

Correlation analysis between knowledge hiding behavior and personality traits of young people in a community in Xi'an

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Abstract: To investigate the current situation of knowledge hiding behavior and personality traits of young people in a community in Xi'an City and analyze their correlation. Methods: From January 8 to 27, 2023, 220 young people in a community in Xi'an were investigated by general data questionnaire, knowledge hiding behavior questionnaire and personality trait inventory. The score of knowledge hiding behavior of 220 young people in a community in Xi'an was (31.59 ± 11.16) , of which the rational dimension scored the highest (10.72 ± 4.33) , followed by the avoidance dimension (10.57 ± 3.93) , and the deaf and mute dimension scored the lowest (10.30 ± 3.85) . The score of personality traits of 220 young people was (127.49 ± 15.22) points, and the agreeableness personality score was the highest (26.75 ± 4.77) points. Neurotic personality score was the lowest (21.56 ± 5.37) ; The scores of knowledge hiding behavior of young people in a community in Xi'an had statistical significance in gender and education level ($P < 0.05$); There was a negative correlation between knowledge hiding behavior and personality trait score of young people in a community in Xi'an ($P < 0.05$). There is a negative correlation between knowledge hiding behavior and personality traits of young people in a community in Xi'an. Therefore, young people learn to observe and control their emotions in the process of interpersonal communication, which is conducive to career development and information acquisition.

1. Introduction

With the rapid development of the economy of the times, Chinese youth, as the backbone of the society, are quick-thinking, skilled and talented. They have high acceptance of knowledge, strong creativity and their own distinctive personal characteristics [1]. In the process of social interaction, the transmission and expression of knowledge is influenced by the interaction between people. Knowledge hiding, as the opposite side of knowledge sharing, was proposed by Connolly in 2012. It means that when others ask questions about relevant knowledge and need help, they choose to turn a blind eye or deliberately hide it [2]. Research shows that knowledge hiding will form 'information barriers', which is not conducive to personal development and growth [3]. Personality

traits are the psychological characteristics of individual behavior stability, with individual differences. It mainly includes five factors: neuroticism, conscientiousness, agreeableness, openness, extraversion [4]. Studies have shown that extroverts are more impulsive to communicate and share with others [2]. Therefore, this study investigated the correlation between knowledge hiding behavior and personality traits of young people in a community in Xi'an, aiming to provide a reference for the mental health of knowledge hiding and personality traits of young people in a community in Xi'an.

2. Objects & Methods

2.1 Research people

A convenience sampling method was used to include 220 young people in a community in Xi'an from January 8 to 27, 2023 in the study. Inclusion criteria: (1) Aged between 18 and 44 years old; (2) They have informed consent and volunteered to participate. Exclusion criteria: (1) They suffer from severe mental disorders; (2) They have reading comprehension barriers.

2.2 Research Tools

1) General Information Questionnaire Designed by the researchers themselves, including gender, age, education level, marital status, monthly income, and place of residence.

2) Knowledge hiding behavior questionnaire the knowledge hiding behavior questionnaire was developed by CONNELLY [5] et al. and translated into Chinese by Weiwei Li [6]. The scale has 12 items and 3 dimensions, which are deaf-mute, avoidance and rationalization. A 5-point Likert scale was used, with scores ranging from 12 to 60, the higher the score, the higher the level of knowledge hiding. The overall Cronbach's α for this scale was 0.913. The Cronbach's α coefficients of the three dimensions were 0.777, 0.750 and 0.814, respectively.

3) Personality Traits Scale This study used the short version of the Chinese Big Five Personality Questionnaire compiled by Mengcheng Wang and Xiaoyang Dai [4,7-8], including five personality traits (neuroticism, conscientiousness, agreeableness, openness, extraversion). Each personality trait has 8 questions, including 40 items. The scale was scored using the Likert 5-level scoring method. The Cronbach's α coefficient of the scale in this survey was 0.802. The Cronbach's coefficients of the five personality traits were 0.749, 0.742, 0.676, 0.777 and 0.781, respectively.

2.3 Method of data collection

Using the questionnaire star platform to design the questionnaire, an online questionnaire survey was conducted on the young people in a community in Xi'an, which contained the questionnaire description, and the anonymous questionnaire was filled out after informed consent. A total of 220 questionnaires were distributed in this study, and 220 were valid, with an effective rate of 100 %.

2.4 Statistical methods

The data were statistically analyzed using SPSS25.0 expressed as mean \pm standard deviation, and the count data were described by frequency and composition ratio. one-way analysis of variance using independent samples t-test or ANOVA. Correlation analysis was performed by Pearson correlation analysis. Significant differences were indicated by $P < 0.05$.

