

## 高齡者休閒心流體驗與孤寂感之關係

### 摘要

本研究旨在探討兩種社會支持型態(休閒情緒支持、休閒工具支持)和休閒心流體驗與孤寂感之關係。本研究使用面對面問卷調查，收集 160 位高齡者之問卷。問卷包含休閒情緒支持量表、休閒工具支持量表、休閒心流體驗量表及孤寂感量表。本研究採用多元迴歸分析，探討上列變項之關係。研究結果顯示，休閒情緒支持和休閒心流體驗與孤寂感顯著負相關，但休閒工具支持與孤寂感則無顯著相關。另外，休閒心流體驗與孤寂感的相關性高於休閒情緒支持與孤寂感的相關性。本研究進一步討論研究結果之意涵，試圖提出無須倚靠他人支持而減少孤寂感之方法。

**關鍵字：**社會支持、休閒情緒支持、休閒工具支持

## Relationship Between Flow and Loneliness Among Older Adults

### Abstract

We examined the relationships of two types of social support (leisure emotional support and leisure instrumental support) and flow with loneliness among older adults. In total, 160 older adults participated in our study. Face-to-face interviews were used to measure their leisure emotional support, leisure instrumental support, flow, and loneliness. Data were analyzed by multiple regression analysis. The results indicated that leisure emotional support and flow were significantly and negatively correlated with loneliness, but leisure instrumental support was not. Moreover, flow was more strongly correlated with loneliness than leisure emotional support was. We discuss implications of the results in terms of reducing loneliness, without depending highly on the presence of others.

**Keywords:** social support, leisure emotional support, leisure instrumental support

## **Introduction**

Loneliness is prevalent among older adults (Hawkley & Kocherginsky, 2018). Loneliness refers to negative feelings of social isolation that accompany perceived deficiencies in the quantity and quality of social interactions (Wang et al., 2011). Loneliness causes depression (Zhao et al., 2018) and suicidal ideation (Zhang et al., 2020) and reduce quality of life (Trybusińska & Saracen, 2019); therefore, preventing and treating loneliness among older adults are necessary to improve their mental health and well-being.

### **Importance of Social Support for Older Adults**

Some variables such as age, gender, health, and widowhood have been observed to be associated with loneliness among older adults (Dahlberg & McKee, 2014); however, their effect of social support on loneliness reduction has attracted considerable attention in numerous studies (Chen et al., 2019; Hawkley & Kocherginsky, 2018; Wang et al., 2011). Social support refers to the care and assistance from family members and friends (Chang, 2018). Empirical studies have confirmed that social support is more significantly correlated with loneliness reduction among older adults than the aforementioned factors are (Hawkley & Kocherginsky, 2018; Wang et al., 2011). Because social support can satisfy needs for social relationships and is strongly associated with loneliness reduction among older adults (Eskimez et al., 2019; Zhao et al., 2018), providing them with social support is believed to be an effective method of reducing loneliness.

Leisure may provide older adults with not only pleasurable experiences to supplement their routines of daily life but also opportunities to develop companionships with family members and friends (Chang, 2018). Leisure is also reported to be an effective intervention that can increase social support (Lee et al., 2018). In other words, encouraging older adults to participate in leisure may be a feasible means of enhancing their social support. Receiving social support from leisure companions is defined as leisure social support (Chang, 2020). Although no studies have examined a relationship between leisure social support and loneliness

among older adults, some evidence indirectly supports this relationship. Coleman and Iso-Ahola (1993) indicated that leisure social support could effectively mitigate the negative effects of stress on health. Older adults who receive leisure social support from leisure companions can reduce the negative effects of stress through emotion-based comfort or aid to solve problems (Chang, 2020). Several studies have demonstrated that high levels of loneliness can effectively predict high levels of stress (DeBerard & Kleinknecht, 1995) and vice versa (Satici, 2020). Loneliness is also observed to be a stressor many older adults experience (Hunter & Gillen, 2009). According to these findings, leisure social support is hypothesised to be associated with loneliness reduction among older adults, as inferred from the close relationship between loneliness and stress.

