likely to occur ultimately affecting the universality and predictability of these theories. The decision-making style in Western culture is toward self-directed action and individualized goals, which directly contradict the collective decision-making style favored in Asian culture (Stewart, 1985). Additionally, because the DCS was designed to investigate health care decision making from an individual and independent standpoint, its applicability in collective family caregiver decision making needs to be further examined and explored. Because cultural background, beliefs, and values influence an individual's decision-making process, exploring Chinese family caregiver' decisional conflict regarding nursing home placement decision making would provide valuable insight into the applicability of the DCS to this particular area of health care.

Supported by previously reported qualitative findings (Chang et al., 2011), the aims of this mixed-methods paper were to 1) examine relationships between uncertainty, perceived information, personal values, social support, and filial obligation among Chinese family caregivers making a nursing home placement decision for an older adult family member with dementia; and 2) describe the applicability of the DCS in Chinese family caregivers through the integration of qualitative and quantitative findings.

Methods

Design

A mixed methods study-triangulation design involves at least two methods, usually qualitative and quantitative, to address the same research question. Methodological triangulation resulting in complementary conclusions reinforce research results and contribute to theory and knowledge development

(Morse, 1991). Triangulation also maximizes strengths and minimizes weaknesses of each method (Knafl, Pettengill, Bevis, & Kirchhoff, 1988). In addition, research findings based on more than one methodological approach may present wider and more diverse perceptions (Bechtel, Davidhizar, & Bunting, 2000). Thus, to provide a more complete and holistic description of nursing home placement decisional conflict among Chinese family caregivers, methodological triangulation was a well-suited approach for the purpose of this study. There are two types of methodological triangulation: simultaneous/concurrent and sequential implementations. Some researchers recommend that research driven by an inductive process to develop theory qualitatively with complementary quantitative methods indicates the need for simultaneous triangulation (Field & Morse, 1985; Morse, 1991). Because the applicability of the DCS in the context of nursing home placement decision among Chinese family caregivers remains unclear, the authors explored decisional conflict both qualitatively and quantitatively using complementary simultaneous implementation.

Participants and Setting

To address the continuum of nursing home placement decision making, study participants included Chinese family caregivers actively involved in the nursing home placement decision-making process as well as Chinese family caregivers who had already made the nursing home placement decision. For this study, we defined the term *family caregiver* as a family relative who self-identified as a caregiver for an older adult family member with dementia. Specific enrollment criteria included Chinese individuals 18 years and older who identified themselves as a primary caregiver for an older adult family member with dementia and who were either actively involved in or had already made a nursing home placement decision. Exclusion criteria included family members who were younger than 18 years of age, and who were not primary caregivers. To understand the influence of Chinese filial piety on caregiver decisional conflict as it relates to nursing home placement, we recruited adult children and grandchildren expected to practice traditional filial piety when caring for older adult family members with dementia. We recruited participants from one gero-psychiatric clinic of a university-based medical center and one community-based nursing home in a metropolitan city in Taiwan. The Institute Review Board at Saint Louis University approved this study. We used Mandarin in the interview process. We obtained written informed consent in Mandarin from each participant. A total of 30 family caregivers participated in the study. Nineteen of the caregivers were in the process of making a nursing home placement decision while 11 of them already made a nursing home placement decision.

Data Collection and Analysis

Qualitative Data Collection Procedure and Analysis

Qualitative data collection procedure, analysis, and findings have been previously reported (Chang et al., 2011). We based the sequence of data collection procedure regarding qualitative interviews and quantitative questionnaires on caregiver participants' preferences. In summary, we utilized a pilot tested semi-structured interview guide with probing questions exploring participants' experiences concerning nursing home placement decision making and difficulties encountered during the decision-making process to collect qualitative data. Data were analyzed using Braun and Clarke's (2006) systematic method for thematic analysis which included becoming familiar with the data, generating initial codes, searching for themes, reviewing themes, and naming themes. To support findings resulting from the thematic data analysis, we utilized direct quotes from study participants. We utilized the translation and back-translation approach to ensure conceptual equivalence of the translated themes (Brislin, 1980). A Chinese bilingual graduate student translated Mandarin themes into English and the translated version was then back-translated to Mandarin by another Chinese bilingual researcher. The research team validated the equivalence of the two sets of themes by comparison and discussion among the research team, which included an expert qualitative researcher who was bilingual in English and Mandarin.

