

The Loneliness of Older Adults Associated with Various Types of Thai Families

Chutamas Phuangcharoen¹ and Sawitri Thayansin^{1*}

¹ National Institute for Child and Family Development, Mahidol University, Thailand

* Sawitri Thayansin, corresponding author. Email: sawitri.tha@mahidol.ac.th

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Abstract

The structures of Thai families have changed, and therefore increased the number of factors negatively affecting older adults. The most common is loneliness, which affects older adults and is closely related to mental state. The purpose of this research was to analyze and compare the level of loneliness of older adults in different family types and study the differences between personal factors, family factors, and social factors of the older adults toward the loneliness of the older adults within a variety of family types. The population was 346 older adults aged 60 years and over. The analysis found that 76% of older adults in the study have low levels of loneliness. The older adults in different family types had a statistically significant difference level of loneliness. The older adults who lived alone had a higher level of loneliness than others. Factors related to the moderate level of loneliness among the older adults within different family types were not participating in family activities of a parent-child family and income inadequacy in a three-generation family. The outcome of this research could be used to promote and improve care for older adults to reduce and prevent loneliness based on their specific family types.

Keywords

Family types; loneliness; older adults; older people; Thai family

Introduction

Since 2005, Thailand has become an aging society, with the 60-year-old population rising to 10% of the nation's population (Foundation of Thai Gerontology Research and Development Institute, 2016). The aging of the Thai population has rapidly changed with the declining birth rate, and the long-term age of the Thai people has increased the number of older adults (over 60 years), and the number of working-age adults (between 15 and 59 years) has decreased. As a result, the old-age dependency ratio is likely to increase. The older adults will become more of a burden on the working-age population (Foundation of Thai Gerontology Research and Development Institute, 2015).

Older adults are physically, mentally, emotionally, and socially retrogressed. There are many common problems in older adults. For example, physical problems are often present. Other problems are onset diseases, living without care, or having insufficient income to live. Older adults have little chance of gaining knowledge to adapt to changing ages and social conditions. Older adults may not be regarded as respected by society when they can still work and benefit society. Older adults may not be cared for and may not be able to go out to do business with friends or do social activities, as usual, causing anxiety, loneliness, and family problems. These issues are the most worrying for older adults. Older adults have lived alone without any good care as in the past. They have been abandoned, leading to living their lives in convalescent or foster homes (Ministry of Social Development and Human Security, 2017).

Loneliness is one of the most significant problems associated with the mental state of older adults. Loneliness refers to negative feelings of wanting human contact but feeling alone, typically from unpleasant personal experiences. This feeling of being alone results from a lack of the desired response to interactions and relationships with others, including separation from society. Loneliness can be found in all genders, ages, and social contexts. The loneliness that arises in older adults affects them in many ways. Loneliness causes the body and mind of older adults to deteriorate more (Rogers, 1989). Loneliness affects health conditions, causing changes in sleep patterns and nutrition, leading to ailments such as cardiovascular disease, high blood pressure, and also causes stress, leading to riskier behaviors that further affect health conditions (Cacioppo & Patrick, 2008). Decreased social interaction with others increases the isolation of older adults from society (Killeen, 1998), resulting in greater loneliness (Eliopoulos, 2005).

Loneliness arises from personal, physical, and psychosocial factors of older adults who are very isolated and have lower self-esteem (Panya et al., 2014; Phimphachiyaboon, 2015). These feelings of being part of a group or society will deteriorate (Gumphan et al., 2016), causing the older adults to have diminished mental well-being (Sirotamarat, 2010), leading to depression (Promjun & Suppapitiporn, 2014; Sampao, 2005). Aylaz et al. (2012) found a significant relationship between loneliness and depression in the older adults living in a society. These feelings also caused a sense of discouragement and hopelessness, which led to not wanting to live (de la Cruz, 1986).

The rapidly increasing number of older adults in Thailand has resulted in many social transformations. It also affected the family institution, which is the fundamental social institution, causing the size and types of Thai families to change in the family structure, directly affecting the older adults.

From the literature review, we found many studies and research on loneliness in older adults in Thailand and other countries. However, studying the differences among the older adults living in a family of different types was noteworthy. Moreover, no research has been found that analyzes the differences of various factors associated with the loneliness of older adults in Thai families. Therefore, the researchers were interested in exploring family types and the loneliness of older adults.

