

THE CORRELATION BETWEEN GRATITUDE AND SENSE OF LIFE MEANING AMONG COLLEGE STUDENTS

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Abstract: This study aims to understand the current status of gratitude traits and the sense of life meaning among college students, providing theoretical foundations and insights for the implementation of life education courses in higher education institutions. Utilizing the College Student Gratitude Scale and the Sense of Life Meaning Scale, we investigated 270 college students to explore their levels of gratitude, sense of life meaning, and the relationship between the two. The results indicated: (1) Female students scored significantly higher than male students in terms of gratitude towards nature, sense of life meaning, and meaning-seeking; (2) Students majoring in humanities and social sciences scored significantly higher in gratitude towards nature compared to those in science, engineering, and arts; (3) Senior students scored significantly higher in gratitude towards nature and meaning-seeking compared to lower-grade students, while junior students scored significantly higher in the absence of deprivation compared to freshmen and seniors; (4) Rural students scored significantly higher in the absence of deprivation compared to urban students; (5) Students who had not held leadership positions scored significantly higher in overall gratitude, social gratitude, and gratitude towards nature compared to those who had served as student leaders.

Keywords: College students; Gratitude; Sense of life meaning

1 INTRODUCTION

The existence of human life is the foundation of all social activities. In recent years, with the frequent occurrence of self-harm and harm-to-others incidents in higher education institutions, life education has been introduced into college classrooms and even ideological and political education systems. Enhancing the sense of life meaning among college students has become particularly crucial while continuously improving their overall qualities.

The sense of life meaning refers to an individual's perception that their life is meaningful and valuable, coupled with an awareness of having clear goals and missions in life [1]. It is closely related to mental health levels, with life purpose and life control being primary predictors of mental health. Over the past decade, there has been ongoing exploration into methods for enhancing the sense of life meaning, with cultivating gratitude emerging as a particularly effective approach.

The concept of gratitude was first proposed by Adam Smith, who viewed it as the most rapid and direct emotion driving people to reciprocate, representing an individual's grateful and reciprocal psychological response to support and assistance from others [2]. Domestic scholars have also translated it as "gan dai". Gratitude can be understood as an emotional trait, where individuals with high levels of gratitude are more prone to and intense in experiencing and expressing gratitude. It is a positive personality trait that can effectively predict personal growth and self-acceptance.

Through a literature review, it was found that gratitude significantly predicts the sense of life meaning among college students. Li Xu's research revealed that individuals with higher levels of gratitude in daily life tend to focus on positive stimuli around them, adopting positive external evaluations and coping strategies, which can enhance positive psychological experiences and better acquire a sense of life meaning [3]. In a longitudinal study on gratitude record-sharing among college students, Liu Xiangling et al. found that cultivating gratitude thinking and strengthening gratitude awareness can effectively reduce negative emotional experiences and enhance the sense of life meaning [4].

Furthermore, foreign scholars such as Kleiman et al. conducted a prospective survey on college students and found that gratitude buffers suicide risk by enhancing their sense of life meaning [5]. Tongeren et al.'s study demonstrated that college students who express gratitude through writing thank-you letters experience a greater sense of life meaning [6].

2 PARTICIPANTS, TOOLS, AND METHODS

2.1 Participants

A total of 290 questionnaires were distributed, with 270 valid questionnaires used for statistical analysis. Among them, there were 100 males (37%) and 170 females (63%); 80 students majoring in humanities and social sciences (29.6%), 119 in science and engineering (44.1%), 55 in arts (20.4%), and 16 in other majors (5.9%); 44 freshmen (16.3%), 67 sophomores (24.8%), 90 juniors (33.3%), and 69 seniors (25.6%); 95 only children (35.2%) and 175 non-only children (64.8%); 122 rural students (45.2%) and 148 urban students (54.8%); 92 students who had served as student leaders (34.1%) and 178 who had not (65.9%).