Quantitative Instruments and Analysis

The DCS consists of 16 items with a 5-point Likert response format ranging from 0 (strongly agree) to 4 (strongly disagree). There are five subscales in the DCS representing O'Connor's (1995) conceptualization of decisional conflict: the uncertainty subscale, the perceived information subscale, the personal values subscale, the support in decision-making subscale, and the effective decision subscale. The uncertainty subscale (3 items), assesses decisional uncertainty with higher scores indicating a higher level of uncertainty. O'Connor described uncertainty in decision making as a negative reaction that triggers psychological distress in individuals and developed an outcome measure to evaluate the effects of utilizing decisional aids in the medical decision-making process. The uncertainty subscale has been utilized as a separate construct to reflect on emotional distress of making a difficult decision. The uncertainty scale can be influenced by three other subscales including the perceived information subscale, the personal value subscale, and the support in decision-making subscale. The perceived information subscale (3 items) assesses informed decision making

Table 1. *Demographic Information of Family Caregivers (*N *=30)*

	M (*SD*)	
Age (years)	49.3 (11.1)	
Length of being a caregiver (years)	3.2 (3.0)	
	n	Percentage
Gender		
Male	11	36.7%
Female	19	63.3%
Marital Status		
Single	7	23.4%
Married	22	73.3%
Widow	1	3.3%
Education		
Less than HS	2	6.7%
High School	13	43.3%
More than HS	15	50.0%
Occupational status		
Employed	14	46.7%
Unemployed	14	46.7%
Retired	2	6.7%
Relationship with care recipient		
Son	8	26.7%
Daughter-in-law	7	23.3%
Daughter	6	20.0%
Granddaughter	2	6.7%
Spouse	5	16.7%
Nephew	1	3.3%
Niece	1	3.3%
Living situation		
Same household	29	96.7%
Separate household	1	3.3%

with higher scores indicating a lower level of perceived information. The personal values subscale (3 items) assesses personal values in decision making with higher scores indicating a lower level of personal values. The support in decision-making subscale (3 items) assesses social support with higher scores indicating a lower level of social support. Finally, the DCS includes an effective decision subscale (4 items) measuring an overall perception of the quality of the decision after making a choice. The DCS was translated into Mandarin and tested in a sample of breast cancer patients in Taiwan with good reliability and validity (Lee, 2003). The Mandarin version of the DCS demonstrated good reliability, known-group validity, and convergent validity; and a Cronbach's alpha value of .91 for the total scale and .74 to .92 for the subscales (Lee, 2003). The Cronbach's alpha values of these five subscales in our study ranged from .96 to .40.

The Filial Obligation Scale (FOS), developed by Cicirelli (1983), was utilized to assess global feelings of filial obligation in order to reflect general cultural norms about the obligation to help. The FOS is a 7-item scale with 5-point responses with higher scores indicating higher obligation. The internal consistency reliability of this scale was .73 and evidence for concurrent validity includes a correlation of .62 with a filial obligation measure based on role tasks (Cicirelli, 1983). The Mandarin version of the scale had a Cronbach's alpha value of .88 in a sample of family caregivers living in Taiwan (Chou, LaMontagne, & Hepworth, 1999).

Additionally, caregivers were asked to fill out a demographic questionnaire including caregiver age, gender, educational level, relationship to the care-recipient, living arrangement, and length of caregiving time. We used SPSS 22.0 for data analyses. Descriptive statistics were utilized for all demographic information, subscales, and total scores. We used Spearman's correlation to examine the relationships between the uncertainty subscale and perceived information, personal values, and social support in decision making, as well as examining relationships between the uncertainty subscale and filial obligation subscale.