Methodology

Populations and samples

This study was conducted in the Ko Rai sub-district. The researchers wanted to reflect on the loneliness of the older adults in a semi-rural area. A situation analysis was performed before the study and found that there are different family types of Thai older adults in the Ko Rai sub-district. Therefore, the Ko Rai sub-district was chosen as the research area. The population in this study were older adults aged 60 years and over who lived in the Ko Rai Sub-district, Ban Pho District, Chachoengsao, Thailand.

The samples were collected from the whole area according to the number of households with older adults. The sample was 346 older adults aged 60 years or older of the 474 households within the five villages in the Ko Rai Sub-district, Ban Pho District, Chachoengsao. In the case of any households that had more than one older person, one older adult per household was randomly selected from the sample group. The samples had qualifications according to the criteria set, were observed, and a family member confirmed participation before the interview. First, there could be no neurological diseases or brain problems such as confusion and loss of consciousness. Next, there could be no hearing and speech problems that would interfere with communication. There was no one excluded, nor did anyone refuse to participate in the study. All of the participants were willing to take part in the research.

This study was divided into six types of families: 1) A three-generation family (a family with an older adult, child, and grandchild); 2) A parent-child family (a family with an older adult who lives with their spouse and their child); 3) A husband and wife family (a family with an older adult who lives with their spouse only); 4) An older adult living alone (a family with an older adult who lives alone); 5) A skip-generation family (a family with an older adult and a grandchild); and 6) A sibling family (a family with an older adult who lives with their sibling).

Research instruments

The research instruments included the personal data questionnaires and the Loneliness Scale. The personal data questionnaires were created by the researchers and were divided into three parts with a total of 28 questions, some of which were open-ended questions. The 28 questions consisted of 13 personal questions, 8 family questions, and 7 social questions. The personal data questionnaires corresponded to the variables studied and obtained from the literature review. The personal demographic questionnaire was examined by two research advisors and revised according to the advisors' suggestions.

The Loneliness Scale used in this study was translated and adapted into the Thai language by Kositanon (1999) following Russell's concept from the UCLA Loneliness Scale Version 3

(Russell, 1996). The Loneliness Scale was highly reliable with a Cronbach's alpha coefficient of 0.99. The reliability of the Loneliness Scale utilized in this study had a Cronbach's alpha coefficient of 0.84. There were a total of 24 closed-ended questions, including 9 positive questions and 15 negative questions. The questions had four levels of Likert scale, from Level 1, meaning 'never felt,' to Level 4, 'feeling like that very often or regularly.'

The conversion of the total score is divided into three periods. The overall score indicates high levels of loneliness, and a low overall score indicates low levels of loneliness. By converting the results of the scores, the details are as follows.

Scores	Meaning
24-48 points	low levels of loneliness
49-72 points	moderate levels of loneliness
73-96 points	high levels of loneliness

Data collection

This research received ethical approval prior to data collection from the Committee for Research Ethics (Social Sciences), Mahidol University (MU-SSIRB: 2019/299-B2).

The data was gathered from all representative older adults of all participating families in the Ko Rai sub-district and the Village Health Volunteers (VHV) in each village. They helped manage to enter the house of each older adult. The details of the research project, such as objectives, data collection methods, and sample rights, were explained to the family members. As well, participation in the research project and answering the questionnaire were requested and confirmed by the participants by signing the clarification document and a letter of consent to participate in the research project. The participants could withdraw from the study if they felt uncomfortable providing information. The data was collected to provide seniors with easy access to information, prevent information deviations, bring data from the collection to statistical analysis, and present research results comprehensively. The data was collected for a total of 4 months between May and September 2020.

Data analysis

Descriptive statistics were used to analyze the personal data and compare the degree of loneliness of the older adults in various family types. Chi-square test and Fisher's exact test statistics were used to analyze the differences between personal factors, family factors, and social factors of the older adults with the loneliness of the older adults in a variety of family types. Odds ratio (OR) was used to compare the relative odds of the factors with the loneliness of the older adults in different family types and estimate the precision of the OR by the 95% confidence interval (CI).

