

# Survey and Analysis of Health Literacy of Primary School Teachers

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**Abstract:** The results of the survey on the health literacy of primary school teachers in Chongchuan District, Nantong show that the health literacy of teachers is normally distributed, and the number of poor and excellent health literacy is very small, while the number of good and medium teachers accounts for 89%. The health literacy status of female teachers was significantly better than that of men; Age has a significant negative impact on health literacy; Literacy can have a significant positive impact on health literacy.

**Keywords:** Primary School Teachers; Health Literacy; Survey and Analysis

## Introduction

Health is the foundation of human survival, and health literacy is the guarantee for people to maintain and improve their health. Insufficient health literacy among teachers can affect students' health. Therefore, exploring the health literacy of primary school teachers plays an important role in improving the health quality of students.

## 1. Research Methods

In this paper, a random sample questionnaire survey was conducted on primary school teachers in Chongchuan District, Nantong. The questionnaire refers to the research of Luo Qingbin (2022), including 4 first-level indicators, 22 second-level indicators and 67 third-level indicators of health knowledge, health concepts, health behaviors and health skills. A total of 235 questionnaires were collected in this survey, of which 226 were valid. The collected data was statistically analyzed using SPSS26.0 software.

## 2. Results and Analysis

### 2.1 Current Situation and Univariate Analysis of Primary School Teachers' Health Literacy

#### 2.1.1 Health Literacy of Primary School Teachers of Different Genders

Among the 226 respondents, 3 men and 0 women had poor health literacy; 31 males and 5 females in the middle; 81 men and 84 women were good; 0 males and 22 females; There are 0 men and 0 women who are very good. Using independent sample t-test, gender was significantly on health knowledge, health philosophy, health behavior and health skills ( $P < 0.05$ ). The average values of men's health knowledge, health concepts, health behaviors, and health skills are significantly lower than women's. It can be seen that male primary school teachers have lower health literacy than female teachers, as shown in Table 1.

**Table 1 Gender univariate analysis**

Gender (mean ± standard deviation)		<i>t</i>	<i>P</i>
Male(n=115)	Female(n=111)		

Health knowledge	2.93±0.47	3.92±0.30	-18.884	0.000**
Health philosophy	3.01±0.96	3.82±0.85	-6.68	0.000**
Health behaviors	3.22±0.67	3.59±0.59	-4.498	0.000**
Health skills	3.35±0.57	3.72±0.55	-5.004	0.000**

\*  $P < 0.05$  \*\*  $P < 0.01$

### 2.1.2 Health Literacy of Primary School Teachers of Different Ages

Among the 226 respondents, 0 had poor health literacy; The middle group was distributed in 51-60 years, with 17 people; The good ones were distributed between 26 and 30 years old, with 59 people; The outstanding ones were distributed between the ages of 26 and 30, with 14 people; There are 0 very good people. Using univariate ANOVA, age showed significance for four items: health knowledge, health concept, health behavior and health skills ( $P < 0.05$ ). In Table 2, the significance results of different ages for health knowledge were as follows: 18-25 years old > 26-30 years old > 31-40 years old > 41-50 years old > 51-60 years old > 60 years old and above. The significant results of different ages on health concepts were as follows: 26-30 years old > 18-25 years old > 41-50 years old > 31-40 years old > 51-60 years old > 60 years old and above; The significant results for healthy behaviors at different ages were: 18-25 years > 26-30 years > 41-50 years > 51-60 years > 31-40 years > 60 years old; The significant results for health skills at different ages were: 26-30 years > 18-25 years > 31-40 years > 41-50 years > 51-60 years > 60 years and older.

**Table 2 Age univariate analysis**

	Age (mean ± standard deviation)						F	P
	18-25 years old (n=15)	26-30 years old (n=74)	31-40 years old (n=43)	41-50 years old (n=53)	51-60 years old (n=35)	Over 60 years old (n=6)		
Health knowledge	4.52±0.24	3.89±0.16	3.54±0.12	3.11±0.17	2.55±0.24	1.69±0.27	53.32	0.00**
Health concept	3.77±1.00	3.95±0.77	3.21±0.86	3.28±0.95	2.84±0.89	1.58±0.66	15.28	0.00**
Health behaviors	3.86±0.48	3.68±0.52	3.15±0.63	3.31±0.62	3.23±0.65	2.38±0.97	10.87	0.00**
Health skills	3.67±0.53	3.81±0.53	3.50±0.55	3.42±0.50	3.24±0.60	2.64±0.69	9.16	0.00**

\*  $P < 0.05$  \*\*  $P < 0.01$

### 2.1.3 Health Literacy of Primary School Teachers of Different Literacy Levels

Among the 226 respondents, those with poor health literacy were mainly distributed below the junior college, 3 people; The middle ones were distributed in the undergraduate, with 16 students; Good ones were distributed in undergraduates, 108 people; The outstanding ones were distributed in master's and doctoral degrees, 12 and 4 respectively; The number of very good ones is 0. Using one-way ANOVA, academic qualifications showed significance for four items: health knowledge,

health concept, health behavior, and health skills ( $P<0.05$ ). See Table 3, the significance results of different educational qualifications in health knowledge are: doctorate>master's degree>bachelor's degree> junior college > below; The significant results of different educational qualifications in health concepts are: doctorate>master's degree> bachelor's degree> junior college> college or below; The significant results of different educational qualifications in health behavior were as follows: doctorate>master's degree> bachelor's degree> junior college> or below; The significant results of different educational qualifications in health skills were as follows: the results were master's degree > doctoral > bachelor's degree > junior college > junior college or below.