Mixed Methods

A mixed method, or methodological triangulation, is a research strategy meant to achieve two distinct purposes: completeness and confirmation. A mixed method incorporating qualitative and quantitative data used within a single domain helps confirm information, therefore, increasing credibility (Breitmayer, Ayres, & Knafl, 1993). Used across domains, a mixed research strategy accomplishes a more complete understanding of the concept of caregivers' decisional conflict regarding nursing home placement. Creswell and Plano Clark (2006) suggested two techniques for concurrent mixed method research to merge two datasets: data transformation and data comparison. The data transformation technique is described as transforming qualitative data into quantitative data or vice versa. Therefore, the two data sets with the same form (either two quantitative datasets or two qualitative datasets) can be merged. Data comparison is to compare two data sets by using a matrix display or a discussion without transformation. We utilized both strategies to merge qualitative and quantitative data to capture the complexity of the decisional conflict, which were not applied previously to the decision-making process among Chinese caregivers of individuals with dementia.

Results

Participants' demographic characteristics are summarized in Table 1. Participants' ages ranged from 25 to 83 years (mean: 49.3; *SD* = 11.1) and the

Table 2. *Correlations between Uncertainty, Perceived Information, Personal Values, and Social Support (*N = *30)*

	Uncertainty
Contributing Factor	
Perceived information	0.61***
Personal Values	0.55**
Social support	0.43*
Effective decision[#]	0.83**
Filial Obligation[##]	-0.34*

*$p < .05$, **$p < .01$, ***$p < .001$; [#] $n = 11$, [##] $n = 25$

Table 3. *Correlations among Uncertainty and Quantified Qualitative Themes (*N = *30)*

	Uncertainty
Quantified Qualitative themes	
1. Caregiver issues	.46**
2. Family Disagreement	.32*
3. Elder Unwillingness	.37*
4. Nursing home issues	.36*

*$p < .05$, **$p < .01$

average time of caregiving was 3.2 years. Most caregivers were married (73.3%; $n = 22$), female (63.3%; $n = 19$), and had a high school or college education (93.3%; $n = 28$). Approximately half of the caregivers were employed (46.7%; $n = 14$). Relationships with the care recipient primarily included sons (26.7%; $n = 8$), daughters-in-law (23.3%; $n = 7$), daughters (20%; $n = 6$), and spouses (16.7%; $n = 5$). Twenty-nine participants (96.7%) resided with their care recipient.

Qualitative Results

A summary of the previously reported qualitative findings is as follows. Family caregiver participants felt conflicted, ambivalent, and uncertain about the nursing home placement decision and described the decision-making process as painful and difficult (Chang et al., 2011). Factors influencing decisional conflict among the family caregivers included the Chinese value of filial piety, limited family financial resources and information, willingness of the older adult family member to be placed in a nursing home, family disagreement, family distrust of nursing home care quality, and limited nursing home availability. These six factors were further categorized by the authors into four major themes: caregiver issues (concern related to the practice of Chinese filial piety, financial burden, lack of decision-making authority, lack of information regarding long term care services), the older adult's placement willingness (elder's resistance for nursing home placement and elder's reactions to nursing home placement by family), family disagreement (family conflict and disapproval over the placement decision and lack of family support), and nursing home issues (concern regarding the quality of care, limited nursing home availability, difficulty finding a nursing home specific for dementia care).

Quantitative Results

Table 2 presents the findings of the quantitative data analysis. We found a significant correlation between perceived information, social support, and personal values regarding placement decision making and uncertainty ($r = .43$-$.61$, $p < .05$). Results revealed that caregivers who had higher perceived information, better social support, and clearer personal values reported lower uncertainty when making a nursing home placement decision. To further understand caregivers' decisional conflict post placement decision, we conducted an additional analysis to examine the relationship between the effective decision subscale and uncertainty subscale among 11 caregivers who had already made the placement decision. Due to the small sample size and non-normal distribution, the relationship was tested using Spearman's correlation. Findings indicated that a significant relationship existed between these two variables ($r = .83$, $p < .01$). Caregivers with a higher perception of making an effective decision reported lower uncertainty. We used Spearman's correlation to examine the relationship between the filial obligation and uncertainty subscale because only adult children caregivers ($n = 25$) responded to the filial obligation scale. We also found a significant correlation between Filial obligation and decisional conflict ($r = -.34$, $p < .05$) indicating that caregivers with higher filial obligation reported higher level of uncertainty.

