A Study on the Relationship between Active Aging Learning and Well-being of Elderly People

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Keywords: Elderly people, Active aging learning, Happiness

Abstract: This study explores the relationship between active aging learning status and well-being of elderly people. Through two-stage sampling, 440 elderly people over 55 years of age were selected as subjects. Empirical data were collected using questionnaire surveys, descriptive statistics, univariate analysis, regression analysis, item analysis and factor analysis. The statistical analysis results show that the elderly is active in aging learning and well-being. In addition, a significant positive correlation was found between active aging learning and well-being in older people. Based on preliminary research, the researchers found that active aging learning has an effect on improving the happiness of the elderly, and made relevant suggestions for future research and teaching units.

1. Introduction

1.1 Research Background and Motivation

According to Taiwan government statistics, as of the end of May 2010, the proportion of elderly people was 10.69%, as of the end of July 2013 was 11.33%, and will continue to climb to 20% by 2025 (Labor Development Department of the Ministry of Labor, 2016). This trend follows With the rapid aging of the population, Taiwan has officially become an "advanced society" in 2017 (Ministry of the Interior, Min. 99), and will soon face an ultra-advanced society in 2025. There will be 4.62 million elderly people over 65, accounting for Taiwan's total With a population of 20.1%, how to make older people who have tried their best to contribute to society to be able to feel physical and psychological health and well-being in later life is also an important issue that Taiwan society cannot ignore (Liu Wei, Min. 101). This study explores the relationship between learning choices and inner feelings of seniors from the perspectives of active aging and well-being [1-3]. We look forward to helping seniors understand their true needs, screening suitable teaching suggestions with adult teaching institutions, and hope to guide seniors learning can increase happiness for future life.

1.2 Research Hypotheses

According to the research background and motivation, the research hypotheses established in this study are as follows:

Hypothesis 1: Population attributes have a significant relationship to active aging learning;

Hypothesis 2: Demographics have a significant relationship to happiness;

Hypothesis 3: Active aging learning has the ability to predict well-being.

2. Research Methods

2.1 Research Framework

The content of this study consists of three parts: the first part: "demographic variables"; the second part: "active aging learning"; the third part: "happiness". The study aims to explore the relationship between the attributes (age, gender, education, retirement work) of middle-aged and senior learners and

  DOI: 10.25236/isaete.2020.005

active aging learning and well-being, and to clarify the impact of active aging learning on well-being. As shown:

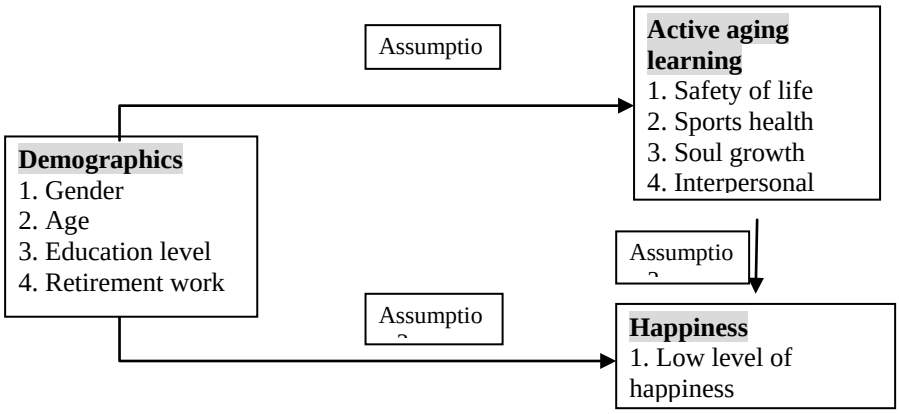

Figure 1 Research concept architecture.

