

Loneliness and Its Related Factors Among College Students

Yongmei Hou^{1*}, Wanhui Huang², Yongxin Liang³

^{1,2}Department of Psychology, School of Humanities and Management, Guangdong Medical University, Dongguan, Guangdong, 523808

³Department of Biological Sciences, School of Life Sciences and Biopharmaceutics, Guangdong Pharmaceutical University, Guangzhou, 512017



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Corresponding author:

Yongmei Hou

Abstract

In order to know current status of college students' loneliness, and discuss main related factors, this paper adopts stratified random sampling method to select 819 undergraduates from 7 universities in Guangdong province, and investigates them according to UCLA Loneliness Scale (UCLALS), Simplified Coping Style Questionnaire (SCSQ), College Students Interpersonal Comprehensive Diagnostic Scale (CSICDS) and personal general situations questionnaire. Results show a. the total score of UCLALS, CSCQ and CSICDS of college students are respectively

44.07±6.97, .36±1.83 and 9.04±4.33; b. the SCSQ score, CSICDS score and UCLALS score of college students are of obvious pairwise correlation ($r=0.508\sim0.799$, $P<0.01$); c. according to multiple linear regression, SCSQ score, CSICDS score, grade, involvement in romantic relationship and majors are the five related factors for UCLALS score. In conclusion, the loneliness of college students are closely related to multiple factors such as school education, personal experience and psychological quality

Keywords:

Introduction

Loneliness is a painful experience that an individual undergoes when his/her actual social relation is obviously inferior to the expected status, and meanwhile, he/she feels not accepted due to isolation from others or lack of contact [1].

The influence of loneliness on individuals in each stage of life is shown in "∩" shape, and the peak is in the youthful days [2]. The young college students experience high-level loneliness universally. Almost every college student feels lonely, among them, the rate of medium or serious loneliness is 61.4~95.5% [3-6]. The loneliness could predict forwards the psychological and behavioral problems of college students such as smartphone addiction [3,7-8], distress in romantic relationships and sex [5], depression [9] and suicidal ideation [6]; and predict negatively mental health status [10] and subjective well-being [11]; the loneliness could reduce sleep quality [8,12-13], and increase morbidity and mortality rates of multiple diseases [12-13].

The loneliness of college students is a complex system comprising internal structure, vertical structure, and horizontal structure. The internal structure is one-dimensional common loneliness; the vertical structure contains short-term and long-term loneliness; and horizontal structure contains loneliness of development, life, social contact, teacher-student sentiment, romantic relationship, friendship, and kinship [14].

Factors relating to college students' loneliness are divided to demographic factors and social factors. The former contains gender [6-8,15], grade [5,7,15-17], major [7], only child or not [7], origin of student [5], family economic status [5], love life [5], sex life [5], parenting pattern [11] and media violence exposure degree [18], etc. In general, the loneliness of females is higher than that of males [6-8] (however, the opinion of Yan Weijia

[15] is opposite); the loneliness of sophomores and Juniors is obviously higher than that of freshmen and seniors [5,15-16] (but Zhou Li, Liu Jie [4,17] believed there is no grade

difference); students majoring in medicine or science and engineering feel more lonely [7]

(but Zhou Li, Liu Jie [4,17] believed there is no major difference); the loneliness of non-only-child is higher [7]; the loneliness of students from rural areas is notably higher than that of urban students [5,15-17] (but Zhou Li [4] did not agree to the difference of students' origin[4]); students not involved in a romantic relationship feel more lonely than those who are in love [5]; those with worse family economic status have higher loneliness [5]; those who have sexual experience feel more lonely than those who have not [5]; the media violence exposure degree could predict forwards the loneliness of college students [18].

