Research on the Response of Stress and Learning Needs of Senior Citizens

Yen-Ni Tsai

The Education Science Department, Zhaoqing University, Zhaoqing city, China

ypwaittim@163.com

Keywords: Senior citizens; Stress response; Learning needs

Abstract: The purpose of this study is to explore the population attributes, stress response, and learning needs of the elderly, and the impact of learning needs on their later learning. This study adopts a questionnaire survey method. The survey participants are participants in adult education in Taiwan. A total of 470 valid samples were obtained through descriptive statistics. It's t-test, single factor variance, Pearson correlation statistical analysis and other statistical methods for data processing and analysis. The study found that: 1. Retired senior citizens feel generally good about stress response and learning needs; 2. In the age of stress, women, highly educated, and retirees are most likely to respond to stress; 3. At the age of seniors In terms of learning needs, males, highly educated people, and those over 60 years of age have more learning needs; 4. The pressure of senior age has an intermediary effect in dealing with the relationship of senior learning needs.

1. Introduction

According to the statistics of the Government's "Human Resources Survey" in the past 20 years, it is found that the rate of labor participation in the 55-64 age group has decreased, but the rate of labor participation in the 45-49 age group has increased. Among them, those over 65 years old have little change due to labor participation. It is less important (Executive Director's Office, 2016) [1], and Esther R. Greenglass & Lisa M. Fiksenbaum (2009) [2] has also proposed that forward-looking people are responsible, principled and organic. Personality traits, dealing with affairs are also well thought out and far-sighted, and Neville Hatton & David Smith (1995) [3] also studied in 1998, pointing out that reflection is an action that helps individuals grow and improve, is a careful thinking process, can Adapt to more life dilemmas.

2. Research Purposes

(1) Analyze the analysis of stress response for elderly people with different population attributes;

(2) Analysis of the analysis of learning needs by senior citizens with different population attributes;

(3) Exploring the relationship between the stress response of senior citizens and learning needs;

(4) Exploring the predictive power of the elderly's stress response and learning needs.

3. Literature Discussion

3.1 Related Literature.

The Ministry of the Interior is classified as a high-ranking person at the age of 55-65 in the "Statistical Classification of Household Census". Moreover, the CLA has pointed out that 55 to 65 years old are senior workers. Therefore, according to the determination of the CLA, this study defines that middle-aged and elderly people are mainly those aged 45 to 65.

3.2 Relevant Literature on Stress Response.

Esther R. Greenglass & Lisa M. Fiksenbaum (2009) and others believe that stress response is a response to one thing and a belief in survival. Aspinwall & Taylor (1997) [4] stated that stress response is risk management and is a process of preventive measures. Based on the assertion of

  DOI: 10.25236/icem.2019.098

Aspinwall & Taylor (1997), this study defines the ability to respond to an individual's inner state of preparation before stress occurs.

3.3 Relevant Literature on Learning Needs.

Dewey (1993) [5] pointed out that learning needs is a cautious thinking process. David Boud, Rosemary Keogh & David Walker (1985) [6] argue that learning needs lead them to understand more about new things. According to the definition of Neville Hatton & David Smith (1995) [7], this study considers learning needs to be a post-cognitive process.

4. Research Methods

4.1 Research Architecture.

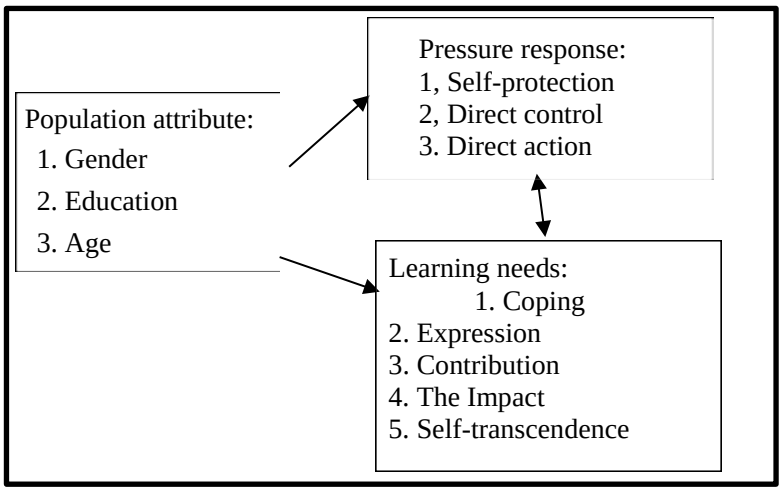

Figure 1. The structure of the study

4.2 Research Variables.

The self-changing part is “population attribute”: (1) gender: the gender of the subject is divided into two categories: “male” and “female”. (2) Education: refers to the academic qualifications in Taiwan. For the "National Small", "National Middle School", "High School" and "College", (3) Age: The current age category of the subjects is divided into "45-49 years old" and "50-54 years old". "55-59 years old" and "60 years old or older".