Source: collation of this study

2.2 Research Design and Objects

This research is based on the theoretical concept of psychological well-being model put forward by Ryff in 1989, and designed a quantitative survey and research method. It is published in the book "Senior Life Career" compiled by Professor Wei Huijuan (2015) of Chung Cheng University. The "Active Aging Learning Scale" and "Happiness Self-scale" are used to collect data for case data collection. In addition, this research case uses the senior university in a certain area of central Taiwan as the research area, and adopts sampling intentionally, supplemented by snowball sampling to seek research cases [4]. The implementation steps are based on the SPSS statistical analysis (Tu Jintang, 2010) to conduct a questionnaire survey, and then to summarize and discuss the content of the case questionnaire based on the significance of the spss statistical analysis. We look forward to exploring the active aging and learning of middle-aged and elderly students Post-happiness.

2.3 Analysis Method

2.3.1 Descriptive Statistics

In this study, a total of 500 questionnaires were distributed using a stratified random sampling method. After the questionnaires were recovered, invalid questionnaires were deleted. A total of 440 valid questionnaires were recovered. The effective recovery rate was 88%. After the collection of the sample data, it was found that the majority of elderly learners were females, accounting for 277 (63%), aged 65-69 years old, accounting for 145 (33%), and most educated by elementary schools, accounting for 249 (56.5%), with the largest number of occupations in the industry and service industry, accounting for 132 people (30%). Based on this, the "Analysis Table of Research Object Background Data" (Table 1) is summarized as follows:

Table 1 Analysis of background information of research objects (N: 440).

Item type	category	Number of people (person)	Percentage (%)
Gender	Male	163	375
	Female	277	63
Age	55-59 years	85	19.3
	60-64 years	112	25.5
	65-69 years	145	33.0

	70 years the above	95	22.2
Education level	Elementary school	249	56.5
	National middle school	101	23
	High school	90	20.5
Retirement work	Military positions, Civil servants, Teachers	80	18.2
	Businessman	65	14.8
	Industrial workers	132	30
	Agricultural workers	32	7.2
	Service industry practitioners	131	29.8
	Other practitioners	0	0

Source: collation of this study

2.3.2 Reliability Analysis

In the first part of the scale of "active aging learning", this study uses the self-developed "active aging learning scale", supplemented by SPSS statistics (Wu Minglong, Tu Jintang, 2007) for analysis, which is in line with reliability The minimum standard of degree is above 0.5, so it shows obvious reliability, as shown in Table 2.

Table 2 Reliability analysis of various facet variables of the Active Aging Learning Scale.

Facet	Questionnaire number	Cronbach's α
Factor one (Life safety)	Five questions (1、2、3、4、5)	0.774
Factor two (Sports Health)	Six questions (6、7、8、9、10、11)	0.857
Factor three (Spiritual growth)	Six questions (12、13、14、15、16、17)	0.832
Factor four (Interpersonal communication)	Six questions (18、19、20、21、22、23)	0.800
Factor five (Contributed Services)	Four questions (24、25、26、27)	0.969

Source: The researchers self-constructed table according to the data.

In the second part of the "happiness" scale, this study uses a self-made "happiness scale" supplemented by SPSS statistical analysis. It meets the minimum reliability standard of 0.5 or more in the scale reliability analysis, so it is obvious Reliability, as shown in Table 3.

Table 3 Reliability analysis of various facet variables of the "Happiness Scale".

Facet	Questionnaire number	Cronbach's α
Factor one (Low happiness)	Six questions (1、2、3、4、5、6)	0.868
Factor two (Moderate happiness)	Seven questions (7、8、9、10、11、12、13)	0.878
Factor three (Highly happiness)	Seven questions (14、15、16、17、18、19、20)	0.849

Source: The researchers self-constructed table according to the data.

2.3.3 Factor Analysis

In this study, the "construction validity" of the scale was obtained by factor analysis. The principal component analysis mode of the principal axis method was used. Those who had a KMO value> 0.6 and extracted the eigenvalues greater than 1 were selected. Axis of factor. Projects with a factor load greater than 0.3 are used as the basis for naming each factor (Huang Junying, Lin Zhenyan, 1994), and substandard items are excluded. The five facets are used to replace complex questionnaire items. In the factor analysis, the KMO value was 0.881, and Bartlett's spherical test value was 2865.057 (degrees of freedom: 406). The significance was 0.000 and the significance was significant. The 27 questions reached the selection criteria. After factor analysis, five factors were extracted. The characteristic value of the factor is 8.801, the characteristic value of the second factor is 2.917, the characteristic value of the third factor is 1.975, the characteristic value of the fourth factor is 1.623, the characteristic value of the fifth factor is 1.170, the entire scale The cumulative explanatory variability is 56.850%, and the explanatory variability of each factor is 30.349%, 10.059%, 6.810%, 5.596%, and 4.036% in turn. Presented in the active aging learning factor analysis summary table (Table 4), as shown below.