Leisure social support can be divided into two major types: leisure emotional support and leisure instrumental support (Chang, 2018). Leisure emotional support is the provision of affection, concern, empathy, encouragement, love, or trust from leisure companions. Leisure instrumental support, also called leisure tangible support, is financial assistance, material goods, or services leisure companions provide. If leisure social support is negatively related to loneliness, further examining the relationships between the two specific types of leisure social support and loneliness contributes to our understanding of the causes of loneliness reduction among older adults.

### **Flow as a Crucial Predictor of Loneliness**

Loneliness is a negative emotion that leads to poor mental health, whereas its detrimental effects can be regulated by positive emotions (Fredrickson, 1998). For example, the positive emotion of contentment can broaden mindfulness to help older adults savor their current circumstances and experience oneness with the world, thereby attenuating the negative effects of loneliness (Newall et al., 2013). In other words, factors that can generate positive emotions may be crucial predictors of loneliness among older adults.

According to flow theory (Csikszentmihalyi, 1975; 1997), older adults experience anxiety

when challenges in activities are beyond their skills. Older adults experience boredom when challenges in activities are below their skills. Older adults feel apathy when the levels of both challenges and skills are low. Only when a balance is reached between high-level challenges and skills can older adults experience energized focus, deep involvement, and complete enjoyment in activities. This phenomenon is called *flow*. Empirical studies have indicated that older adults who have sufficiently high skills to meet challenges in activities experience flow, and these flow experiences enable them to develop positive emotions and improve their quality of life (Lee & Heo, 2019; Standridge et al., 2020). Experiencing flow is also reported to generate the positive emotion of contentment (Fredrickson, 1998). Therefore, flow may be negatively related to loneliness among older adults.

Examining a negative relationship between flow and loneliness is necessary. Although the loneliness construct simultaneously comprises both emotional and social dimensions (De Jong Gierveld & Van Tilburg, 2006), the role of the emotional dimension has not been adequately addressed. Numerous studies have focused on the social dimension to determine the effect of social support on loneliness among older adults (Eskimez et al., 2019; Hawkley & Kocherginsky, 2018; Wang et al., 2011; Zhao et al., 2018). However, the emotional dimension has been observed to account for variance in loneliness more than the social dimension (Dykstra & Fokkema, 2007). In other words, a loneliness model must simultaneously include both emotion-based and interaction-related predictors, and emotion-based predictors are more important in the model than interaction-related predictors are. Because experiencing flow can generate positive emotions (Lee & Heo, 2019; Standridge et al., 2020), which may regulate negative feelings of loneliness (Newall et al., 2013), a potentially valuable relationship between flow and loneliness warrants investigation.

According to the aforementioned findings, we examined whether leisure emotional support, leisure instrumental support, and flow were significantly and negatively correlated with loneliness to obtain valuable information for developing strategies to reduce loneliness

among older adults.

## Methods

### Participants

Older adults were purposively selected as participants if they met the two eligibility criteria: (a) aged 65 years or older and (b) able to participate in active leisure such as painting and playing croquet. In total, 160 older adults participated in our study. Each received small gifts (cash coupons and paper tissues) and filled out an informed consent form before our study began. The participants were aged 65–92 years with a mean age of 76.56 years ( $SD = 7.46$ ). Most of them were female and widowed. Other characteristics are presented in Table 1.