Results

Personal factors, family factors, and social factors of older adults

The study of the sample's personal data showed that the majority of the older adults were female (58.7%), and were between 60-65 years old (42.8%) and 66-70 years (23.7%). There were more Muslims (59.8%) than Buddhists (40.2%). The older adults mostly completed primary school education (59.5%), followed by an elementary graduate (27.5%). Most of the older adults were unemployed (43.9%); however, it was found that some of the older adults were still employed (24.9%). The average income of the sample group was 4,535 Thai baht (139 US dollars) per month which was the older adults' welfare money (98.3%). Most of the older adults within the sample group had enough income to cover their expenses, but they did not have any leftover money (46.2%). Interestingly, the older adults with insufficient income to cover expenses and debt was only 26.6%. Most of the older adults had hobbies, which were planting trees or gardening. Interestingly, card games were also a favorite hobby (5.2%). Most older adults had no illnesses, but the results found that some older adults had specific diseases such as diabetes, hyperlipidemia, and hypertension (33.8%). The majority of the older adults (65%) lived in the Ko Rai Sub-district for more than 50 years. The average duration of all older adults residing in the Ko Rai Sub-district was 54.2 years.

From the study of family information of the sample group, the majority of the older adults had couples status (54%), were in the family with only two members, with the highest number of family members was three generations. A third of the older adults within the sample group raised their grandchildren closely (33.5%). The vast majority of the older adults engaged in daily routines with their families by eating together (53.1%). On the other hand, 33.8% of the older adults did not participate with their family regularly. They enjoyed doing family activities (71.1%) more than participating in activities with neighbors or communities.

According to the study of social data of the sample, it was found that 33.5% of the older adults did not participate in activities with neighbors or people in their community. Interestingly, 87.9% of the older adults did not participate in public benefit activities or work as volunteers of the community or society. Most of the older adults used mobile phones to chat, but 33.5% of the older adults did not use technology in their daily lives. Up to 28.1% of the older adults used television to prevent loneliness, followed by talking with their children (26.6%). The older adults from the sample group were interested in participating in activities between themselves and their children by watching children sing or dance, supporting with food, teaching, and exercising with children.

Levels of loneliness of older adults in a variety of family types

As seen in Table 1, it was found that most older adults (76%) in the Ko Rai Sub-district have a low level of loneliness. This was followed by a quarter of the sample group (24%) experiencing a moderate level of loneliness. No high levels of loneliness were found, but the moderate level of loneliness score was relatively high.

Table 1: Classification of the Levels of Loneliness (N=346)

Loneliness	Frequency	Percentage
Low levels of loneliness (24-48 points)	263	76
Moderate levels of loneliness (49-72 points)	83	24
High levels of loneliness (73-96 points)	*--	*--
Mean = 44.3, S.D. = 7.09, Min = 25, Max = 72		

*Note: * No high levels of loneliness were found.*

As seen in Table 2, it was found that the older adults who experienced a low level of loneliness were more than 80%, consisting of the older adults in three-generation, husband and wife, and skip-generation families. The rest of the families, about 70%, showed a lower level of loneliness, except for families where most of the older adults lived alone. These were at a moderate level of loneliness (96.2%). According to the analysis with chi-square test statistics, it was found that ($\chi^2 = 84.771, p < .001$) the older adults in different family types had a statistically significant difference level of loneliness (p -value = 0.001). In addition, the loneliness scores were analyzed as the lowest and highest. As well as the mean, the loneliness score of each family type is shown in the table. Interestingly, the average score of the loneliness of older adults who lived alone was the highest. The highest score of loneliness in the medium is 72, which is a relatively high level of loneliness.

Table 2: The Analyzes Comparing the Levels of Loneliness of Older Adults in the Families with Different Types (N=346)

Types of families	Lowest loneliness score	Highest loneliness score	Mean of loneliness score	Levels of loneliness				Total		χ^2 (p-value)	
				Low		Moderate		Frequency	Percentage		
				Frequency	Percentage	Frequency	Percentage				
Three-generation family	25	68	42.2	139	85.8	23	14.2	162	100		
Parent-child family	29	64	44.3	57	74.0	20	26.0	77	100		
Husband and wife family	34	57	43.7	25	80.6	6	19.4	31	100		
Family where the older adult lived alone	48	72	57.5	1	3.8	25	96.2	26	100	84.771*** (0.001)	
Skip-generation family	34	58	44.4	24	85.7	4	14.3	28	100		
Sibling family	35	53	43.9	17	77.3	5	22.7	22	100		
Total	34.2	62	46	263	76.0	83	24.0	346	100		

Note: *** $p<0.001$, F = frequency, % = percentage

Personal factors, family factors, and social factors of older adults towards loneliness in a variety of family types

In this section, the researchers analyzed the differences between personal factors, family factors, and social factors of the loneliness of the older adults according to the six family types. As shown in Table 3, no factor was found statistically significant with the different levels of loneliness for a three-generation family, husband and wife family, a family where the older adult lived alone, skip-generation family, and sibling family; except in a parent-child family that was found, participating or not participating in family activities had a significantly different level of loneliness.