Table 4 Aggregated analysis of active aging learning factors.

Original question number	Formal question number	Factor one (Life safety)	Factor two (Sports Health)	Factor three (Spiritual growth)	Factor four (Interpersonal communication)	Factor five (Contributed Services)
1	1	0.760				
7	2	0.719				
13	3	0.611				
19	4	0.448				
25	5	0.374				
5	6		0.800			
11	7		0.720			
23	8		0.679			
24	9		0.641			
2	10		0.616			
8	11		0.614			
14	12			0.736		
20	13			0.698		
26	14			0.648		
3	15			0.613		
9	16			0.581		
15	17			0.518		
21	18				0.776	
27	19				0.737	
6	20				0.692	
17	21				0.681	
4	22				0.625	
10	23				0.612	
16	24					0.757
22	25					0.693
12	26					0.645
18	27					0.372
Eigenvalues		8.801	2.917	1.975	1.623	1.170
Explaining the amount of variation (%)		30.349	10.059	6.810	5.596	4.036

Cumulative explanatory variation (%)	30.349	40.408	47.218	52.814	56.850

Source: collation of this study

The KMO value of the active aging learning problem factor analysis was 0.895, while Bartlett's spherical test value was 3521.112 (degree of freedom was 351), and the significance was 0.000, which was significant [4-6]. Therefore, 20 questions reached the selection criteria. The characteristic value of the first factor is 9.678, the characteristic value of the second factor is 3.774, the characteristic value of the third factor is 1.736, and the cumulative explanatory variation of the entire scale is 56.20%. The explanatory variation of each factor the amounts were 35.845%, 13.976%, and 6.429%, respectively. Presented in the analysis of the well-being factors (Table 5), as shown below.

Table 5 Aggregated analysis of well-being factors.

Original question number	Formal question number	Factor one (Low happiness)	Factor two (Moderate happiness)	Factor three (Highly happiness)
1	1	0.790		
7	2	0.753		
13	3	0.726		
19	4	0.726		
25	5	0.695		
31	6	0.660		
32	7		0.795	
37	8		0.786	
38	9		0.779	
2	10		0.640	
8	11		0.638	
14	12		0.631	
20	13		0.604	
26	14			0.851
3	15			0.686
9	16			0.676
15	17			0.630
21	18			0.494
27	19			0.415
33	20			0.378
Eigenvalues		9.678	3.774	1.736
Explaining the amount of variation (%)		35.845	13.976	6.429
Cumulative explanatory variation (%)		35.845	49.821	56.250

Source: collation of this study

3. Research Results

3.1 Analysis on the Difference of Active Aging Learning Among Middle-aged and Elderly People with Different Demographic Attributes

3.1.1 Gender

This study shows whether there is a significant difference in active aging learning according to

different genders. According to the data, it is found in life safety (T = -0.764, P> 0.05), sports health care (T = -1.267, P> 0.05), spiritual growth (T = -1.701, P> 0.05), interpersonal communication (T = 1.220, P> 0.05), contributing services (T = -0.189, P> 0.05) and other five facets have no significant differences, indicating that the sexes are actively aging in the elderly under investigation There is no obvious difference in learning.

3.1.2 Age

In this study, according to population attributes, there is a significant relationship between active aging learning. The different age groups have significant differences in active aging learning. According to the data, Table 7 can be found that in the "life safety" section, the F value is 5.255. In the "Sports Health" section, the F value is 2.912, in the "Spiritual Growth" section, the F value is 3.753, and in the "Interpersonal Communication" section, the F value is 6.748. You can find these four facets and age there are significant differences. Further inspection by Scheffe found the following:

(1) "Life safety" section: At age 70 or older, safety is more important than 55-59.