The psychological and social factors of college students' loneliness are comprised of protective factors and risk factors. The former contains parents' relationship [6], father's emotional warmth and understanding [11], interpersonal adaptability [3], interpersonal trust [19], self-esteem [20], self-liking [17], core self-evaluation [21], friends support [21], subjective support [22], support accessibility [22], problem solving factor and appealing factor in coping method[23]. The risk factors are over-protection of farther [11], interaction anxiety [24], shyness [25], network social support [25], nervousness [10], attachment avoidance and anxiety in adult attachment [16, 25], social sensitivity of social skills [20] and perceived discrimination [21].

To sum up, former literature only involved several related factors about loneliness of college students but failed to reach consensus on roles of many demographic factors. That is because most of the studies adopted nonrandom sampling methods such as cluster sampling so the samples are not representative enough; related factors were also mostly selected by the empirical approach. They failed to deeply take account logic connection of various factors. For instance, although many psychological quality elements affect loneliness of college students, the loneliness is generated because interpersonal relation could not reach personal expectations. An interpersonal relationship is the direct reason of loneliness; the coping style is the treatment method adopted facing various life events, and directly and closely related to various psychological problems of college students [23]. Based on aforesaid analysis, we could use coping style and interpersonal relationships as the possible related psychological factors of college students' loneliness.

Objects and methods

Objects

Totally 900 college students from Guangdong Pharmaceutical University, Jinan University, Guangzhou Academy of Fine Arts, Guangdong University of Technology, Xinghai Conservatory of Music, Guangdong Sports Institute, and Guangdong University of Foreign Studies were selected by stratified random sampling method. Totally 819 effective questionnaires are recovered, with an effectiveness of 91.0%. Among the respondents, 435 are males and 384 are females; 256 are only-child and 563 are non-only-child; 502 are from urban areas and 317 are from rural areas; 231 are freshmen, 217 sophomores, 187 juniors, and 184 seniors. Their ages are 17~24, average 19.82 ± 1.52 .

Instruments

- UCLA loneliness scale (Revised UCLA Loneliness Scale-Version 3, UCLALS)

UCLALS is prepared by Russell, et al. (1978) and revised to the Chinese edition by Liu Ping [26]. It contains 20 items and adopts Likert 4-level scoring. Those with total score >44 are highly lonely, <28 are lowly lonely, while $28 \leq \text{score} \leq 44$ are medium lonely. In this study, the Cronbach's coefficient of the scale is 0.914.

- Simplified Coping Style Questionnaire (SCSQ)

SCSQ is prepared by Xie Yaning (1998) [27], and belongs to self-evaluation scale. It contains 20 items, involving different attitudes and measures probably adopted in daily life. It adopts Likert 4-level scoring, and provides four options of "not adopt", "occasionally adopt", "sometimes adopt" and "frequently adopt" (respectively with scores of 0, 1, 2, and 3). The difference value between active and positive coping style scale is the total score (coping style tendency); if the score is positive, the coping style turns to positive; if the score is negative, the coping style is negative; if the score is zero, the coping style is neutral. The Cronbach's coefficient of the scale is 0.889 in this study, and of positive and negative coping style scales is respectively 0.868 and 0.785.

- College Students Interpersonal Comprehensive Diagnostic Scale (CSICDS)

CSICDS is prepared by Zheng Richang (1999) [28] and used to measure degree of interpersonal relationship and behavior problems. It contains 28 items, which are divided to four dimensions respectively talking with people, making friends, dealing with people, and opposite-sex communication. It scores by "Yes-No" answer, Yes=1, and No=0. The higher the score is, the more serious the interpersonal relationship problem will be. According to total scores, people can be divided to three levels: little or no interpersonal communication problem (0~8 points), certain degree of interpersonal communication problem (9~14 points), and serious interpersonal communication problem (15~28 points). In this study, the Cronbach's coefficient of the general scale is 0.847, while of each sub-scale is about 0.784~0.825.

- Self-prepared questionnaire on general personal information

Totally 387 Chinese literature and 2361 English literature can be found by searching "loneliness of college students" in search engines such as CNKI, Wanfang Database, Baidu, Goggle, and Pubmed. Totally 11 items about "demographic factors of college students' loneliness" were formulated according to searching results, and then two items were deleted according to the results of three rounds of discussions with 9 college student representatives and 5 higher education workers representatives. After necessary revision, the final questionnaire covers nine aspects including "grade", "gender", "age", "origin of student", "university type", "major", "only-child or not", "family income", and "romantic relationship status".