2.2 Research Tools

2.2.1 College Student Gratitude Scale (GART)

Adopting the revised College Student Gratitude Scale by Sun Wengang et al., the scale comprises 34 items divided into three dimensions: absence of deprivation, gratitude towards society, and gratitude towards nature. The absence of deprivation dimension contains 16 items, gratitude towards society includes 11 items, and gratitude towards nature comprises 8 items. The scale uses a 5-point Likert scale, with 1-5 points representing "strongly disagree," "disagree," "neutral," "agree," and "strongly agree," respectively. Higher total scores indicate higher levels of gratitude [7]. In this study, the Cronbach's α coefficient for the scale was 0.775.

2.2.2 Sense of Life Meaning Scale (MLQ-C)

Adopting the Chinese version of the Sense of Life Meaning Scale (MLQ-C) adapted by Wang Xinqiang from Steger's original Meaning in Life Questionnaire (MLQ), the scale consists of 10 items divided into two subscales: presence of meaning and search for meaning. Item 2 uses reverse scoring [8]. In this study, the Cronbach's α coefficient for the scale was 0.866.

2.3 Statistical Analysis

Data were entered and organized using SPSS 26.0. Group comparisons were conducted using t-tests or ANOVA, and correlations between gratitude and the sense of life meaning among college students were explored using correlation analysis.

3 RESULTS AND ANALYSIS

3.1 Control and Inspection of Common Method Bias

Given that this study utilized self-reported data from students, procedures were implemented to control for common method bias, including procedural controls during data collection, reverse scoring of individual items, and Harman's single-factor test. Initially, participants were informed through instructions that the questionnaire was solely for academic purposes, with strict confidentiality guaranteed, encouraging honest responses. Subsequently, Harman's single-factor test was conducted, incorporating all items from the two measurement tools into an exploratory factor analysis without rotation. The results showed that eight factors had eigenvalue values greater than 1, with the first factor explaining 23.98% of the total variance, below the critical threshold of 40%, indicating no significant common method bias in this study, allowing for subsequent analysis.

3.2 Demographic Differences in Relevant Variables

3.2.1 Gender differences

As shown in Table 1, significant gender differences were observed in gratitude towards nature, sense of life meaning, and meaning-seeking. Specifically, female students scored significantly higher than male students in these three dimensions, while no significant gender differences were found in other dimensions.

Table 1 Test of Differences in Variables by Gender

	Male(n=100)		Female(n=170)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Gratitude	113.31	20.21	116.56	11.76	-1.47
The absence of a sense of deprivation	42.43	9.93	42.82	9.30	-0.33
Gratitude to society	40.25	9.49	41.44	6.36	-1.11
Gratitude for natural things	30.63	7.27	32.31	5.03	-2.04*
Sense of life meaning	44.29	10.26	46.87	7.85	-2.17*
Meaningful	22.08	5.67	22.39	5.09	-0.45
Seeking meaning	22.21	6.48	24.48	4.86	-3.04**

Note: * $p < 0.05$, ** $p < 0.01$.

3.2.2 Major differences

As depicted in Table 2, significant major differences were found in gratitude towards nature. Post-hoc tests revealed that students majoring in humanities and social sciences scored significantly higher in gratitude towards nature than those in science, engineering, and arts, with no significant differences observed among other majors.

Table 2 Test of Differences in Variables by Major

	Literature and History (n=80)		Science and Engineering (n=119)		Art-related (n=55)		Other (n=16)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Gratitude	116.41	11.65	114.48	16.86	116.25	14.74	113.56	23.43	0.38
The absence of a sense of	41.83	8.55	43.43	9.66	43.62	10.40	38.13	9.18	1.88

deprivation									
Gratitude to society	41.68	6.72	40.11	8.10	41.80	7.14	41.44	10.33	0.96
Gratitude for natural things	32.91	4.89	30.94	5.96	30.84	6.48	34.00	8.33	2.94*
Sense of life meaning	46.74	9.03	46.02	8.17	45.27	9.16	43.25	12.18	0.81
Meaningful	21.99	5.69	22.71	4.86	22.36	5.18	20.13	6.63	1.24
Seeking meaning	24.75	5.64	23.30	5.48	22.91	5.31	23.13	7.08	1.55

Note: * $p < 0.05$.