**Table 1. Participant Characteristics**

Characteristic	<i>N</i>	%
Gender		
Female	97	60.6
Male	63	39.4
Marital Status		
Unmarried	42	26.3
Divorced	17	10.6
Widowed	69	43.1
Married	32	20.0
Education		
Illiterate	30	18.8
Primary School Graduates	101	63.1
High School Graduates	17	10.6
University Degree and Above	12	7.5

## **Procedures**

Although 81.2% of the participants could read a questionnaire by themselves, many had visual impairment and disliked reading it. For consistency, face-to-face interviews were conducted. A research assistant read the questionnaire items aloud to each participant. After the assistant read each item aloud, she used a five-point interval scale regarding an answer of the item and coded a response. Each interview lasted approximately 35 minutes. Before beginning each interview, the assistant explained the purposes of our study, rights of participants, anonymity of their identity, and confidentiality of all responses. The literate participants signed an informed consent form to affirm that their participation was voluntary. If the illiterate participants doubted the form content, they could ask their adult children or friends for assistance. After agreeing to enroll in our study, they stamped their name on the form. Each interview was conducted in a private place such as a conference room or a living room.

## **Measures**

Leisure emotional support was measured using the scale of Iwasaki and Mannell (2000). The scale has been reported to be reliable for research on older adults and able to effectively evaluate the degree to which they feel adequately and emotionally supported by their leisure companions (Chang, 2018). Items are as follows: (a) I feel emotionally supported by my leisure companions, and (b) I feel that I am respected by my leisure companions. Older adults were asked to rate the degree to which they agreed with each item on a five-point scale from 1 (*not at all*) to 5 (*completely*). The scale has eight items, and total scores ranged from 8 to 40. High scores represented high levels of leisure emotional support.

Leisure instrumental support was measured using the scale of Iwasaki and Mannell (2000). The scale has been reported to be reliable for research on older adults and able to effectively evaluate the degree to which they feel adequately supported by their leisure companions in terms of tangible aid (Chang, 2018). Items are as follows: (a) My leisure companions give me advice when I am in trouble, and (b) my leisure companions will lend me things when I need

to borrow them. Older adults were asked to rate the degree to which they agreed with each item on a five-point scale from 1 (*not at all*) to 5 (*completely*). The scale has eight items, and total scores ranged from 8 to 40. High scores represented high levels of leisure instrumental support.

Flow was measured using the scale of Jackson et al. (2008). The scale has been reported to be reliable for research on older adults and able to effectively evaluate the following nine dimensions: challenge-skill balance, action awareness, clear goals, unambiguous feedback, concentration on task, sense of control, loss self-consciousness, transformation of time, and autotelic experience (Chang, 2020). Items are as follows: (a) My abilities match high challenges faced in the situation, and (b) I really enjoy the experience. Older adults were asked to rate the degree to which they agreed with each of the items on a 5-point scale from 1 (*not at all*) to 5 (*completely*). The scale has nine items, and total scale scores ranged from 9 to 45. High scores represented high levels of flow.

Loneliness was measured using the scale of De Jong Gierveld and Van Tilburg (2006). The scale has been reported to be reliable for research on older adults and able to effectively evaluate their perceptions of loneliness (De Jong Gierveld et al., 2015). Items are as follows: (a) I experience a general sense of emptiness, and (b) there are enough people I feel close to. Older adults were asked to rate the degree to which they agreed with each item on a five-point scale from 1 (*not at all*) to 5 (*completely*). The scale has six items, and total scores ranged from 6 to 30. High scores represented high levels of loneliness.

### **Data Analysis**

Descriptive statistics were adopted to describe participant characteristics. Correlation analysis was performed to examine the interrelationships among leisure emotional support, leisure instrumental support, flow, and loneliness. Multiple regression analysis was conducted to examine the relationships of leisure emotional support, leisure instrumental support, and flow with loneliness.

## Results

The average scores were 30.23 (SD = 7.56) for leisure emotional support, 25.56 (SD = 8.45) for leisure instrumental support, 34.40 (SD = 8.78) for flow, and 15.61 (SD = 4.04) for loneliness. The correlation analysis results indicated that leisure emotional support ( $r = -.57$ ;  $p < .01$ ), leisure instrumental support ( $r = -.42$ ;  $p < .01$ ), and flow ( $r = -.58$ ;  $p < .01$ ) were all significantly and negatively correlated with loneliness (Table 2).