Data processing

This paper adopts SPSS 20.0 to carry out statistical analysis on effective data; adopts descriptive statistics to calculate mean score and standard deviation of subjects in each scale; adopts Pearson product-moment correlation, independent sample *t*-test, and one-way ANOVA to discuss correlation among variables; applies multiple-linear regression to analysis on related factors of UCLALS total score.

Results

Descriptive statistics of total score and score of each factor in each scale

According to Table 1, the coping styles of students in this group are mostly neutral, and they have high-level loneliness and obvious interpersonal relationship problems.

Table 1 Descriptive statistics of total score and score of each factor in each scale

Dimension	Min	Max	M	SD	Number of items	Item mean score	Standard deviation of mean score for each item
Loneliness scale	24	72	44.51	7.87	20	2.23	.39
Positive coping	6	36	23.44	5.52	12	1.95	.46
Negative coping	0	22	10.26	4.16	8	1.29	.52
Coping style tendency	-5.32	2.55	-.22	1.50	20		
Conversation	0	7	2.53	1.81	7	.36	.26
Communication	0	7	3.32	2.05	7	.47	.29
Dealing with people	0	7	1.51	1.44	7	.22	.21
Opposite-sex communication	0	7	1.77	1.69	7	.25	.24
Total score of CSICDS	0	27	9.12	5.62	28	1.30	.80

Analysis on scores of each scale

Table 2 shows the total score of UCLALS is of obvious positive correlation with total score and scores of four dimensions in CSICDS, of negative correlation with total score of SCSQ (coping style tendency) and score of sub-scale of active coping, and of positive correlation with score of negative coping sub-scale. Total score and scores of four dimensions of CSICDS is of obvious negative correlation with score of SCSQ (coping style tendency) and active coping sub-scale, and of obvious positive correlation with score of negative coping sub-scale.

Variable 1	2	3	4	5	6	7	8	9	
1 Positive coping									
2 Negative coping		-.238**							
3. Coping tendency		.788**	-.786**						
4 Total score of loneliness		-.572**	.684**	-.799**					
5 Conversation		-.395**	.349**	-.473**	.576**				
6 Communication		-.235**	.379**	-.390**	.500**	.628**			
7 Dealing with people		-.295**	.319**	-.390**	.432**	.479**	.478**		
8 Opposite-sex communication		-.270**	.323**	-.376**	.398**	.531**	.565**	.426**	
9 Total score of CSICDS		-.369**	.429**	-.508**	.598**	.833**	.859**	.712**	.786**

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (similarly hereinafter)

Single-factor analysis of demographic variables for college students' loneliness

- Variable assignment

Firstly, the possible demographic variables (options) affecting total score of UCLALS will be assigned, as shown in Table 3.

Table 3 Variable assignment

Item	Option and assignment
1. Grade	0=Freshmen, 1= Sophomore, 2=Junior ,3=Senior
2. Gender	0=Male, 1= Female
3. Major	0=Science, 1= Engineering, 2= Literature, 3= Medicine, 4= Agriculture, 5=Education, 6= Law, 7= Art
4. University type	0=Comprehensive, 1= Engineering, 2= Normal, 3=Finance and economy, 4=Languages, 5= Medicine, 6= Agriculture, 7= Art
5. Only-child or not	0=No, 1=Yes
6. Family monthly income	0=RMB 0~4000, 1= RMB 4001~8000, 2=RMB 8001~12000, 3=RMB 12001 and above
7. Origin	0=Rural area, 1= City or town
8. Romantically involved or once romantically involved	0= Never, 1= Now, 2= Once

- Single-factor analysis of demographic variables for college students' loneliness

Single-factor analysis is applied to demographic variables affecting total score of UCLALS, as shown in Table 4.