(2) "Sports health" section: At age 70 and older, sports health is more important than 55-59 years.

(3) The part of "spiritual growth": At age 70 or older, 55-59 years old is more important for spiritual growth.

(4) "Interpersonal communication" part: People who are 55-59 years old are more important than 60-64 years old, 65-69 years' old, and 70 years old.

Table 6 Analysis of age single factor variation (active aging learning).

	Life safety	Sports Health	Spiritual growth	Interpersonal communication	Contributed Services
55-59 years	3.0635	3.1725	3.4020	3.5333$^{1>2,3,4}$	2.7153
60-64 years	3.3286	3.3810	3.5937	3.2262	2.8411
65-69 years	3.2152	3.3483	3.5333	3.2632	2.7821
70 and over	3.4469$^{4>1}$	3.4507$^{4>1}$	3.6599$^{4>1}$	3.1241	2.8694
	(5.255) **	(2.912) *	(3.753) *	(6.748) ***	(2.591)
Note: F values in parentheses		*p < 0.05 **p < 0.01 ***p < 0.001			

Source: The researchers self-constructed table according to the data.

3.1.3 Education

In this study, according to population attributes, there is a significant relationship between active aging learning. The difference in education has significant differences in active aging learning. From Table 8, it can be found that in the "sports health care" part, the F value is 3.063 The "service" part has an F-value of 3.856, and it can be found that only two facets and education have significant differences. Further inspection by Scheffe found the following:

(1)"Sports health care" section: People below elementary school pay more attention to sports health care for those in high school.

(2)"Contribution service" part: People below elementary school have higher vocational education who value contribution service.

Table 7 Analysis of single factor variation in education (active aging learning).

	Life safety	Sports Health	Spiritual growth	Interpersonal communication	Contributed Services
Below elementary school	3.3149	3.4455$^{1>3}$	3.6205	3.2508	2.8455$^{1>3}$

Junior High School	3.2530	3.3534	3.5415	3.2503	2.8249
High school vocational school	3.2489	3.2111	3.5019	3.3704	2.6978
	(0.315)	(3.063) *	(1.219)	(1.225)	(3.856) *
Note: F values in parentheses		*p < 0.05 **p < 0.01 ***p < 0.001			

Source: The researchers self-constructed table according to the data.

3.1.4 Occupation

In this study, according to population attributes, there is a significant relationship between active aging learning. Different occupations have significant differences in active aging learning. From Table 9, it can be found that in the "spiritual growth" part, the F value is 2.930, and the "contribution" The "service" part has an F-number of 2.477. You can find that both aspects and occupations are significant. No further significant results were found after Scheffe's test:

Table 8 Analysis of occupational single factor variation (active aging learning).

	Life safety	Sports Health	Spiritual growth	Interpersonal communication	Contributed Services
Military positions, Civil servants, Teachers	3.2050	3.2562	3.4167	3.3375	2.7000
Businessman	3.3477	3.4128	3.6795	3.1538	2.8369
Industrial workers	3.2121	3.3384	3.5215	3.3510	2.7803
Agricultural workers	3.3750	3.4479	3.4740	3.2552	2.8000
Service industry practitioners	3.2916	3.3486	3.6196	3.2252	2.8748
	(0.805)	(0.728)	(2.930) *	(1.413)	(2.477) *
Note: F values in parentheses		*p < 0.05 **p < 0.01 ***p < 0.001			

Source: The researchers self-constructed table according to the data.

3.2 Analysis of the Difference in Happiness among Middle-aged and Elderly People with Different Demographic Attributes

3.2.1 Gender

In this study, whether there is a significant difference in happiness according to different genders. According to the data, it can be found in Table 10: low happiness (T = -0.367, P> 0.05), moderate happiness (T = 0.674), P> 0.05), high happiness (T = 0.265, P> 0.05) and other three facets have no significant difference, which indicates that there is no significant difference in the happiness of the elderly in the surveyed elderly.