**Table 2. Means, Standard Deviations, and Correlation Coefficients of Variables**

Variable	1	2	3	4
1. Leisure Emotional Support				
2. Leisure Instrumental Support	.67**			
3. Flow	.61**	.45**		
4. Loneliness	-.57**	-.42**	-.58**	
M	30.23	25.56	34.40	15.61
SD	7.56	8.45	8.78	4.04

\*\* $p < .01$

The multiple regression analysis produced three main results (Table 3). First, leisure emotional support significantly predicted loneliness ( $\beta = -.31$ ,  $p < .01$ ). Specifically, the more the leisure emotional support of older adults, the less lonely they felt. Second, leisure instrumental support did not significantly predict loneliness ( $\beta = -.05$ ,  $p > .05$ ). Specifically, levels of loneliness among older adults did not change with levels of leisure instrumental support. Third, flow significantly predicted loneliness ( $\beta = -.37$ ,  $p < .01$ ). Specifically, when the flow of older adults increased, their loneliness decreased.



**Table 3. Multiple Regression Analysis for Variables Predicting Loneliness**

	<i>B</i>	<i>SE</i>	<i>B</i>
Leisure Emotional Support	-.17	.05	-.31**
Leisure Instrumental Support	-.02	.04	-.05
Flow	-.17	.04	-.37**
<i>F</i>		35.89	
<i>R</i> <sup>2</sup>		.41	

\*\**p* < .01

## Discussion

### Relationship Between Leisure Emotional Support and Loneliness

The results indicated that leisure emotional support was significantly and negatively correlated with loneliness. The results were consistent with findings in the literature (Chang, 2018; 2020). As aforementioned, loneliness is the unpleasant feelings of social isolation that accompany perceived deficiencies in expected social interactions (Wang et al., 2011). Because leisure emotional support can satisfy a need for expected social interactions (Chang, 2018), high levels of leisure emotional support are considerably associated with low levels of loneliness among older adults.

### Mixed Relationship Between Leisure Instrumental Support and Loneliness

Inconsistent with findings in the literature (Chang, 2018; 2020), in our study, leisure instrumental support was not significantly correlated with loneliness. The cause of this inconsistency might have been the multi-collinearity between leisure emotional support and leisure instrumental support. Leisure emotional support was significantly and positively correlated with leisure instrumental support ( $r = .67, p < .01$ ). Notably, the correlation coefficient between leisure instrumental support and loneliness was significant ( $r = -.42, p < .01$ ) but that between leisure emotional support and loneliness was more significant ( $r = -.57, p$

< .01). After we simultaneously integrated leisure emotional support and leisure instrumental support into the multiple regression model, the effect of leisure instrumental support on loneliness decreased significantly.

Although the effect of leisure instrumental support on loneliness was replaced by that of leisure emotional support in the multiple regression model, an investigation of the construct is warranted as leisure instrumental support is theoretically related to mental health (Chang, 2018; 2020). Therefore, the benefits of leisure instrumental support among older adults are worthy of re-examination.

### **Flow as the best Predictor of Loneliness**

Consistent with findings in the literature (Fredrickson, 1998; Newall et al., 2013), the results indicated that flow was significantly and negatively correlated with loneliness. As aforementioned, the positive emotion of contentment can mitigate the negative effects of loneliness (Fredrickson, 1998). Because experiencing flow results in various positive emotions such as contentment, enjoyment, and interest (Csikszentmihalyi, 1997; Fredrickson, 1998), an increase in flow is considerably associated with a decrease in loneliness.

The results further indicated that the standardized regression coefficient between flow and loneliness was more significant than those between the two types of leisure social support and loneliness were. The results were similar to the findings of Dykstra and Fokkema (2007) that the emotional dimension could account for variance in loneliness more than the social dimension could. In other words, flow is a stronger predictor of loneliness among older adults than the other predictors.

### **Implications**

Our study confirmed that leisure social support, particularly leisure emotional support, was significantly correlated with loneliness reduction. In other words, increasing leisure emotional support may be a feasible means of helping older adults reduce their loneliness. Therefore, older adults should be guided in seeking sources of leisure emotional support.