According to the variable items, there are two items: “stress response” and “learning needs”. In the definition of operational type: (1) Definition of stress response: Powell (1983) [8] believes that individual quality can be divided into three categories: self-protection, direct control, direct action, etc., is the act of maintaining individual psychological balance. For reference, Professor Wei Huijuan's "Elderly Career Learning" (2015) [9] Chapter 8 "Pressure Index Table" is the main research tool. The survey evaluation form collects data and summarizes three facets for analysis. It is "self-protection", "direct control" and "direct action". (2) Definition of learning needs: Using the "Elderly Career Learning Needs Assessment Form" in Chapter 5 of Professor Wei Huijuan's "Elderly Career Learning" (2015) as the main research tool, summarizing five facets to analyze, respectively Five categories of "Coping", "Expression", "Contribution", "Impact" and "Self-transcendence".

5. Research Results

5.1 Analysis of the Analysis of Stress Response for Elderly People with Different Population Attributes.

5.1.1 Gender

This study found that gender has a significant impact on the stress of older age. In the gender section, the number of males is 282, the average is 3.4041; the female is 188, and the average is

3.6170. In the independent sample t test, $p < 0.05$ was used as a significant level. An independent sample t test of "self-protection" was found to be p=0.424; an independent sample of "direct control" was p=0.068; an independent sample of "direct action" was p=0.000; an independent sample of "pressure response" t=check p=0.001, direct action and stress response are both significant levels, it can be inferred that women have more facets than men in partial pressure.

5.1.2 Education

The study found that there is still a difference in the degree of stress in the old age. In the academic part, the number of Primary school graduate is 110, the number of Secondary school graduate is 203, the number of high school graduates is 126, and the number of College graduate is 31. In the single factor variance analysis, $p<0.05$ was used as a significant level. It was found that $p = 0.000$ for "self-protection" ANOVA, $p = 0.000$ for "direct control" ANOVA, and $p = 0.000$ for "direct action" ANOVA, all of which reached a significant level.

5.1.3 Age

The study found that there is still a difference in the degree of stress in old age. In the age group, the number of people aged 45-49 is 141, the number of people aged 50-54 is 186, and the number of people aged 55-59 is 127. The number of people over the age of 60 is 16. In the single factor variance analysis, $p<0.05$ was used as a significant level. It was found that $p = 0.000$ for "self-protection" ANOVA, $p = 0.000$ for "direct control" ANOVA, and $p = 0.000$ for "direct action" ANOVA, all of which reached a significant level.

Table 1 Analysis of the differences in stress response among the elderly with different population attributes

Panel A: Gender									
The difference between old age stress	Male				Female				Difference
	Number of People		Average Value		Number of People		Average Value		
Self-protection	282		3.193		188		3.266		
Direct control	282		3.825		188		3.943		
Direct action	282		3.066		188		3.580		F > M ***
Pressure response	282		4.446		188		4.474		F > M **
Panel B: Education									
The difference between old age stress	(1) Primary school graduate		(2) Secondary school graduate		(3) high school (Vocational) graduates		(4) College graduate		Difference
	Number of People	Average Value	Number of People	Average Value	Number of People	Average Value	Number of People	Average Value	
Self-protection	110	3.213	203	3.474	126	2.620	31	4.053	1,2,4>3*** 4>1,2***
Direct control	110	4.155	203	3.825	126	3.587	31	4.336	1,4>2*** 1,2,4>3***
Direct action	110	3.027	203	3.403	126	3.028	31	4.277	2>1,3*** 4>1,2,3***
Panel C:Age									
The difference between old age stress	(1) 45-49 years old		(2) 50-54 years old		(3) 55-59 years old		(4) 60 years old or older		Difference
	Number of People	Average Value	Number of People	Average Value	Number of People	Average Value	Number of People	Average Value	
Self-protection	141	3.042	186	2.949	127	3.540	16	3.000	3 > 1,2,4***
Direct control	141	3.883	186	3.745	127	3.940	16	4.714	4 > 1,2,3***
Direct action	141	3.456	186	2.764	127	3.744	16	3.800	1,3,4 > 2***