3.2.2 Age

In this study, there is a significant relationship between happiness and well-being according to population attributes. According to the data, Table 11 shows that in the “low-level well-being” part, the F value is 5.065. In the "moderate well-being" section, the F value is 2.652, and it can be found that there is a significant difference between these two facets and age. Further inspection by Scheffe found the following:

"Low-level happiness" section: People over 70 years of age have lower levels of happiness than those 55-59 years old.

Table 9 Analysis of age single factor variation (happiness).

	Low happiness	Moderate happiness	Highly happiness
55-59 years	3.1392	2.5008	3.0319
60-64 years	3.3943	2.4196	2.9617
65-69 years	3.3632	2.3507	2.9911
70 and over	$3.5000^{4>1}$	2.2493	2.8105
	(5.065) **	(2.652) *	(2.066)
Note: F values in parentheses		*p < 0.05 **p < 0.01 ***p < 0.001	

Source: The researchers self-constructed table according to the data.

3.2.3 Education

In this study, there is a significant relationship between happiness and well-being according to the demographic attributes. From Table 10, it can be found that in the “high-happiness” part, the F value is 5.729, and only one can be found. There are significant differences between facets and education. Further inspection by Scheffe found the following:

The part of "high happiness": the education level in high school (vocational school) and junior high school has a higher level of happiness in education below elementary school.

Table 10 Analysis of single factor variation of education (happiness).

	Low happiness	Moderate happiness	Highly happiness
Below elementary school	3.4356	2.2956	2.7610
Junior High School	3.3447	2.4010	$2.9920^{2>1}$
High school vocational school	3.3093	2.3905	$3.0524^{2>1}$
	(1.034)	(1.015)	(5.729) **
Note: F values in parentheses		*p < 0.05 **p < 0.01 ***p < 0.001	

Source: The researchers self-constructed table according to the data.

3.2.4 Occupation

In this study, there is a significant relationship between happiness and well-being according to the demographic attributes. From Table 11, it can be found that in the "moderate well-being" part, the F value is 3.663, and the "high For the "Happiness" part, the F value is 3.253. You can find that both aspects and professions are significant. Further inspection by Scheffe found the following:

The part of "moderate well-being": Occupation in agriculture has a moderate sense of well-being than business.

Table 11 Analysis of single factor variation in living area (sense of happiness).

	Low happiness	Moderate happiness	Highly happiness
Military positions, Civil servants, Teachers	3.2229	2.4357	3.0804
Businessman	3.4538	2.1934	2.7516
Industrial workers	3.3321	2.4340	2.9589
Agricultural workers	3.4740	2.6384$^{4>2}$	3.1696
Service industry practitioners	3.3919	2.3032	2.9106
	(1.635)	(3.643) **	(3.253) *
Note: F values in parentheses	*p < 0.05 **p < 0.01 ***p < 0.001		

Source: The researchers self-constructed table according to the data.

3.3 Exploring the Relationship between Active Aging Learning and Happiness Has a Predictive Ability

Based on the theories of experts and scholars, this study compiled the "active aging learning scale" and "happiness scale", and then used SPSS statistical analysis to analyze the relationship between active aging learning and well-being in a regression model and found that Chemistry has a predictive power to the relationship of well-being. The active aging learning facet is regarded as an independent variable, and well-being is a dependent variable to test its effect on "well-being." From the test results of Mode 1, it was found that the self-concept had a significant positive impact on self-control (β = 0.154, P <0.001), and the regression model reached a significant level. The results are shown in Table 14. Well-being = 2.379 + 0.154 * active aging learning, which means that the higher the requirements for active aging learning in senior middle school, the higher the happiness.

Table 12 Regression analysis of "active learning" and "happiness".

Independent variable	Mode 1 regression coefficient
Constant term	2.379***
Active aging learning	0.154***
R^2	0.024
Adj R^2	0.022
F	10.677***

*p < 0.05 **p < 0.01 ***p < 0.001

Source: The researchers self-constructed table according to the data.