3. Results

3.1 Single factor analysis of the influencing factors of general information, knowledge hiding behavior and personality traits of young people in a community in Xi 'an.

Table 1 shows that the scores of knowledge hiding behavior of young people in a community of Xi'an with gender and education level are statistically significant ($P < 0.05$). Table 1 shows that the scores of personality traits of young people in a community in Xi'an with different gender, age, education level, marital status, monthly income and place of residence were not statistically significant ($P > 0.05$).

Table 1: Single factor analysis of the influencing factors of knowledge hiding behavior and personality traits of 220 young people in a community in Xi 'an (n=220)

Projects	n (Percentage,%)	Knowledge hiding behavior score	t/F	P	Personality trait score	t/F	P		
Gender									
Men	106(48.18)	33.89±11.14	t=	0.003	128.07±14.57	t=	0.590		
Female	114(51.82)	29.46±10.79	2.997		126.96±15.85	0.540			
Age (years)									
18~25	71(32.27)	33.03±11.04	F=	0.079	126.07±16.05	F=	0.109		
26~35	102(46.36)	29.77±10.35			2.570			129.75±14.03	2.240
36~44	47(21.36)	33.36±12.58			124.72±16.00				
Education level									
Junior high school and below	6(2.73)	42.17±6.71	F=	0.021	119.83±12.27	F=	0.518		
High school / technical secondary school	63(28.64)	30.44±11.66			3.328			128.21±15.36	0.759
college for professional training	106(48.18)	32.77±11.04			126.85±15.41				
College and above	45(20.45)	29.00±10.22			129.00±14.99				
Marital Status									
Unmarried	115(52.27)	31.88±11.38	F=	0.850	127.79±16.49	F=	0.880		
Married	102(46.36)	31.35±10.94			0.163			127.26±13.70	0.127
Divorce	3(1.36)	28.67±13.32			123.67±19.04				
bereaved spouse	0								
Monthly income									
<3000	80(36.36)	32.05±10.93	F=	0.428	126.66±16.58	F=	0.359		
3000~4999	110(50.00)	30.73±10.89			0.851			128.84±14.07	1.029
≥5000	30(13.64)	33.53±12.70			124.77±15.48				
Area of residence									
Rural	111(50.45)	31.02±11.01	t=	0.443	127.42±15.68	t=	0.947		
City	109(49.55)	32.17±11.32	0.768		127.60±14.81	0.066			

3.2 Knowledge hiding behavior questionnaire and personality trait scale scores of young people in a community in Xi 'an

Table 2 shows the scores of knowledge hiding behavior and personality traits of 220 young people in a community in Xi'an. The results showed that the total score of knowledge hiding behavior was (31.59 ± 11.16) and the total score of personality traits was (127.49 ± 15.22).

Table 2: Knowledge hiding behavior and personality traits scores of 220 young people in a community in Xi 'an (n=220)

Projects	Number of entries	Entries Total score ($\bar{x} \pm S$, points)	The average score of entries
The deaf-mute dimension in knowledge hiding behavior score	4	10.30 \pm 3.85	2.58 \pm 0.96
The escape dimension in knowledge hiding behavior score	4	10.57 \pm 3.93	2.64 \pm 0.98
Rational dimension in knowledge hiding behavior score	4	10.72 \pm 4.33	2.68 \pm 1.08
Knowledge hiding behavior score	12	31.59 \pm 11.16	2.63 \pm 0.93
Neuroticism Dimension in Personality Traits score	8	21.56 \pm 5.37	2.70 \pm 0.67
The conscientiousness personality dimension in personality traits score	8	26.47 \pm 5.33	3.31 \pm 0.67
The agreeableness personality dimension in personality traits score	8	26.75 \pm 4.77	3.34 \pm 0.60
The Open Personality Dimension in Personality Traits score	8	26.27 \pm 5.84	3.28 \pm 0.73
Extroversion personality dimension in personality traits score	8	26.43 \pm 5.71	3.30 \pm 0.71
Personality trait score	40	127.49 \pm 15.22	15.94 \pm 1.90

3.3 Correlation between Knowledge hiding behavior questionnaire and personality trait scale Young people in a community in Xi 'an

Pearson correlation analysis showed that the knowledge hiding behavior of 220 young people in a community in Xi'an was negatively correlated with conscientiousness personality, agreeableness personality, openness personality and extroversion personality ($r=-0.251 \sim -0.305$, $P<0.01$).and positively correlated with neuroticism personality ($r=0.324$, $P<0.01$).See Table 3.

