

A Study on the Factors Influencing Retired Middle-aged and Older Women's Willingness to Learn from a Learning Society Perspective

-An Empirical Analysis Based on CGSS2017 Data

Xiaotong Tan^{1,*}

¹ School of Philosophy, Northwest University, Xi'an, Chang'an 710119, China
humengyao1994@163.com

ABSTRACT

Building a learning society is an inevitable requirement for the development of modern society, during which the participation of every member of society is indispensable. In this study, a group of retired middle-aged and older women were selected as the research participants, and the CGSS2017 was used to investigate the factors impacting their willingness to learn. The data demonstrated that the individual and spouse education levels, as well as the media contents can exert a profound influence on the learning willingness. Also, there were no urban-rural geographical differences, and the willingness to learn among the studied group is generally not high. Therefore, the construction of senior education should be enhanced by creating a supportive learning environment, providing abundant learning opportunities for middle-aged and older women groups, stimulating their willingness to learn, thereby promoting the further construction of a learning society.

Keywords: Learning Society, Retired Women, Willingness to learn.

1. INTRODUCTION

According to UNESCO (2021), an innovative social contract for education is created in order to "ensure the right to quality education throughout life". This fundamental principle extends the previously proposed concept of "lifelong education" to the provision of a high-quality education available to individuals at different stages of their lives [1]. Also, in China Education Modernization 2035 promulgated in 2019, building a modern lifelong education system that serves all people was considered one of the most essential purposes for China to achieve education modernization and establish a sound system of continuing education [2].

Hutchins, R.M., an American scholar, first proposed the concept of "The Learning Society" in 1968, which emphasized the significant role of learning in developing the future social form **Error! Reference source not found.** This long-existing concept with over 50-year-history has evolved into a new trend in education reform in countries worldwide. For instance, taking into account the special national conditions, China is dedicated to "improving the lifelong learning system and building a

learning society".

It is impossible to create a learning society without the participation of diverse members of the community. In China, retired and middle-aged women have functioned effectively in achieving the aforementioned aims. First of all, based on the statistics from China's seventh national census, the level of population aging has risen to 18.7% [4]; therefore, the learning willingness of middle-aged and elderly groups represented an essential component of the construction of a learning society. Second, in the traditional gender division of labour, middle-aged and elderly people at this age used to be deeply influenced by the "men's work centers around outside, women's work centers around the home" familial structure, which made them have the higher status and the stronger discourse on the family. Therefore, investigating the learning willingness of middle-aged and elderly women can reinforce their studying motivation, which may exert a profound influence on their offspring and even the next generation. Finally, an old Chinese saying, "Live and learn", emphasizes the importance of lifelong learning so the middle-aged and older women can become the leading figures in the new age through

lifelong learning [5].

2. LITERATURE REVIEW AND RESEARCH HYPOTHESES

Willingness to learn refers to an individual's tendency to choose and actively engage in the learning behaviours [6], which is intrinsically vital to directly impact learning outcomes [7]. In educational psychology, willingness to learn functions as a crucial factor determining learners' learning-to-learn journey. Thus, willingness to learn is the inner course of an individual's motivation to learn that triggers learning activities, maintains the triggered activities, and drives the actions toward learning goals.

First, according to Homans's behaviourist exchange theory, in which "outcome claims, stimulus claims, and value claims" can be derived, human behaviour can be predicted based on the consequences of their past behaviour [8]. The higher the primary education achievement one has, the education may reinforce more constraining force on the individual. Under the modern requirements where continuous learning is accentuated, citizens can be deeply impressed to strive for progress in the pursuit of excellence. Secondly, people with higher educational levels tend to develop a greater cognitive ability and higher acceptance of emerging perceptions such as continuous learning [9].

Therefore, this study proposes hypothesis 1: The more educated the group of retired middle-aged and older women are, the more willing they will be to learn.

In the process of constructing a learning society, there are still vexed challenges to address farmers' unwillingness to receive an education due to insufficient funding resources [10]. This is believed to broaden the gap between urban and rural education as educational institutions situated in the city are equipped with diverse learning resources and learning opportunities available.

Therefore, this paper proposes hypothesis 2: After retirement, the middle-aged and elderly females in urban regions are more inclined to study compared with those in rural areas.

Traditional media is generally regarded as a one-way propaganda platform. With the proliferation of new media and the corresponding services, middle-aged and elderly people can become the primary beneficiaries of "smart aging" [11]. Some studies have shown that elderly people will learn to use new media to escape media discrimination and reduce the "digital divide" between them and young people [12].