Leisure social support can be divided into leisure emotional support and leisure instrumental support (Chang, 2018). Although the correlation analysis results revealed that the two types of leisure social support were significantly and negatively correlated with loneliness, the multiple regression analysis results indicated that when leisure emotional support and leisure instrumental support were simultaneously included in the multiple regression model, the effect of leisure instrumental support on loneliness was overshadowed by that of leisure emotional support. In other words, providing older adults with emotional support is more effective to reduce their loneliness than offering them tangible support is.

We further observed that flow could better predict loneliness among older adults than leisure emotional support could. This indicates that although lonely older adults may require social interactions, they may have a larger need for generating positive emotions to mitigate their negative feelings of loneliness. In addition, receiving leisure emotional support depends highly on others, but experiencing flow does not. Older adults can experience flow when are *alone*. Therefore, helping older adults experience flow is a more feasible means of reducing their loneliness than providing leisure emotional support is.

### **Limitations and Recommendations**

Our study has three limitations. First, cause–effect conclusions could not be drawn directly from the results because of our correlational design. Second, because the participants were purposively selected, the results must be generalized to all older adults with caution. Third, autonomy and competence that can generate positive emotions (Weinstein & Ryan, 2011) may also be related to loneliness reduction. However, to streamline the questionnaire, scales for autonomy and competence were omitted. Therefore, our model did not comprehensively include the causes of loneliness reduction among older adults.

Future studies should conduct the following tasks to strengthen our findings: First, the effects of leisure emotional support, leisure instrumental support, and flow on loneliness should be determined in an experimental design. Second, the relationships of leisure emotional support,

leisure instrumental support, and flow with loneliness should be explored using a random sampling method. Third, autonomy and competence should be examined in future models of loneliness to more comprehensively understand the causes of loneliness reduction among older adults.

### **Conclusion**

Among the three predictors analyzed in our study (leisure emotional support, leisure instrumental support, and flow), flow was the strongest predictor of loneliness in the multiple regression model. Flow caused a more significant decrease in loneliness than the other predictors did. To reduce loneliness, leisure service providers should provide older adults with leisure opportunities that balance challenges with skills to promote flow.

Leisure emotional support remained significantly and negatively correlated with loneliness when flow was included in the multiple regression model. In other words, leisure emotional support and flow independently affected loneliness, and the combination of leisure emotional support and flow accounted for variance in loneliness more than flow alone did. Therefore, to more effectively reduce loneliness, in addition to helping older adults experience flow, leisure service providers should guide them in seeking sources of leisure emotional support.

### **References**

- Chang, L. (2018). Is social support always related to stress reduction in nursing home residents? A study in leisure contexts. *Research in Gerontological Nursing, 11*(4), 174-180.
- Chang, L. (2020). Relationship between flow experience and subjective vitality among older adults attending senior centres. *Leisure Studies, 39*(3), 433-443.
- Chen, L., Alston, M., & Guo, W. (2019). The influence of social support on loneliness and depression among older elderly people in China: Coping styles as mediators. *Journal of Community Psychology, 47*(5), 1235-1245.
- Coleman, D., & Iso-Ahola, S. E. (1993). Leisure and health: The role of social support and