Results of Methodological Triangulation

Data Transformation

The integration of quantitative data (three factors influencing decisional conflict/uncertainty) and qualitative data (four themes contributing to decisional conflict) was made by converting the qualitative themes into numbers and then correlating the two quantitative data sets. To quantify the qualitative data, we regarded each category of the four qualitative themes as a dichotomous factor with absence (0) and presence (1) responses. All interviews were coded based on this scoring system. We gave each caregiver participant a score of 1 if the category was present or a 0 if the category was absent to avoid over-inflated counts due to participants who were highly verbal or who kept repeating ideas. We scored each theme by summing up the occurrences of its

Table 4. *Summary of the Three Quantitative Factors and Four Qualitative Themes Influencing Chinese Family Caregiver Nursing Home Placement Decision Making*

Quantitative Factors	Qualitative Themes/Subcategories
Factor 1: Perceived Information (Items 4-6) Definition: Information about alternatives, benefits, and risks of each option. **Factor 2:** Personal Values (Items 7-9) Definition: Feels clear about the importance of outcomes (pros and cons) of the decision and the implicit tradeoffs they will be making in selecting an alternative. **Factor 3:** Social Support (Items10-12) Definition: Feels supported in making a choice or pressure to choose on course of action.	**Theme 1**: Caregiver Issues – Concern related to the practice of Chinese filial piety – Financial burden – Lack of decision making authority – Lack of information regarding long term care services **Theme 2:** Family Disagreement – Family conflict and disapproval over the placement decision – Lack of family support **Theme 3:** Elder Unwillingness – Elder's resistance for nursing home placement – Elder's reactions to nursing home placement by family **Theme 4:** Nursing Home Issues – Concern regarding quality of care – Limited nursing home availability – Difficulty finding a nursing home specific for dementia care

Table 5. *Comparison Matrix for Quantitative Questions and Qualitative Quotes.* Individualism (I/Me/I'm) versus Collectivism (We/Us/Relatives/Family)

Uncertainty Item	Item Response with Supportive Qualitative Quote	Supportive Decisional Conflict Quotes
1. This decision is easy for **me** to make.	Agree: *It may be easy for **me** not for other family members*. Strongly Disagree: ***I** think it is very difficult to make the decision.*	*I was trying to make the decision but I needed to negotiate **with other relatives**.*
2. **I'm** sure what to do in this decision.	Strongly Agree: ***I** knew what I had to do.* Strongly Disagree: ***I** am not very sure what to do with the decision.*	*I didn't know what to do when making the decision**.** **I was so conflicted**.*
3. It's clear what choice is best for **me.**	Strongly Agree: No Individualistic Response Noted Strongly Disagree: No Individualistic Response Noted	*I think it (NHP) may be a good decision for **our whole family**.* *That is not a good place for **him** to live. Perhaps, it is the only way (NHP) **we** can do. It may be the best choice for **us**.* *I was not clear if sending **her** to here (NH) is good for **her**.*

Note. NHP = Nursing Home Placement.

corresponding categories. We used Spearman's correlation to examine the relationship between the new variables (the transformed qualitative data) and the quantitative variables. Table 3 shows the inter-correlations between the Uncertainty subscale and quantified qualitative themes concerning decisional conflict. In general, these four qualitative themes were correlated with the uncertainty subscale indicating that caregivers with higher scores in the qualitative themes tended to report a greater level of uncertainty about the nursing home placement decision.

Data Comparison

First, we compared the themes captured from qualitative findings with quantitative constructs in the DCS. Table 4 illustrates how the qualitative themes with corresponding categories coincided with definitions of the DCS constructs. Specifically, the qualitative themes validated the Social Support and Perceived Information constructs in the DCS.