**Table 3 Analysis of cultural water single level factors**

	Education (mean ± standard deviation)					F	P
	Junior college or below(n=8)	Junior college (n=32)	Bachelor (n=130)	Master(n=50)	Doctorate (n=6)		
Health knowledge	1.81±0.31	2.56±0.23	3.42±0.31	4.05±0.19	4.75±0.23	249.331	0.000**
Health concept	1.94±1.02	2.80±0.87	3.45±0.93	3.81±0.83	4.17±0.98	12.591	0.000**
Health behaviors	2.50±0.85	3.23±0.65	3.34±0.64	3.76±0.43	3.93±0.52	10.990	0.000**
Health skills	2.84±0.68	3.22±0.62	3.53±0.55	3.79±0.58	3.76±0.28	8.469	0.000**

\*  $P<0.05$  \*\*  $P<0.01$

## 2.2 Regression Analysis

Linear regression analysis using gender, age, and education as independent variables and health literacy as dependent variables is shown in Table 4. The model formula is: health literacy = 4.149-0.046 \* gender -0.277 \* age + 0.068 \* education, and the R square value of the model is 0.580, which means that gender, age, and education can explain 58.0% of the reasons for the change in health literacy. An F test was performed on the model and found that at least one of gender, age, and educational background had an impact on health literacy. According to the test of multicollinearity of the model, it is found that all the VIF values in the model are less than 5, which means that there is no collinearity problem. And the D-W value is near the number 2, indicating that the model does not have autocorrelation, there is no correlation relationship between the sample data, and the model is better. The regression coefficient value of sex was -0.046 ( $t=-0.604$ ,  $P=0.547>0.05$ ), indicating that gender did not affect health literacy. The regression coefficient value of age was -0.277 ( $t=-9.322$ ,  $P=0.000<0.01$ ), indicating that age had a significant negative impact on health literacy. The regression coefficient value of academic qualifications was 0.068( $t=3.682$ ,  $P=0.000<0.01$ ), indicating that educational qualifications had a significant positive impact on health literacy.

**Table 4 Regression analysis**

	Non-normalized coefficients		Normalization factor	t	P	Collinear diagnostics	
	B	Standard error	Beta			VIF	Tolerance
Constant	4.149	0.213	-	19.486	0.000**	-	-
Gender	-0.046	0.076	-0.048	-0.604	0.547	3.390	0.295

Age	-0.277	0.030	-0.750	-9.322	0.000**	3.421	0.292
Degree	0.068	0.019	0.164	3.682	0.000**	1.050	0.953
R <sup>2</sup>				0.580			
Adjust R <sup>2</sup>				0.575			
F				F (3,222)=102.354, P=0.000			
D-W				1.678			
Number							

\* P<0.05 \*\* P<0.01

## 2.3 Correlation Analysis

Correlation analysis studies the correlation between health knowledge, health philosophy, health behavior, and health skills, and uses the Pearson correlation coefficient to express the strength of the correlation, as shown in Table 5. The correlation coefficients were 0.434, 0.372 and 0.375, respectively, indicating that there was a positive correlation between health knowledge and the remaining three. The correlation coefficient values were 0.316 and 0.217, respectively, indicating that health concepts had a positive correlation with the remaining two. There was a significant correlation between healthy behaviors and health skills, and the correlation coefficient value was 0.325, which meant that there was a positive correlation between healthy behaviors and health skills.

**Table 5 Correlation analysis**

	Health knowledge	Health concept	Health behaviors	Health skills
Health knowledge	1			
Health concept	0.434**	1		
Health behaviors	0.372**	0.316**	1	
Health skills	0.375**	0.217**	0.325**	1

\* P<0.05 \*\* P<0.01

## 3. Discussion

Through research studies, it can be seen that women's health literacy is significantly higher than that of men. Relevant education and health institutions should take into account the health literacy of male teachers and formulate appropriate health improvement plans, so as to provide a strong guarantee for the health education of male primary school teachers; Age will have a significant negative impact on health literacy, and through TV, radio, mobile phone short videos and other media that are relatively accessible and have low learning costs, targeted health education programs are broadcast to improve the health literacy of teachers of all ages; Education level has a clear positive effect on health literacy. Community health education should be vigorously carried out to increase the population's awareness of health care. It is necessary to comprehensively reflect the continuity of health education and achieve the lifelong use of health education; More emphasis should be placed on its scientific nature, and correct and advanced health care knowledge and information should be disseminated to the general public.

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