- self-determination. *Journal of Leisure Research*, 25(2), 111-128.
- Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. San Francisco: Jossey-Bass.
- Csikszentmihalyi, M. (1997). *Finding flow: The psychology of engagement with everyday life*. New York: Basic Books.
- Dahlberg, L., & McKee, K. J. (2014). Correlates of social and emotional loneliness in older people: Evidence from an English community study. *Aging and Mental Health*, 18(4), 504-514.
- De Jong Gierveld, J., & Van Tilburg, T. (2006). A 6-item scale for overall, emotional, and social loneliness: Confirmatory tests on survey data. *Research on Aging*, 28(5), 582-598.
- De Jong Gierveld, J., Keating, N., & Fast, J. E. (2015). Determinants of loneliness among older adults in Canada. *Canadian Journal on Aging*, 34(2), 125-136.
- DeBerard, M. S., & Kleinknecht, R. A. (1995). Loneliness, duration of loneliness, and reported stress symptomatology. *Psychological Reports*, 76(3), 1363-1369.
- Dykstra, P. A., & Fokkema, T. (2007). Social and emotional loneliness among divorced and married men and women: Comparing the deficit and cognitive perspectives. *Basic and Applied Social Psychology*, 29(1), 1-12.
- Eskimez, Z., Demirci, P. Y., TosunOz, I. K., Oztunç, G., & Kumas, G. (2019). Loneliness and social support level of elderly people living in nursing homes. *International Journal of Caring Sciences*, 12(1), 465-474.
- Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology*, 2(3), 300-319.
- Hawkey, L. C., & Kocherginsky, M. (2018). Transitions in loneliness among older adults: A 5-year follow-up in the National Social Life, Health, and Aging Project. *Research on Aging*, 40(4), 365-387.
- Hunter, I. R., & Gillen, M. C. (2009). Stress coping mechanisms in elderly adults: An initial study of recreational and other coping behaviors in nursing home patients. *Adultspan*

*Journal*, 8(1), 43-53.

- Iwasaki, Y., & Mannell, R. C. (2000). Hierarchical dimensions of leisure stress coping. *Leisure Sciences*, 22(3), 163-181.
- Jackson, S. A., Martin, A. J., & Eklund, R. C. (2008). Long and short measures of flow: The construct validity of the FSS-2, DFS-2, and new brief counterparts. *Journal of Sport and Exercise Psychology*, 30(5), 561-587.
- Lee, C., Sung, Y. T., Zhou, Y., & Lee, S. (2018). The relationships between the seriousness of leisure activities, social support and school adaptation among Asian international students in the US. *Leisure Studies*, 37(2), 197-210.
- Lee, S., & Heo, J. (2019). Life experience of older women with chronic conditions: Flow and balance as a coping resource. *Educational Gerontology*, 45(4), 259-268.
- Newall, N. E., Chipperfield, J. G., Bailis, D. S., & Stewart, T. L. (2013). Consequences of loneliness on physical activity and mortality in older adults and the power of positive emotions. *Health Psychology*, 32(8), 921-924.
- Satici, S. A. (2020). Hope and loneliness mediate the association between stress and subjective vitality. *Journal of College Student Development*, 61(2), 225-239.
- Standridge, S. H., Dunlap, R., & Hamilton, G. (2020). Retirement and flow: Can the casual leisure pursuits of older adults in retirement create the experience of flow? *Activities, Adaptation and Aging*, 44(3), 192-209.
- Trybusińska, D., & Saracen, A. (2019). Loneliness in the context of quality of life of nursing home residents. *Open Medicine*, 14(1), 354-361.
- Wang, G., Zhang, X., Wang, K., Li, Y., Shen, Q., Ge, X., & Hang, W. (2011). Loneliness among the rural older people in Anhui, China: Prevalence and associated factors. *International Journal of Geriatric Psychiatry*, 26(11), 1162-1168.
- Weinstein, N., & Ryan, R. M. (2011). A self-determination theory approach to understanding stress incursion and responses. *Stress and Health*, 27(1), 4-17.

- Zhang, D., Wang, R., Zhao, X., Zhang, J., Jia, J., Su, Y., & Wang, K. (2020). Role of resilience and social support in the relationship between loneliness and suicidal ideation among Chinese nursing home residents. *Aging and Mental Health*, 1-11. (Latest Articles)
- Zhao, X., Zhang, D., Wu, M., Yang, Y., Xie, H., Li, Y., ... & Su, Y. (2018). Loneliness and depression symptoms among the elderly in nursing homes: A moderated mediation model of resilience and social support. *Psychiatry Research*, 268, 143-151.