3.2.3 Grade differences

Table 3 illustrates significant grade differences in the absence of deprivation, gratitude towards nature, and meaning-seeking. Post-hoc tests indicated that junior students scored significantly higher in the absence of deprivation than freshmen and seniors, while no significant differences were found between sophomores and other grades. In terms of gratitude towards nature and meaning-seeking, senior students scored significantly higher than freshmen, sophomores, and juniors, with no significant differences observed among the latter three grades.

Table 3 Test of Differences in Variables Across Grades

	Freshman (n=44)		Sophomore year (n=67)		Junior year (n=90)		Senior year (n=69)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Gratitude	111.59	21.92	115.03	14.43	117.24	12.86	115.62	14.55	1.335
The absence of a sense of deprivation	41.11	9.17	42.40	9.23	44.96	9.85	40.97	9.21	2.929*
Gratitude to society	40.27	9.57	41.04	7.53	41.38	7.12	40.91	7.28	0.206
Gratitude for natural things	30.20	7.55	31.58	5.61	30.91	5.48	33.74	5.49	4.236**
Sense of life meaning	44.45	11.76	45.49	8.69	45.37	7.86	47.97	8.05	1.807
Meaningful	22.95	5.85	22.55	5.57	22.02	4.72	21.90	5.44	0.484
Seeking meaning	21.50	6.90	22.94	5.61	23.34	4.57	26.07	5.21	7.364**

Note: * $p < 0.05$, ** $p < 0.01$.

3.2.4 Only child status differences

As presented in Table 4, no significant statistical differences were found in gratitude, its dimensions, or the sense of life meaning and its dimensions based on only child status.

Table 4 Differences in Variables Among Only Children

	Only child(n=95)		Non-only child(n=175)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Gratitude	115.78	15.49	115.13	15.52	0.33
The absence of a sense of deprivation	43.62	9.36	42.17	9.60	1.20
Gratitude to society	40.20	8.53	41.43	7.15	-1.19
Gratitude for natural things	31.96	5.95	31.54	6.05	0.55
Sense of life meaning	45.03	9.44	46.39	8.56	-1.20
Meaningful	22.07	5.46	22.38	5.23	-0.46
Seeking meaning	22.96	5.55	24.01	5.63	-1.48

3.2.5 Family residence differences

Table 5 shows significant differences in the absence of deprivation based on family residence. Specifically, rural students scored higher in the absence of deprivation than urban students, with no significant differences observed in other dimensions.

Table 5 Test of Differences in Variables by Household Location

	Town(n=122)		Countryside(n=148)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Gratitude	114.21	16.82	116.30	14.28	-1.11
The absence of a sense of deprivation	41.14	9.67	43.95	9.24	-2.42*
Gratitude to society	41.11	8.63	40.91	6.82	0.21
Gratitude for natural things	31.97	6.26	31.45	5.80	0.70
Sense of life meaning	46.51	9.32	45.43	8.52	1.00
Meaningful	22.65	5.28	21.97	5.31	1.05
Seeking meaning	23.86	5.96	23.46	5.32	0.58

Note: * $p < 0.05$.

3.2.6 Leadership position differences

As indicated in Table 6, significant differences were found in gratitude, gratitude towards society, and gratitude towards nature based on whether students had held leadership positions. Specifically, students who had not held leadership positions scored significantly higher in these three dimensions than those who had served as student leaders, with no significant differences observed in other dimensions.

Table 6 Test of Differences in Various Variables Based on Whether One Serves as a Student Leader

	Served as a student leader(n=92)		Has never served as a student leader(n=178)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Gratitude	111.91	18.88	117.14	13.10	-2.38*
The absence of a sense of deprivation	42.00	9.07	43.03	9.76	-0.84
Gratitude to society	39.50	8.46	41.77	7.13	-2.32*
Gratitude for natural things	30.41	6.98	32.34	5.34	-2.32*
Sense of life meaning	45.09	9.91	46.34	8.31	-1.10
Meaningful	22.04	5.33	22.39	5.30	-0.51
Seeking meaning	23.04	6.25	23.95	5.25	-1.26

Note: * $p < 0.05$.