As seen in Table 3, it was found that within a parent-child family, most of the factors had no statistically significant difference in the levels of loneliness, except for participation in activities with families, which had a statistically significant difference in loneliness. The older adults who did not participate in family activities were lonelier than those who took part in family activities. The older adults who did not participate in family activities had 3.56 times (95% CI=1.13-11.15) the odds of being lonely than those who participated in family activities. In the three-generation family, it was found that income adequacy had statistically significant differences in loneliness. The older adults with inadequate income were 2.92 times lonelier than those with adequate income (95% CI=1.13-7.55).

The differences between personal factors, family factors, and social factors of the older adults in all types of families and the loneliness of the older adults were further analyzed with the chi-square test statistics to compare the different factors of all older adults in this study area. It was found that the gender and loneliness of the older adults were statistically significant. The older adult females had 1.76 times higher loneliness than males (95% CI=1.04-2.97). The marital status and the loneliness of the older adults were also statistically significant. The older adults who had single/widowed/divorced/separated status had a loneliness level 2.01 times higher than the older adults who had couples status (95% CI=1.21-3.31). There was a statistically significant difference in participation in family activities and loneliness among the older adults. The older adults who did not participate in family activities had 3.36 times higher risk of loneliness than those who participated in activities with family (95% CI=2.02-5.61). There was a statistically significant difference in participation in social activities with the loneliness of the older adults. The older adults who did not participate in social activities had a risk of loneliness 1.66 times higher than those who engaged in activities with society (95% CI=1.00-2.74).

Table 3: The Analysis of the Differences between Various Factors and Loneliness of Older Adults in Different Family Types

Factors	Family Types																						
	Three-generation (n = 162)			Parent-child (n = 77)			Husband and wife (n = 31)			Older adult lived alone (n = 26)			Skip-generation (n = 28)			Sibling (n = 22)			All families (n = 346)				
	p- value	OR	95% CI	p- value	OR	95% CI	p- value	OR	95% CI	p- value	OR	95% CI	p- value	OR	95% CI	p- value	OR	95% CI	p- value	OR	95% CI		
Age	60 - 69 years																						
	70 years and over	0.479	1.41	0.54	-	0.912	0.94	0.33	a	0.79	0.13	a	4.43	0.16	a	3.55	0.32	a	0.14	0.01	1.02	0.62	
Gender	Female																						
	Male	0.096	2.28	0.85	-	0.177	2.10	0.71	a	0.64	0.10	a	0.58	0.02	a	1.50	0.13	a	6.22	0.29	*	1.76	1.04
			1.00	6.13			1.00	6.24		1.00	4.14		1.00	15.68		1.00	16.82		1.00	131.37		1.00	2.97
Work	No																						
	Yes	0.580	0.78	0.32	-	0.962	0.98	0.35	a	1.06	0.16	a	0.16	0.01	a	0.24	0.02	a	5.71	0.52	0.380	0.80	0.48
Income	0 - 9,484 baht/month	a	1.18	0.25	a	1.00	0.20	a	0.68	0.06	a	3.13	0.10	a	0.57	0.02	a	1.77	0.07	0.695	1.19	0.50	
	> 9,484 baht/month	1.000	-	1.000			1.000	-	1.000	-	1.000	-	1.000	-	1.000	-	1.000	-	1.00	43.03		1.00	2.85
			1.00	5.55			1.00	5.73		1.00	8.00		1.00	99.30		1.00	16.47		1.00				
Income adequacy	Inadequacy	*	2.92	1.13		0.62	0.20	a	1.27	0.21	a	0.16	0.01	a	0.67	0.06	a	7.00	0.79	1.17	0.71		
	Adequacy	0.022	1.00	7.55		1.00	1.95		1.00	7.58		0.346	-	1.000	-	1.00	7.48		1.00	61.98	0.535	1.00	1.93
Hobby	No																						
	Yes	0.520	0.73	0.28	-	0.130	0.40	0.12	a	12.00	0.87	a	2.38	0.09	a	0.47	0.04	a	1.17	0.09	0.718	0.91	-
			1.00	1.90			1.00	1.35		1.00	165.40		1.00	64.05		1.00	5.17		1.00	14.52		1.00	1.54