Furthermore, we determined the integration of quantitative and qualitative data by comparing two data sets with matrices. Table 5 illustrates the results of the comparisons between the two datasets, which we completed by examining the similarities and discrepancies of the two datasets. For confirmation, we selected some of the participants based on their scores on the Uncertainty subscale. Table 5 demonstrates examples regarding the confirmation between quantitative responses and qualitative statements. Table 5 reveals that individuals with responses of "strongly agree" and "strongly disagree" on the three items in the Uncertainty subscale were confirmed by their corresponding qualitative quotes. It is important to note, however, we found that some qualitative quotes contradicted the quantitative items found in the Uncertainty subscale. Such discrepancies were underscored with bolding in Table 5 to show the influence of collective decision making among the Chinese family caregivers as well as to show how Chinese cultural beliefs and values in decision making (we/us/relatives/family) differ from the individualistic role of decision making in Western culture (I/me/I'm).

Discussion

This study builds on the existing decisional conflict theory by providing details about factors influencing Chinese caregivers' decisional conflict and the cultural context in which the decisions were made. Both quantitative and qualitative results of this study confirm O'Connor's (1995) decisional conflict theory, which proposes that perceived information, personal values, and social support influence an individual's conflict when making an important decision.

Qualitative Findings

The thematic analysis resulted in the following four themes reflective of Chinese caregiver decisional conflict in nursing home placement decision making: caregiver issues, the older adult's placement willingness, family disagreement, and nursing home issues (Chang et al., 2011). The four themes conceptually validated two out of the three contributing factors proposed in O'Conner's (1995) decisional conflict theory: Social Support and Perceived Information. In agreement with O'Conner's theory, our qualitative findings conceptually confirmed decision-related information and family support as two major contributors to decisional conflict. Personal Values, the third contributing factor in O'Conner's theory, did not emerge as a decisional issue for family caregivers in this study.

According to O'Conner (1995), understanding the pros and cons of decision-making options assists decision makers in making clear non-conflicted medical decisions. In our study, although most caregivers understood the advantages and disadvantages of nursing home placement and other care options, they still experienced decisional conflict due to family disagreement and obstruction, nursing home care quality and availability, and attempting to adhere to traditional filial piety ideology. These contributing factors often resulted in feelings of ambivalence and distress among caregivers who desperately wanted to make appropriate, respectful, and balanced decisions for their loved one.

Caregivers who reported high decisional conflict when making a placement decision experienced specific challenges not addressed in O'Conner's (1995) DCS. Concern with the quality of nursing home care, family conflict, and the older adults' willingness to be placed in a nursing home were critical challenges frequently reported by participants but not included in the DCS. Furthermore, regarding the quality of nursing home care, participants expressed great concern surrounding nursing staff ability to provide adequate dementia care as well as the availability of dementia care units staffed with trained providers.

Quantitative Findings

In agreement with O'Connor's (1995) theory, the quantitative results of this study indicated that family caregivers who had more information, clearer personal values, and more social support for their nursing home placement decision reported less decisional conflict. The uncertainty, perceived information, and personal value subscales demonstrated acceptable to desirable reliability while the social support subscale showed a low internal consistency. The possible explanation for this is that the items in the Social Support subscale may reflect inconsistent

constructs. For example, item 10 "I am making this choice without any pressure from others" and item 11 "I have the right amount of support from others in making this choice" demonstrates two different aspects of social support that might confuse caregivers. Similarly, the same controversy occurs between item 10 "I am making this choice without any pressure from others" and item 12 "I have enough advice to make a choice." Caregivers may have sufficient advice from others but with a certain level of pressure from family members who disapproved of the placement. Before properly and effectively implementing with the Chinese family caregiver populations, the results of this study suggest that the Social Support subscale needs further development.