Table 3: Correlation analysis between knowledge hiding behavior and personality traits of 220 young people in a community of Xi'an (r value)

Projects	Neuroticism Dimension in Personality Traits	The conscientiousness personality dimension in personality traits	The agreeableness personality dimension in personality traits	The Open Personality Dimension in Personality Traits	Extroversion personality dimension in personality traits	Personality trait score
The deaf-mute dimension in knowledge hiding behavior	0.320 ^a	-0.246 ^a	-0.320 ^a	-0.226 ^a	-0.210 ^a	-0.239 ^a
The escape dimension in knowledge hiding behavior	0.284 ^a	-0.227 ^a	-0.271 ^a	-0.202 ^a	-0.206 ^a	-0.219 ^a
Rational dimension in knowledge hiding behavior	0.291 ^a	-0.262 ^a	-0.255 ^a	-0.263 ^a	-0.308 ^a	-0.286 ^a
Knowledge hiding behavior score	0.324 ^a	-0.267 ^a	-0.305 ^a	-0.251 ^a	-0.265 ^a	-0.271 ^a

Note: ^a $P < 0.01$.

4. Discussion

4.1 The status quo of knowledge hiding level of young people in a community in Xi 'an

In this study, the score of knowledge hiding level of young people in a community in Xi'an was (2.63 ± 0.93) , which was at a medium level. The results were similar to those of Zhang Luyao et al [9] $[(2.73 \pm 0.74)]$. It shows that the knowledge hiding level of young people in a community in Xi 'an is high, and the score of rationalization knowledge hiding dimension is the highest. The reason may be that the young people have complex interpersonal relationships, a large age span, different ways of thinking, and different abilities to deal with problems [10]. The second is the escape knowledge hiding dimension, and the lowest score is the deaf-mute knowledge hiding dimension. Considering the possible reasons and the rapid development of social economy, people can query relevant information and share relevant knowledge through the network platform [11]. Therefore, young people should reduce knowledge hiding behavior by establishing good reputation.

4.2 The status quo of personality traits of young people in a community in Xi 'an

In this study, the scores of neurotic personality, conscientiousness personality, agreeableness personality, openness personality and extroversion personality of young people in a community in Xi'an were (21.56 ± 5.37) , (26.47 ± 5.33) , (26.75 ± 4.77) , (26.27 ± 5.84) and (26.43 ± 5.71) , respectively. The score of agreeableness personality was the highest, while the score of neuroticism personality was the lowest, which was similar to the results of Liu Yuying et al [12]. The analysis was originally likely to be related to the work pressure, heavy burden of life, mutual respect and help of young people, while some work needs to control their emotions and be highly focused. In the face of emergencies at work, good emotions can reduce the occurrence of adverse events [13-14]. Therefore, young people should stabilize their emotions and reduce bad conflicts.

4.3 Influencing factors of knowledge hiding level of young people in a community in Xi 'an

The results of single factor analysis showed that gender and education level were the influencing factors of knowledge hiding level of young people in a community in Xi 'an. Among them, the knowledge hiding level of men is higher than that of women, which is inconsistent with the research results of Zhang Luyao et al [9]. The reason may be that the professional technology between nursing postgraduates is stronger and the confidentiality is higher. In this study, the occupational range of young people in a community in Xi 'an is different and the comparability is small. At the same time, the proportion of men and women in the young and middle-aged population of the society is not coordinated, the competitive pressure is high, and the cost of raising a family for men is higher [15]. In this study, the knowledge hiding level score of the junior high school education group was the highest (42.17 ± 6.71) , and the knowledge hiding level score of the undergraduate education group was the lowest (29.00 ± 10.22) . The results of and Pan Wei [16] are inconsistent, and the reason may be related to the low level of education and insufficient learning opportunities among young people [17].

4.4 Correlation analysis between knowledge hiding behavior and different personality traits of young people in a community in Xi 'an

In this study, knowledge hiding behavior is positively correlated with neurotic personality traits. The reason may be that the higher the level of individual neurotic personality, the greater the negative emotions generated, affecting interpersonal communication, and the desire of others to

share knowledge [18]. It is negatively correlated with conscientiousness personality, agreeableness personality, open personality and extroverted personality. The reason may be that the conscientiousness personality is measured, the agreeableness personality is humble, the open personality is active, and the extroverted personality is enthusiastic about communication [19].

5. Conclusion

This study investigates and analyzes the knowledge hiding level and personality traits of young people in a community in Xi 'an, and there is a correlation between the two. The level of knowledge hiding among young people of different genders is different. The level of education affects the level of knowledge hiding among young people. Personality traits can affect the level of knowledge hiding. Therefore, young people learn to observe and control their emotions in the process of interpersonal communication, which is conducive to career development and information acquisition.

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