Therefore, this paper proposes hypothesis 3: after retirement, the higher the degree of exposure to new media among middle-aged and older women is, the stronger their willingness will be to learn.

As the basic unit of social economy and social

relations, the family has multiple effects on individuals. Besides the familial influence, individuals can also be encouraged to imitate their peers' behaviours under traditional theories such as the cohort effect. On the other hand, individuals who have been in the shared environment for a long time may point to greater convergence owing to the similar external factors even without the mutual behavioural interaction [13]. Since retired middle-aged and older women contact and exchange more frequently with their spouses so their learning motivation may be largely affected by their spouses' education level and willingness to learn.

Therefore, this study proposes hypothesis 4: In marriage, the spouse's education level affects the learning willingness of the retired middle-aged and older women.

3. EMPIRICAL ANALYSIS

3.1. Data Sources

This study uses the China General Social Survey (CGSS) 2017, which began in 2003 to represent China's first comprehensive, longitudinal, and academic survey project. The general topic framework of the project involves a social structure, quality of life, and the intrinsic connection mechanism. The entire sample size for the CGSS 2017 was 12,582, and the results will be revealed on October 1, 2020.

This study focused on the group of middle-aged and older women after retirement, which may refer to those over 50 years old according to the current retirement age criteria for Chinese workers and the World Health Organization's classification for middle-aged and older adults. The ultimate valid sample that satisfied the research standard was 1686 after excluding missing samples on crucial variables such as willingness to learn.

3.2. Variable Selection

The dependent variable in this study is the willingness to learn, which is described and measured using data from the CGSS 2017 questionnaire A31 "In the past year, did you often do the following in your free time? – Learning and recharging". However, the current research subdivided the missing values by reassigning "1-5" as "never, rarely, sometimes, often, and very often". This indicates the disparity in individuals' preference to devote time and energy to learning in their spare time.

The independent variables in this study include an individual's education level, spouse's education level, residential location, and media use.

The individual's education level can be described with the CGSS 2017 questionnaire A7a "Your highest level of education at present". The missing data were filtered and redistributed to "1-3" as "junior high school and below; high school, junior college, and vocational-technical

school; college and above", indicating the education level of individuals. Similarly, the measurement of spouse's education level can also be identified in questionnaire A72 "The highest education level of your spouse or cohabiting partner at present" and its subdivision follows the aforementioned three criteria. Since the spouse's education level was considered one of the critical independent variables, only those in married status were retained as the study sample.

The description of the place of residence was obtained from questionnaire A18 "Your current hukou registration status". According to the design of the questionnaire, the missing values were classified into "1-2" as "rural or urban", indicating the individual residence status.

From the questionnaire A29, "Which media is your most important source of information in the past year", individual's preference for media use can be demonstrated by the figure "1-2" as "traditional media: newspaper, magazine, radio, TV; or new media: Internet, cell phone" to indicate individual's media usage. Table 1 shows the descriptive statistics analysis of each variable.

Table 1. Descriptive Statistics of the Variables

| Variable | | Mean | Std. Dev. |
|-----------------------|----------------------------|--------|-----------|
| Dependent variable | Willingness to learn | 1.1145 | 0.39949 |
| Independent variables | Individual education level | 2.0907 | 0.80249 |
| | Residence | 1.1020 | 0.30276 |
| | Media Usage | 1.9698 | 0.17132 |
| | Spouse's education level | 2.4098 | 0.69666 |

4. ANALYSIS RESULTS

4.1. Analysis of the current

As shown in "Table 1", the average willingness to learn of the researched group in the existing samples was 1.1145. This indicated that the median value of the dependent variable was much less than the normal median level, which was the 3 based on the five-point Likert scale. Therefore, it is obvious that the willingness to learn among the middle-aged and elderly females is at a relatively low level.

Since the distribution of the dependent variable "willingness to learn" did not match the chi-square criteria (Sig. of Levene Statistic is 0.000<0.05), the Welch test was employed to examine the data. Table 2 shows the results of the Welch test for middle-aged and older women's willingness to learn.

Table 2. the Welch test for the willingness to learn among middle-aged and older women

| Variables | | Obs | Mean | Statistic ^a (Sig.) |
|----------------------------|--|------|--------|-------------------------------|
| Individual education level | junior high school and below | 473 | 1.0211 | 42.921*** (0.000) |
| | high school, junior college, and vocational-technical school | 587 | 1.0579 | |
| | college and above | 626 | 1.238 | |
| Residence | rural | 1514 | 1.1077 | 3.142 (0.078) |
| | urban | 172 | 1.1744 | |
| Media Usage | traditional media | 51 | 1.3725 | 7.478** (0.009) |
| | new media | 1635 | 1.1064 | |
| Spouse's education level | junior high school and below | 205 | 1.0439 | 20.968*** (0.000) |
| | high school, junior college, and vocational-technical school | 585 | 1.0530 | |
| | college and above | 896 | 1.1708 | |

Note1: a.Asymptotically F distributed.