Mixed Methods Findings

Our study aimed to examine the qualitative and quantitative data for confirmation and completeness to increase the validity of the study. The purpose of confirmation in a mixed methods study is to reduce the threats to validity of each method, and the purpose of completeness refers to the use of various dimensions of the phenomenon of interest from one or more research approaches (Fielding & Fielding, 1986; Sandelowski, 2000). The similarities between qualitative and quantitative findings included significant relationships between uncertainty and perceived information, personal values, and social support. As mentioned earlier, quantitative findings revealed that caregivers who received more information, had clearer personal values, and had more social support tended to report less conflict. Qualitative quotes confirmed these quantitative findings and provided additional dimensions to explain the occurrence of decisional conflict, such as family conflict, an older adult's willingness to move to the nursing home, and nursing home care quality and availability. Such data comparison not only increases the validity of the study (purpose of confirmation) but enhances the depth and breadth of understanding caregivers' decisional conflict (purpose of completeness). The mixed methods findings also suggest that integrating quantitative and qualitative data gives a comprehensive understanding of what Chinese caregivers encountered during the decision-making process.

Qualitative findings support the value and significance of traditional Chinese filial piety (cultural factors) to the nursing home decision-making process and also support the influence of culture in decisional conflict confirmed in other studies (Chang & Schneider, 2010; Kao & McHugh, 2004). The quantitative results confirmed the cultural influence on decisional conflict by indicating the significant relationship between decisional conflict and filial obligation. The confirmation between quantitative and qualitative data increases the validity of this study. In today's Chinese society, placing an aging parent into a nursing home is still considered non-filial practice. Our findings support the critical need to, therefore, include unique cultural components to the current decisional conflict theory to make it more applicable to Chinese family caregivers. Even though our study participants may be aware of the necessity of nursing home placement, they struggled between their desire to respect the practice of filial piety and their decision to place an older adult parent or relative with dementia into a nursing home.

Further data comparisons based on the Uncertainty subscale scores showed similarities and discrepancies between qualitative and quantitative data. Chinese family caregivers who rated higher or lower in their Uncertainty subscale scores stated similar responses in their qualitative interview. In general, we found qualitative quotes and quantitative scores to mutually confirm each other. However, unlike quantitative questions in the Uncertainty subscale beginning with the first person "I," Chinese family caregivers used the collective descriptors, such as "us," or third person, such as "he," in the interview to describe their decision-making experience. This discrepancy strongly supports the collective nature of decision making related to older adult care among Chinese families in direct opposition to the Westernized role of a surrogate decision maker (Stewart, 1985). The Chinese family caregivers in this study thought that the nursing home placement decision should be made by taking into consideration the input of their entire family and/or extended family, as well as the need and input of their older adult family member with dementia. Also, the placement decision involved multiple decision makers, which increased the likelihood of decisional conflict when a family disagreement occurred. Additionally, more than half of the caregiver participants informed the investigator that they did not know how to answer some of the DCS questions and felt forced to select a response. Specifically, most participants struggled with the question, "*It's clear what choice is best for me*" often commenting on how the question was not a clear statement for them. The participants additionally reported that the placement decision was not made by them alone because it was viewed as a family decision.

Finally, we completed a mixed methods analysis utilizing data transformation technique. The qualitative data analysis revealed four major themes found to influence decisional conflict. The significant relationship between decisional conflict scores and the four quantified qualitative themes indicated that the Chinese family caregivers who reported more concern qualitatively had a higher level of decisional conflict. Therefore, we validated the qualitative findings quantitatively. The combined quantitative and

qualitative data provided better insight into the Chinese family caregivers' perspectives on the role of surrogate decision makers, individual and family conflict, and quality of care in the nursing home.

Limitations

The authors would like to acknowledge the following study limitations. First, given the exploratory nature of this study, as well as the small sample size of Chinese family caregivers, it is important to acknowledge limitations regarding the generalizability of findings. Second, because this study utilized a concurrent mixed method design, potential bias may have occurred during data collection. Creswell and Plano Clark (2006) pointed out that one form of data may bring bias that would confound the results from the other form of data when collecting data from the same participants in a concurrent mixed methods design. Although Creswell and Plano Clark suggested that researchers report any potential bias and openly discuss it, they did not provide a solution for it. Because we used a concurrent mixed methods design for this study, Chinese family caregivers who responded to questionnaire items may have assumed what topics would be discussed during interview sessions and could have provided similar answers for both quantitative and qualitative questions. On the other hand, Chinese family caregivers who completed the qualitative interview first may have become more aware of nursing home placement decision issues when they filled out the questionnaires. This potential influence may have resulted in less ability to capture the caregivers' original thoughts and conflicted situations within the quantitative scales utilized for this study.