3.3 Correlation Analysis of Relevant Variables

As shown in Table 7, correlation analysis between gratitude, its dimensions, and the sense of life meaning and its dimensions revealed significant positive correlations between gratitude, gratitude towards society, gratitude towards nature, and the sense of life meaning and its dimensions.

Table 7 Descriptive Statistics and Correlation Analysis of Variables (n=270)

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Gratitude	115.36	15.48	-						
2. The absence of a sense of deprivation	42.68	9.53	0.585**	-					
3. Gratitude to society	41.00	7.67	0.732**	-0.047	-				
4. Gratitude for natural things	31.69	6.00	0.716**	-0.018	0.683**	-			
5. Sense of life meaning	45.91	8.89	0.471**	-0.042	0.596**	0.520**	-		
6. Meaningful	22.27	5.30	0.279**	-0.179**	0.517**	0.343**	0.802**	-	
7. Seeking meaning	23.64	5.62	0.483**	0.103	0.455**	0.499**	0.826**	0.326**	-

Note: ** $p < 0.01$.

3.4 Regression Analysis of Relevant Variables

A multiple regression analysis was conducted with gratitude and its dimensions as independent variables and the sense of life meaning as the dependent variable. In the regression equation, only gratitude towards society and gratitude towards nature had regression coefficients with significance levels below 0.05, indicating that these two factors could be included in the regression equation, while other factors were not significant and were removed. The final regression equation model had an R^2 of 0.374, explaining 37.4% of the variance in the dependent variable.

Table 8 Variance Analysis of the Regression Equation of Gratitude and Sense of Life Meaning

Model	Sum of squares	df	MS	F	p
Return	8058.616	2	4029.308	81.524	0.000
2 Residual	13196.424	267	49.425		
Total	21255.041	269			

As shown in Table 8, the regression equation's F value was 81.52, with a p-value < 0.001 , rejecting the null hypothesis and indicating the regression equation's validity for further analysis.

Table 9 Coefficient a of the Independent Variable in the Regression Equation

	B	Bata	t	p
(Constant)	14.550		5.779	0.000
Gratitude to society	0.523	0.452	6.839	0.000
Gratitude for natural things	0.313	0.211	3.199	0.002

Note: Dependent variable: Sense of life meaning

As shown in Table 9, the results of the stepwise regression method showed that both the constant and independent variables were significant in the regression equation, establishing the regression equation: Sense of Life Meaning = $14.550 + 0.523 * \text{Gratitude Towards Society} + 0.323 * \text{Gratitude Towards Nature}$. This indicates that the predictor variables positively predict the sense of life meaning, with gratitude towards society having the strongest predictive ability. A coefficient of 0.523 for gratitude towards society suggests that for each one-point increase in this dimension, an individual's sense of life meaning increases by 0.523 points. Similarly, a coefficient of 0.313 for gratitude towards nature indicates that when gratitude towards society remains constant, a one-point increase in gratitude towards nature leads to a 0.313-point increase in the sense of life meaning.

4 CONCLUSION

- (1) In gender difference tests, female students scored significantly higher than male students in gratitude towards nature, sense of life meaning, and meaning-seeking, with no significant gender differences observed in gratitude, absence of deprivation, or gratitude towards society.
- (2) In major difference tests, students majoring in humanities and social sciences scored significantly higher in gratitude towards nature than those in science, engineering, and arts, with no significant differences observed among other majors.
- (3) In grade difference tests, senior students scored significantly higher in gratitude towards nature and meaning-seeking than freshmen, sophomores, and juniors, while junior students scored significantly higher in the absence of deprivation than freshmen and seniors.
- (4) In family residence difference tests, rural students scored higher in the absence of deprivation than urban students, with no significant differences observed in other dimensions.
- (5) Whether students had held leadership positions significantly impacted gratitude, gratitude towards society, and gratitude towards nature, with students who had not held leadership positions scoring higher in these three dimensions than those who had served as student leaders.

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