Note2: *,**,*** are significant at levels of 0.05, 0.01 and 0.001 respectively.

As shown in Table 2, in terms of personal education level, the willingness to study among the targeted group increases with their degree of education, reaching 1.0211, 1.0579, and 1.2380, respectively. However, only those receiving the diploma of "college and above" (1.2380) were proven to have higher learning willingness than the overall average (1.1145). The statistic of individual education level is 42.921*** and is significant (Sig.=0.000), indicating a substantial difference in the willingness to learn among middle-aged and older women with varying degrees of education.

Regarding the places of residence, the willingness to learn of those living in urban areas (1.1744) is higher than that of their counterparts living in rural regions (1.1077).

Nonetheless, the difference is negligible as both values are close to the overall mean figure (1.1145). Also, the distribution of the sample is uneven because a majority of the selected sample is situated in rural locations. Moreover, the Statistic^a of this index is 3.142 and shows a non-significant status (Sig.=0.078>0.05), indicating no urban-rural regional difference in the willingness to learn among middle-aged and older female groups.

Considering the variable of media usage, despite the relatively smaller sample size, the research subjects who preferred traditional media (1.3725) are more willing to learn compared with those using new media (1.1064). And this figure is even higher than the overall mean value of willingness to learn (1.1145), but the difference was not significant. The statistic of media use was 7.478**, which was substantial (Sig.=0.009<0.01), indicating a significant difference in media use among the middle-aged and older female groups.

As for the education level of spouses, their learning willingness tends to increase with their spouses' education level, following the same pattern as the education level themselves. In contrast, only the mean value of the "college and above" dimension (1.1708) is higher than the overall mean willingness to learn (1.1145). The statistic of spouse's education level was 20.968*** and was outstanding (Sig.=0.000), indicating a significant difference in the learning willingness among middle-aged and older women with different spouse's education levels.

4.2. Analysis of the influencing factors

Before formally building the model, this study first analysed the correlation between the variables. As shown in Table 3, the Sig. numbers of the Kolmogorov-Smirnova and the Shapiro-Wilk are all significant, indicating that the sample data did not follow a normal distribution. Therefore, Spearman Bivariate Correlation and its Partial Correlation were selected to analyse the correlation between variables, as shown in Table 4 below.

Table 3. Tests of Normality

| Variables | Kolmogorov-Smirnova | | Shapiro-Wilk | |
|----------------------------|---------------------|-------|--------------|-------|
| | Statistic | Sig. | Statistic | Sig. |
| Willingness to learn | 0.527 | 0.000 | 0.310 | 0.000 |
| Individual education level | 0.243 | 0.000 | 0.794 | 0.000 |
| Residence | 0.530 | 0.000 | 0.346 | 0.000 |
| Media Usage | 0.540 | 0.000 | 0.160 | 0.000 |
| Spouse's education level | 0.333 | 0.000 | 0.741 | 0.000 |

Note: a. Lilliefors Significance Correction.

Table 4. Correlation coefficient test

| Variables | Bivariate Correlations [Sig. (2-tailed)] | Partial Correlations [Sig. (2-tailed)] |
|----------------------------|--|--|
| Individual education level | 0.246*** (0.000) | 0.193*** (0.000) |
| Residence | 0.058* (0.018) | 0.023 (0.336) |
| Media Usage | -0.109*** (0.000) | -0.092*** (0.000) |
| Spouse's education level | 0.152*** (0.000) | 0.054* (0.000) |

Note: *, **, ***. Correlation are significant at the 0.05 level (2-tailed), 0.01 level (2-tailed) and 0.001 level (2-tailed).

As shown in Table 4, the independent variables, including individual education level, residence, media use, and spouse's education level, as well as the dependent variable individuals' willingness to learn, were all significant in Bivariate Correlation. Among them, only media use was negatively correlated with the learning willingness of the studied female group, whereas the rest of the independent variables all demonstrate a positive correlation. After controlling the other independent variables, partial correlation analysis revealed that the correlation coefficient between the residence and the willingness to learn was 0.023, which was not significant (Sig.=0.336). As a result, the willingness to learn among middle-aged and elderly females is largely dependent on the three influencing factors containing individual education, media use, and spouse's education level. Therefore, the findings of this study were unable to verify the second hypothesis, which stated that middle-aged and elderly females living in urban areas are more willing to learn after retirement compared with those living in rural areas.