According to Table 4, except the three factors of gender, origin of student, and university type which have no obvious influence on UCLALS total score, the other six items influence total UCLALS scale obviously ($r=-.086$, $P=.016$; $t/F = 2.170\sim 9.479$, averagely $p < 0.01$).

Table 4 Single-factor analysis of demographic variables possibly affecting total score of UCLALS

Item	r/t/F	P value
1. Age	-.086 .016	
2. Grade	9.479 < .001	
3. Gender	1.569 .117	
4. Only-child or not	2.170 .030	
5. Origin	1.945 .052	
6. Major	4.709 <.001	
7. University type	1.123 .326	
8. Family monthly income	4.488 .004	
9. Romantically involved or once romantically involved	3.907 <.001	

Multiple linear regression analysis (MLR) of factors regarding college students' loneliness

MLR is carried out with total score of UCLALS as dependent variable, and factors (including demographic variables, coping style tendency and total CSICDS score) possibly affecting total score of UCLALS obviously as independent variable. The result is in 95% confidence interval, as shown in Table 5.

According to Table 5, coping style tendency, CSICDS total score, grade, romantic relationship and major are related factors of UCLALS total score.

Table 3 Table 5 MLR analysis on main factors affecting total score of UCLALS

Dependent Variable	Independent Variables	B	SE	β	t value	P value	R ²	R _{adj} ²
UCLALS total score	Coping style tendency	-4.435	.112	-.673	-30.578	<.001	.509	.503
	CSICDS total score	.368	.032	.476	11.855	<.001		
	Grade	.378	.143	.440	-2.632	.009		

Romantic relationship	.558	.193	.399	2.895	.004
Major	.229	.102	.306	2.225	.024

Discussion

The total score of loneliness of college students in this group is (44.07±6.97), belonging to high-level loneliness. The result is consistent with former studies [3-6]. It shows college students feel lonely universally, and they lack intimate feelings in international communication. The mean value of coping style tendency of college students in this group is (.36±1.83), consistent with former research findings [23], showing their coping styles are largely neutral and lack of positive and active coping styles. Their total score of CSICDS is (9.04±4.33), the same as the study result of Zhang Yan [3], meaning obvious interpersonal relationship problems among college students.

This study finds that CSICDS total score positively predicts loneliness while the coping style tendency negatively predicts loneliness, consistent with research findings of Murphy and Li Xiaoling [23, 29]. The interpersonal relationship problems reflect worse interpersonal relationship, while worse adaptability, insufficient social contact skills, and worse interpersonal relationship are the major and direct reasons leading to loneliness

[1, 29]. Therefore, the more serious the interpersonal relationship problem is, the lonelier one will feel. Li Xiaoliang found mature coping style (solving problems and asking for help) negatively predicts loneliness, while immature coping styles are on the contrary [23], conforming to the result of this study. Since mature coping style (solving problems and asking for help) shows active interaction, it will increase interpersonal understanding and harmony and reduce loneliness.

Grade positively predicts loneliness of college students. The main development task in the college stage is to acquire intimacy and avoid loneliness [1], so compared to former development stages, college students are more sensitive to loneliness. However, due to psychological lockout, they are unwilling to express their deep thinking and concept to others. Such trend becomes more serious as they go to higher grade so that interpersonal communication becomes superficial and formal, and it is difficult to establish an intimate interpersonal relationship. Thus, they feel distant from people, resulting in stronger sense of loneliness. Love life is a risk factor for loneliness of college students. Those who are never romantically involved feel lonely the least, followed by those who are in love now. Those who were once in love feel lovely the most. The reason is lovers contact frequently so as to reduce their concern to other people (teachers, students, and even former best friends) virtually, and lower number and quality of friendship, narrow down the life cycle and generate loneliness thus. When it is unable to interact with lovers, individuals will feel lonelier due to psychological contrast (compared with the time when interacting with lovers).