Factors	Family Types																Sibling (n = 22)		All families (n = 346)					
	Three-generation (n = 162)				Parent-child (n = 77)				Husband and wife (n = 31)				Older adult lived alone (n = 26)				Skip-generation (n = 28)				Sibling (n = 22)		All families (n = 346)	
	p-value	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI			
Health problems	Yes																							
	No	0.129	2.22	0.78	0.489	1.45	0.50	a	1.13	0.17	a	0.26	0.01	a	1.00	0.09	a	2.18	0.20	1.07	0.64			
Marital status	Single status																							
	Couple status	0.266	0.57	0.21	0.121	2.29	0.79	a	2.30	0.17	a	5.44	0.15	a	1.00	0.04	No one answered "Couple"	** 0.006	2.01	1.21	-			
Changes in the family	Yes																							
	No	a 1.000	1.22	0.14	No one answered "Yes."		No one answered "Yes."		a 1.000	0.18	0.01	No one answered "Yes."		No one answered "Yes."		a 0.675	1.27	0.24	-	1.00	6.69			
Participation in family activities	No																							
	Yes	0.346	0.58	0.19	* a 0.033	3.56	1.13	a	2.57	0.42	No one answered "Yes."		a 1.000	1.67	0.20	a 0.323	4.50	0.41	*** .000	3.36	2.02			
Participation in activities with society	No																							
	Yes	0.820	1.11	0.44	0.279	1.77	0.63	a	3.17	0.50	a 1.000	0.31	0.01	a 0.596	3.55	0.32	a 1.000	1.60	0.20	* .049	1.66	1.00		
Participation in volunteer work	No																							
	Yes	a 0.767	0.89	0.28	a 0.689	0.67	0.15	a 1.000	2.02	0.09	a 1.000	3.13	0.10	a 0.270	0.13	0.01	No one answered "Yes."	0.977	1.01	0.47	-			

Note: *p-value <0.05, **p-value <0.01, ***p-value <0.001, ^a Fisher's Exact Test

Discussion

Older adults in different family types and different levels of loneliness

The majority of the older adults in the sample group experienced low levels of loneliness followed by moderate levels of loneliness. It was found that none of the older adults in the sample group experienced high levels of loneliness. Due to the location, the older adults of this study live next to people they were familiar with, causing community members, including the older adults, to have good interactions and close relationships with neighbors and know and help each other very well. Most of the older adults who live with their grandchildren were taken care of by their grandchildren. There were also neighbors in the same community to counsel and talk when needed.

Social support is also what older adults appreciate, and they perceive that they are assisted or supported by three groups of individuals: family, friends, and significant others (Zimet et al., 1988). However, feelings of loneliness were not associated with social isolation or less contact but were related to expectations of social contacts and the experienced quality of relationships (Tilvis et al., 2011). Getting social support is one of the significant factors in reducing the levels of loneliness of older adults. This finding is in line with Gumpphan et al. (2016), who found that social support influences loneliness in older adults. Older adults with low perceived social support had a higher chance of loneliness than those with a high perception of social support.

In addition, this study found that many older adults in the study group had a hobby of playing cards, which is considered an activity that is quite useful for older people. It is an activity that helps exercise the brain by practicing calculating. Playing cards is an activity that will keep them excited and alert and is also an activity that gives the older adults and friends a chance to come, meet, and do activities together.

Wangwun (2010) studied the effects of playing the *Angklung* (a traditional Indonesian musical instrument made from bamboo tubes attached to a bamboo frame) (Daly, n.d.) together with a group and its process on the loneliness of the older adults in nursing homes. They found that the older adults who participated in the *Angklung* group activity showed a decrease in loneliness compared to those before participating in the activity. These findings were consistent with the study by Noppamitra (2017), who compared dementia and loneliness of older adults who participated in an *Angklung* group play activity and those who did not participate. The older adults in the community who did not participate in the *Angklung* play activities show a significant difference in levels of loneliness. Although there were no older adults in this study that experienced high levels of loneliness, the highest total loneliness score was nearest to the high loneliness levels, with the total score of loneliness being 72 points. However, these levels still need to be watched by supervision and prevention to reduce loneliness in older adults in this study area.

According to the results of this study, it was found that the older adults who were in families with different types experienced different levels of loneliness. The types of families in which the older adults live alone had the highest level of loneliness, compared to older adults in a three-generation family who experienced the lowest levels of loneliness. Due to the family that the older adults live alone without family members to look after leads to lack of

communication and care expression. In addition, some of the older adults who live alone in this study still had to work to support themselves, causing a lack of participation in activities with neighbors and society.