Conclusions

The findings of this study enhanced our understanding and added to the current body of knowledge regarding decisional conflict by applying it to a new situation where Chinese family caregivers were faced to make a health-related decision for someone else. Although our quantitative findings supported the use of the DCS among Chinese family caregivers making a nursing home placement decision, additional explanations for caregiver decisional conflict included cultural aspects related to caregiver roles, which interfered with the applicability of the DCS among Chinese family caregivers. Increased understanding and sensitivity to the cultural beliefs and values in Chinese caregiver decision making are important for clinicians to consider and recognize as they provide care for this growing population. Even within the small sample participating in the quantitative section of this study, we revealed a diversity of experiences highlighting the importance of taking into account contextual factors and individual differences when describing the decision-making process of nursing home placement.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest concerning the research, authorship, or publication of this article.

Funding

This study was supported by Sigma Theta Tau International Nursing Society Small Grant.

References

Bechtel, G. A., Davidhizar, R., & Bunting, S. (2000). Triangulation research among culturally diverse populations. *Journal of Allied Health, 29*(2), 61-63.

Blasinsky, M. (1998). Family dynamics: Influencing care of the older adult. *Activities, Adaptation & Aging, 22*(4), 65-72. https://doi.org/10.1300/j016v22n04_07

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*, 77-101. https://doi.org/10.1191/1478088706qp063oa

Brehaut, J. C., O'Connor, A. M., Wood, T. J., Hack, T. F., Siminoff, L., Gordon, E., & Feldman-Stewart, D. (2003). Validation of a decision regret scale. *Medical Decision Making, 23*, 281-292. https://doi.org/10.1177/0272989x03256005

Breitmayer, B. J., Ayres, L., & Knafl, K. A. (1993). Triangulation in qualitative research: Evaluation of completeness and confirmation purpose. *Image: Journal of Nursing Scholarship, 25*, 237-243. https://doi.org/10.1111/j.1547-5069.1993.tb00788.x

Brislin, R.W. (1980). Translation and content analysis of oral and written material. In H. C. Triandis & J. W. Berry (Eds.), *Handbook of cross-cultural psychology* (Vol. 1, pp. 389-444). Boston: Allyn & Bacon.

Chang, Y. P., & Schneider, J. K. (2010). Decision making process of nursing home placement among Chinese family caregivers. *Perspectives in Psychiatric Care, 46*, 108-118. https://doi.org/10.1111/j.1744-6163.2010.00246.x

Chang, Y. P., Schneider, J. K., & Sessanna, L. (2011). Decisional conflict among Chinese family caregivers regarding nursing home placement of older adults with dementia. *Journal of Aging Studies, 25*, 436-444. https://doi.org/10.1016/j.jaging.2011.05.001

Cheek, J., & Ballantyne, A. (2001). Moving them on and in: The process of searching for and selecting an aged care facility. *Qualitative Health Research,*

11, 221-237. https://doi.org/10.1177/104973201129119064

Chou, K. R., LaMontagne, L. L., & Hepworth, J. T. (1999). Burden experienced by caregivers of relatives with dementia in Taiwan. *Nursing Research, 48*, 206-214. https://doi.org/10.1097/00006199-199907000-00003

Chow, N. W. S. (2001). The practice of filial piety among the Chinese in Hong Kong. In I. Chi, N. L. Chappell, & J. Lubben (Eds.), *Elderly Chinese in Pacific rim countries: Support and obligation* (pp. 125-136). Hong Kong: Hong Kong University Press.

Cicirelli, V. G. (1983). A comparison of helping behaviors to elderly parents of adult children with intact and disrupted marriages. *Gerontologist, 23*, 619-625. https://doi.org/10.1093/geront/23.6.619

Creswell, J. W., & Plano Clark, V. (2006). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.