5.2 Analysis of the Needs of Senior Citizens Who Analyze Different Population Attributes.

5.2.1 Gender

This study found that gender has a significant impact on the learning needs of senior citizens. In

the gender section, the number of males is 282, the average is 4.2062; the female is 188, the average is 4.2013. In the independent sample t test, we p<0.05 is considered to be a significant level. We found that the independent sample t test for “payable demand” was p=0.621; the independent sample t test for “representation requirement” was p = 0.010; the independent sample t of the “contribution requirement” was determined p =0.009; p<.078 for independent sample t-test for "influenced demand"; p=0.021 for independent sample t-test for "self-transcendence"; p=0.907 for independent sample t-test for "learning demand", The three dimensions of contribution demand and self-transcendence have reached a significant level. It can be inferred that women are more likely to contribute to the face of contributing needs than men, and men are more likely to express their needs and self-transcend facets than women.

5.2.2 Education

The study found that there is still a difference in the level of learning needs of senior citizens. In the academic part, the number of Primary school graduate is 110, the number of Secondary school graduate is 203, the number of high school graduates is 126, and the number of College graduate is 31. In the single-factor variance analysis, p<0.05 was used as the significant level. We found that p/0.000 for ANOVA, p=0.221 for “expression demand” ANOVA, p=0.000 for “contribution demand” ANOVA, Affected demand "ANOVA's p = 0.000, "self-overtaking" ANOVA's p = 0.005, "Available Demand", "Contribution Demand", "Impact Demand" and "Self-overtaking" are all at a significant level.

5.2.3 Age

The study found that there is still a difference in the level of learning needs of senior citizens. In the age group, the number of people aged 45-49 is 141, the number of people aged 50-54 is 186, and the number of people aged 55-59 is 127. The number of people over the age of 60 is 16 people. In the single-factor variation analysis, we use p<0.05 as the significant level. We found that P/0.000 for ANOVA and P=0.000 for ANOVA. Contribution demand "ANOVA p = 0.000, "impact demand" ANOVA p = 0.000, "self-transcend" ANOVA p = 0.000, all reached a significant level.

Table 2 Analysis of learning needs of senior citizens with different demographic attributes

Panel A: Gender									
The difference between old age stress	Male				Female				Difference
	Number of People		Average Value		Number of People		Average Value		
Coping needs	282		4.446		181		4.474		
Expressive needs	282		4.366		181		4.219		M > F*
Contributive needs	282		4.207		181		4.357		F > M **
Influence needs	282		4.143		181		4.238		
Transcendence need	282		3.867		181		3.716		M > F*
Learning needs	282		4.206		181		4.201		
Panel B: Education									
The difference between old age stress	(1) Primary school graduate		(2) Secondary school graduate		(3) high school (Vocational)graduates		(4) College graduate		Difference
	Number of People	Average Value	Number of People	Average Value	Number of People	Average Value	Number of People	Average Value	
Coping needs	110	4.686	203	4.544	126	4.113	31	4.483	1,2,4>3***
Expressive needs	110	4.411	203	4.278	126	4.252	31	4.354	
Contributive needs	110	4.504	203	4.269	126	4.004	31	4.483	1,2 > 3*** 4 > 1,2***
Influence needs	110	4.265	203	4.009	126	4.341	31	4.354	1,3,4 > 2*** 4 > 3***
Transcendence need	110	3.723	203	3.727	126	3.932	31	4.096	**
Panel C:Age									
The difference between old age stress	(1) 45-49 years old		(2) 50-54 years old		(3) 55-59 years old		(4) 60 years old or older		Difference

	Number of People	Average Value	Number of People	Average Value	Number of People	Average Value	Number of People	Average Value	
Coping needs	141	4.118	186	4.534	127	4.685	16	4.750	2,3,4 > 1***
Expressive needs	141	4.400	186	4.149	127	4.348	16	5.000	4 > 1,2,3*** 1 > 2***
Contributive needs	141	4.177	186	4.005	127	4.659	16	5.000	3 > 1,2*** 4 > 1,2***
Influence needs	141	4.400	186	3.896	127	4.283	16	4.750	1,3,4 > 2*** 4 > 3***
Transcendence need	141	4.134	186	3.513	127	3.722	16	5.000	1,3,4 > 2*** 4 > 1,3*** 1 > 3***

5.3 Exploring the Relationship between Stress Response and Learning Needs of Senior Citizens.

This study used Pearson's statistical methods to analyze the correlation analysis between the age-related stress response of middle-aged people and the level of learning needs of senior citizens.