These factors encourage older adults to become lonelier. This finding is in line with the research of Meesiri (1998), Sriram (1996), and Theeke (2009), who found that older adults who lived with their children were less lonely than those who lived alone. This is because children play an essential role in helping older adults to adapt happily. The children take care of the older adults' health, financial support, and assistance when needed. In addition, grandchildren also have respect for the older adults and make the older adults proud. Older adults feel that they are still important to their families. This feeling makes the older adults more comfortable and able to fight the aging life that challenges them physically, mentally, and socially (Jumpadajamikon, 2014).

Personal factors, family factors, and social factors of older adults and the loneliness of the older adult in the family

It was found that income adequacy with older adults in the three-generation family showed statistically significant differences in the level of loneliness. The older adults who have inadequate income are lonelier than those who have adequate income. Loneliness is linked to income and unemployment (Lauder et al., 2006). Low income has been found to increase the risk of loneliness and social isolation. The people living on low income were twice as likely to be lonely and six times more likely to be socially isolated (Hortulanus et al., 2006). Moreover, this result was related to a study by Elsayed et al. (2019), which revealed a statistical significance between income level and loneliness. They found that the older adults who had some monthly income, but not enough, would be lonelier than the older adults who had enough monthly income. The older adults who have enough income and savings have the lowest loneliness level.

Participating in family activities was the factor that differed in the levels of loneliness toward the older adults in the parent-child family type. The participation in the family activities of the parent-child family show statistically significant differences in levels of loneliness. In other words, the older adults who do not participate in family activities are lonelier than the older adults who take part in family activities. This result was related to Wu et al. (2010), who found that the empty-nester older adults who perceived more family adaptability, affection, and resolve reported lower loneliness scores. More social support and better family function might decrease loneliness in the empty-nest older adults (Wu et al., 2010). This is because most of the older adults in the study group often participate in family activities and join in activities together with family members to build family relationships in behavior that affects the feelings of loneliness of the older adults (Sombultawee et al., 2014).

The older adults who live as a parent and have regular family activities lack participation in activities with family members, especially the son or daughter who are the primary dependent of the older adults in the family of parents-child. It may make the older adults feel that their relationships with family members are deteriorating and can affect the loneliness of the older adults. This approach is different from a three-generation family. Although joining activities of three-generation family members, especially the older adults and their children, does not happen as often, the effect on the loneliness of the older adults less because, the older adults can still find happiness and do activities with other family members, especially grandchildren. And in addition, in the family where the older adults live alone, participating in family

activities may not be as vital as they are used to being alone and able to adapt even without family members to participate in activities as well. At old age, spouses can restrict each other in relationships and may not have as many feelings and thoughts to share in their advanced age. This behavior is often observed in older females (Arslantaş et al., 2015). So, participating in activities with others, such as neighbors, community members, or society, is likely to be more important and influence the loneliness of the older adults alone.

Policy recommendation

The research found that the older adults who live alone were more likely to be lonely than those in families with other members of the family. Holding the activities should highly focus on the single older adults group, allowing this group to interact and have the opportunity to do activities with others. This attention will help reduce or solve the problem of loneliness for this older adult group.

From interviews and collecting data from the older adults, it was found that 71.1% of the older adults were the happiest to participate in activities with family members. Therefore, the older adults with family members should be encouraged to recognize the importance of building a relationship with the older adults by providing opportunities for them to participate in various activities with family members living with the older adults, having good interactions with the older adults, and taking them to go out and do activities together. This connection will help to reduce the loneliness that will occur in older adults.

Organizations in the community should hold activities for older adults and provide opportunities to participate in activities with family members, neighbors, and community members. This research found that up to 38.2% of older adults were interested in community meetings, followed by 10.7% of physical activity for the older adults. Also, 28.9% of older adults are interested in participating in activities with their children, primarily by watching their children's singing and dancing.

Recommendation for further study

This research recommends continuing to study and develop a model to promote or solve the problem of loneliness among older adults according to various family types because studies according to family types are still rare in Thailand. An in-depth interview should be conducted with older adults who have or tend to have high levels of loneliness, and interviews with family members to understand the problems and factors that contribute to the loneliness of the older adults in that family.

Limitations

This research was conducted in the Ko Rai sub-district, Ban Pho District, Chachoengsao Province. Therefore, there are limitations in referring to the older adult population throughout the country. Older adults belong to different families and have different cultures, so various factors will cause loneliness.

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