Dellasega, C., Mastrian, K., & Weinert, C. (1995). The process and consequences of institutionalizing an elder. *Western Journal of Nursing Research, 17*, 123-140. https://doi.org/10.1177/019394599501700202

Field, P. A., & Morse, J. M. (1985). *Qualitative Nursing Research: The application of qualitative approaches*. Rockville, MD: Aspen.

Fielding, N., & Fielding, J. L. (1986). *Linking data*. Beverly Hills, CA: Sage.

Janis, I. L., & Mann, L. (1977). *Decision making: A psychological analysis conflict, choice and commitment*. New York: The Free Press.

Kao, H. F. S., & McHugh, M. L. (2004). The role of caregiver gender and caregiver burden in nursing home placement for elderly Taiwanese survivors of stroke. *Research in Nursing & Health, 27*, 121-134. https://doi.org/10.1002/nur.20007

Knafl, K. A., Pettengill, M. M., Bevis, M. E., & Kirchhoff, K. (1988). Blending qualitative and quantitative approaches to instrument development and data collection. *Journal of Professional Nursing, 4*, 30-37. https://doi.org/10.1016/s8755-7223(88)80071-1

Lan, P. C. (2002). Subcontracting filial piety: Elder care in ethnic Chinese immigrant families in California. *Journal of Family Issues, 23*, 812-835. https://doi.org/10.1177/019251302236596

Lee, S. Y. (2003) *Treatment decision-making for the primary treatment among Chinese Americans with early-stage breast cancer* (Unpublished dissertation). New Haven, CT: Yale University.

Morse, J. M. (1991). Approaches to qualitative-quantitative methodological triangulation. *Nursing Research, 40*, 120-123. https://doi.org/10.1097/00006199-199103000-00014

National Development Council, Executive Yuan. (2016). Statistics: Population projections for Republic of China (Taiwan). Retrieved from http://www.ndc.gov.tw/en/cp.aspx?n=2E5DCB04C64512CC&s=002ABF0E676F4DB5

O'Connor, A. M. (1995). Validation of a Decisional Conflict Scale. *Medical Decision Making, 15*, 25-30. https://doi.org/10.1177/0272989x9501500105

O'Connor, A. M., & Jacobsen, M. J. (2007). *Decisional Conflict: Supporting people experiencing uncertainty about options affecting their health*. Ottawa, Ontario: Ottawa Health Decision Centre.

Penrod, J., & Dellasega, C. (1998). Caregivers' experiences in making placement decisions. *Western Journal of Nursing Research, 20*, 706-732. https://doi.org/10.1177/019394599802000604

Ryan, A. A., & Scullion, H. F. (2000). Nursing home placement: An exploration of the experiences of family careers. *Journal of Advanced Nursing, 32*, 1187-1195. https://doi.org/10.1046/j.1365-2648.2000.01589.x

Sandelowski, M. (2000). Combining qualitative and quantitative sampling, data collection, and analysis techniques in mixed-method studies. *Research in Nursing & Health, 23*, 246-255. https://doi.org/10.1002/1098-240x(200006)23:3<246::aid-nur9>3.3.co;2-8

Stewart, E. C. (1985). Culture and decision making. In W. B. Gudykunst, L. P. Stewart, & S. Ting-Toomey (Eds.), *Communication, culture and organizational processes*. Beverly Hills, CA: Sage Publications.

Taiwan Alzheimer's Disease Association. (2016). *Understanding Dementia.* Retrieved from http://www.tada2002.org.tw/tada_know_02.html

Taiwan Association of Long-term Care Professionals. (2008). Yearly growth of long-term care facility from 1995 to 2007 in Taiwan. Retrieved from http://www.ltcpa.org.tw/index.php?func=introduce&nID=10

Zhan, H. J. (2004). Through gendered lens: Explaining Chinese caregivers' task performance and care reward. *Journal of Women & Aging, 16*, 123-142. https://doi.org/10.1300/j074v16n01_09