Based on the abovementioned analysis, the independent variable of the residence was excluded in order to generate the optimal model and produce the appropriately-fit regression model. As indicated in Table 5, the other three independent variables were modeled and tested by multiple linear regression analysis to predict the learning willingness of middle-aged and older women.

Table 5. Multiple Linear Regression

Note: *,**,***. Correlation are significant at the 0.05 level (2-tailed), 0.01 level (2-tailed) and 0.001 level (2-tailed).

As shown in Table 5, model 1 is designed for analysing the variable of an individual's education level. The number of Durbin-Watson is 1.956. The data are independent of each other, which meets the condition of linear regression independence; in ANOVA analysis, $F=89.713$, $P=0.000^b < 0.05$, so the constructed regression model is statistically significant. In model 1, individual education level was significant ($Sig.=0.000$) and had a positive effect (0.225^{***}) on willingness to learn. Therefore, the higher the education level of middle-aged and older women, they will become more willing to learn. Therefore, hypothesis 1 in this study is valid.

In model 2, the Durbin-Watson figure is 1.963, and the data also satisfied the requirements of linear regression independence. According to the ANOVA analysis, the constructed regression model is statistically significant ($F=53.628$, $p=0.000^b < 0.05$). Therefore, model 2 proved that media use has a considerable state ($Sig.=0.000$) with a significantly adverse effect (-0.097^{***}) on willingness to learn. Women in their middle and later years who prefer conventional media have a higher willingness to learn than those who use new media. Therefore, hypothesis 3 in this paper is valid.

In model 3, the number of Durbin-Watson is 1.969, and the data can also be qualified to be applied into linear regression. In ANOVA analysis, the constructed regression model is statistically significant ($F=37.121$, $p=0.000^b < 0.05$). Accordingly, the spouse's educational level had a significantly positive correlation (0.052^*) with women's willingness to learn. The higher the spouse's education level is, the greater the learning willingness of the studied group will be. Therefore, hypothesis 4 in this study is valid.

5. CONCLUSION

In the context of learning society and population aging, the retired women in their middle and later years have attracted much attention from society and academia because of their large number. This paper analyses the factors influencing the willingness to learn of the targeted group from the perspective of the Learning Society theory. As a result, it concluded that individuals with higher education levels and have spouses with higher education levels are more willing to learn; also, those preferring traditional media to new media have a greater willingness to learn.

First, education has exerted a profound and long-lasting impact on people as it cultivates a person's sense of learning. The subjects selected for this study were all retired middle-aged and elderly women, so both the

research participants and their spouses have completed

| | Model 1 | Model 2 | Model 3 |
|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Individual education level (Sig.) | 0.225*** (0.000) | 0.217*** (0.000) | 0.195*** (0.000) |
| Media Usage (Sig.) | | -0.097*** (0.000) | -0.097*** (0.000) |
| Spouse's education level (Sig.) | | | 0.052* (0.048) |
| R Square | 0.051 | 0.060 | 0.062 |
| Adjusted R Square | 0.050 | 0.059 | 0.060 |
| Durbin-Watson | 1.956 | 1.963 | 1.969 |
| F (Sig.) | 89.713*** (0.000 ^b) | 53.628*** (0.000 ^b) | 37.121*** (0.000 ^b) |
| Collinearity Statistics | Tolerance | 1.00 | 0.994 |
| | VIF | 1.00 | 1.006 |
| | | 1.226 | |

their formal schooling years before. Nonetheless, their learning willingness was still significantly impacted by these variables. Although the education level of the participants' spouses has less influence, it also highlights the necessity of creating a supportive learning environment to cultivate their learning willingness from the side.

Secondly, there is no geographical difference in people's willingness to learn. Statistically speaking, the learning willingness of those living in rural areas is virtually equal to the overall average level. Also, there is just a tiny difference between the willingness to learn of rural residents and urban ones. Therefore, this study can strongly avoid and escape the negative stereotype of rural people being generally uneducated.

Finally, the middle-aged and older female groups are willing to learn and develop in line with the current trend under modern digital society. The findings of this research illustrate that even if remaining a small minority, the middle-aged and older females who prefer traditional media to new media are more willing to learn. From the side, it can be shown that although the innovative media resources have been accepted and utilized by most retired women, those who do not use new media are more willing to participate in learning and catch up with digital advancement. Therefore, this study can also break the stereotype and stigma of the digital divide of middle-aged and elderly women as they have already kept up with the development of times and society.

AUTHORS' CONTRIBUTIONS

This paper is independently completed by Xiaotong Tan.

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