4. Conclusions and Recommendations

4.1. Conclusion

4.1.1 Population Attributes Have a Significant Relationship to Active Aging Learning

In terms of gender, no significant differences were found in the five facets (life safety, sports health, spiritual growth, interpersonal communication, and contribution services), which indicates that there is no significant difference between the genders in the active aging learning of the elderly under

investigation. In terms of age, I found that the four facets (life safety, sports health, spiritual growth, interpersonal communication) and age have significant differences, and 55-59 years old is just at the margin of retirement. If you are in good health, you will be more active. Learning to invest in new knowledge or technology. In terms of education, there are significant differences between the two facets (sport health care and contribution services) and education. It can be seen that the elderly under the elementary school pay more attention to the services of physical health and social feedback, and the participation of the highly educated is less. In the professional part, there are significant differences between the two facets (spiritual growth, service contribution) and education. The industrial and service industries account for the highest proportion. It can be inferred that most of their retired jobs are processing or foundry, and traditional services. Category of work. From the above data, it is found that the five major learning aspects of active aging (life safety, sports health, spiritual growth, interpersonal communication, and contribution services) and their curriculum attributes show that most of the senior learners of senior education in Central District consider adult education to be important or very practical.

4.1.2 Demographics Have a Significant Relationship to Happiness

In terms of gender, no significant differences were found in the three facets (low, moderate, and high), which indicates that there is no significant difference between the two genders in the active aging learning of the elderly under investigation. In terms of age, two facets (low happiness, moderate happiness) and age were found to be significantly different, and those over 70 years of age had lower levels of happiness than those 55-59 years old. In the part of education, it was found that there is only one facet (high sense of happiness) and education. There is a significant difference, and high school and middle school have a higher level of happiness in education below elementary school, indicating that the senior citizens with high education background recognize their self-worth. In terms of self-esteem and self-esteem, I believe that I can contribute to society and realize my potential (Huang Meiying, Min 95). In the professional part, there are two significant differences (moderate happiness, high happiness) and education. There is a moderate happiness in agriculture than in business. It can be inferred that most of his retirement jobs are farming or helping farmers. Type of work, and the elderly are more often engaged in activities that actually help economic activities. I believe that this type of activity can feel more stable and secure (Li Weiling, Shi Jianbin, Qiu Xianglan, Min 96). It can be seen that the content of adult education courses can be combined with work or Life experience will definitely improve learning happiness. From the above data, it is found that the three major aspects of happiness (low happiness, moderate happiness, and high happiness) show that most elderly learners in the central district still think that adult education can produce happiness.

4.1.3 Active Aging Learning Has the Ability to Predict the Relationship of Happiness

This study found that the positive self-worth and overall well-being of the elderly and middle-aged education participants were present in the highly active aging learners. The regression obtained by the regression analysis method Equation: Well-being = 2.379 + 0.154 * Active aging learning, which indicates that the higher the requirements for active aging learning in senior middle age, the higher the sense of happiness, which shows that proper curriculum content design can increase the learning needs of senior learners , Can also enhance their happiness.

4.2. Suggestions

4.2.1 Suggestions for Educators' Reference

If senior citizens participate in learning activities, their financial situation may result in disruption of learning. Therefore, it is recommended that senior education institutions should provide more care and financial assistance to senior citizens, such as reducing course fees and assisting in applying for social welfare agencies. . For courses that are not considered important (gender knowledge, social trends,

human resources), relevant institutions of adult education should also be widely publicized, and courses should be planned based on the inner feelings of the elderly, so that courses that are close to the needs of the elderly can be presented More levels of happiness.

Generally speaking, elderly learners with lower education levels have less learning history. Therefore, it is recommended that adult education institutions should design courses based on the personalization and learning needs of their inner feelings, and further promote them to local government agencies and private institutions to enable senior citizens. The learning content of students has a comprehensive diversity and happiness feeling, and I hope to encourage more seniors to actively participate in senior learning.

4.2.2 Suggestions for Future Researchers

This research uses questionnaires to conduct research. Although the study results found that learning needs and happiness are related, it is not possible to know the more subtle feelings of learning needs and happiness. It is suggested that interview and observation methods or longitudinal inertial research can be added in the future. History research has a clearer understanding of the important curriculum arrangements of middle-aged and elderly people's learning needs and well-being, making research a more powerful reference.

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