Table 3 Relevant situations between seniors in senior age learning

	The stress response in the elderly	Learning needs of the elderly
The stress response in the elderly	1	0.317***
Learning needs of the elderly	0.317***	1
Note: *p < 0.05 **p < 0.01 ***p < 0.001		

There is a positive correlation between the age-related stress and the level of learning needs of senior citizens (0.317), and the correlation between them is significant. It shows that the age-old age of senior citizens is significantly higher than that of senior students. A consistent positive relationship.

5.4 Exploring the Predictive Power of Senior Citizens' Age-Age Stress Response and Advanced Learning Needs.

The stress of the elderly is the predictive variable, and the predictive effect is the predictive analysis of the learning needs of the elderly. After testing the collinearity, the tolerance (1-R2) is found to be 0.899. If it is greater than 0.4, there is no collinearity problem; The age-age stress of middle-aged people is a predictive variable, and the level of learning needs is entered into the regression equation. The F-value of the overall regression model is $p<0.001$, which shows a significant level, showing predictive variables and criterion variables. There is a significant correlation, which can effectively predict the level of learning needs of senior citizens. From the test results, it is found that the age-old stress has a significant positive impact on the learning needs of older age ($\beta=0.459$, $p<0.001$), and the multi-step progressive return model reaches a significant level. The regression equation obtained by the stepwise regression analysis method: the ageing learning requirement = 1.559 + 0.0.317 * the ageing learning demand, and the summary of the prediction analysis results are shown in Table 4:

Table 4 Summary table of stress response and learning demand forecast analysis for senior citizens

Input forecast variable order	R	R^2	$\triangle R^2$	F value	$\triangle F$	*B*	Beta(β)
Learning needs of the elderly	0.317	0.101	0.099	52.425***	52.425***	0.459	0.317***

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

6. Conclusion

In this study, descriptive statistics, t-test, single-factor variance analysis, Pearson-related statistics and other analytical methods were used to explore the causal relationship between population attributes, stress response, and learning needs of elderly people. The questionnaire survey method was used. 470 are more representative of the situation of the elderly. Use questionnaires and statistical methods and get directions for improvement and management decisions. It helps adult education institutions and related companies to better improve adult learning motivation and balance stress services, and to create a strategy for the use of human resources and to improve the stress situation for the elderly. However, there are still some shortcomings in this study, such as the lack of detailed research on qualitative research and the integration of influencing factors. In addition, the study of the physiological aspects of expanding older learners will be more representative and can also improve the rigor of research, which is the direction that future research can be further strengthened.

References

[1] Directorate General of Budget, Accounting and Statistics, Executive Yuan, R.O.C. (2016) 2017/3/24 Taken from https:/eng.dgbas.gov.t/l:.as:?CtNodr=5624&CtUnit=1818&BasrDSD=29&m:=1

[2] Greenglass, E. R., and Fiksenbaum, L. (2009). Proactive coping, positive affect, and wellbeing: testing for mediation using path analysis considerations. European Psychologist, 14, 29-39.

[3] Hatton, N., and Smith D. (1995). Reflection in teacher education: towards definition and implementation. Teaching and Teacher Education, 11(1), 33-49.

[4] Aspinwall, L.G., and Taylor, S. E. (1997).A stitch in time: self-regulation and proactive coping. Psychological Bulletin, 121, 417-436.

[5] Dewey, J. (1993). How to think. Chicago: Henry Regnery.

[6] Boud, D., Keogh, R., and Walker, D. (1985). Promoting reflection in learning: A model. In D. Boud, R. Keogh, & D. Walker(Eds.),Reflection: turning experience into learning (pp.18-40). London: Kogan Page.

[7] Hatton, N., and Smith D. (1995). Reflection in teacher education: towards definition and implementation. Teaching and Teacher Education, 11(1), 33-49.

[8] Powell, D. H. (1983). Understanding human adjustment: normal adaptation through the life cycle. Boston: Little Brown & Co.

[9] Wei, Hui-Chuan (Peggy)(2015)Book: Senior Career Learning. Published; National Open University.