Majors obviously predict loneliness of college students. In general, students majoring in science, engineering, and medicine feel lonelier than normal students, showing influence of education and

learning characteristics on personalities of students. The teaching of science, engineering, agricultural and medical majors pay more attention to preciseness and science, and mostly follows traditional apprentice education method and management mode in fixed place and time. Students mainly study by independent thinking or group discussion, and contact the most with instructors and classmates (although agricultural majors have many field experiments, the experiments are mainly finished by independent operation and group learning). With less time to making friends, they feel lonely more intensively. Relatively, students majoring in literature and education have more opportunities for social practices, and their learning modes are various including independent thinking and operation, group discussion, teacher-student discussion, basic-root service, and social investigation so that they may contact various people. With more opportunities to communicate and make friends, their loneliness is relatively less.

References

1. Cacioppo JT, Patrick W. Loneliness: Human nature and the need for social connection [J]. *Library Journal*, 2008, 19(3): 71-89.
2. Pinquart M, Sörensen S. Risk factors for loneliness in adulthood and old age- a meta-analysis [J]. *Advances in Psychology Research*, 2003, 19(15): 111-143.
3. Zhang Yan, Zhou Yangen, Pei Tao. Mediating effect of loneliness on relationship between interpersonal adaptation and mobile phone addiction in college students [J]. *Chinese Mental Health Journal*, 2015, 29(10): 774-779.
4. Zhou Li, Yu Shigang. Study on the loneliness of college students [J]. *Science of Social Psychology*. 2015, 30(11): 28-33.
5. Xie Hua, Peng Mingfang, Zhao Xue. Research into the loneliness in college students between their Love and sex [J]. *Journal of Ankang University*. 2015, 27(5): 107- 110.
6. Zhang Haixia. Relationship between stress life events, loneliness, and suicidal ideation among university students [J]. *Occupation and Health*. 2016, 32(14): 1976-1979.
7. Li Yange. Study on communication alienation and gregarious loneliness of college students [J]. *Journal of Wuhan Textile University*. 2015, 28(1): 75-79.
8. Li Li, Mei Songli, Niu Zhimin, et al.. Loneliness and sleep quality in university students: Mediator of smartphone addiction and moderator of gender [J]. *Chinese Journal of Clinical Psychology*. 2016, 24(2): 345- 349.
9. Dai Ge, Guo Wei, Wang Zhigang, et al.. The effect of college students' sense of loneliness on depression [J]. *Chinese Journal of Health Psychology*. 2017, 25(2): 297-299.
10. Yan Ming, Xu Ya, Zhao Dongwei. Relationship between family environment and mental health: Chain mediating

- effects of neuroticism and loneliness [J]. *Occupation and Health*. 2015, 31(13): 1821-1824.
11. Zhang Zhitao, Wang Jingqun, Liu Fen. Relationship between parenting styles, perceived social support, loneliness, and subjective well-being of undergraduates [J]. *Chinese Journal of Health Psychology*. 2012, 20(7): 1050-1082.
 12. Cacioppo JT, Hawkley LC, Crawford LE, et al. Loneliness and health: Potential mechanisms [J]. *Psychosomatic Medicine*, 2002, 64(3): 407-417.
 13. Kurina LM, Knutson KL, Hawkley LC, et al. Loneliness is associated with sleep fragmentation in a communal society [J]. *Sleep*, 2011, 34(11): 1519-1526.
 14. Huang Guoping, Yao Benxian. Preparation for questionnaire on loneliness of college students and testing of reliability and validity [J]. *Journal of Chizhou University*. 2015, 29(6): 86-91.
 15. Yan Weijia. Locus of control, social support, and loneliness of college students and relationship [D]. *Ludong University*. 2015, 06.
 16. Feng Chuande, Zhan Qisheng. Mediating effect of emotional intelligence on relationships among adult attachment and loneliness in college students [J]. *Chinese Journal of Mental Health*. 2015, 29(8): 630-632.
 17. Liu Jie. A Research on the Relationship among Self-esteem, loneliness, social anxiety and internet relationship dependence [D]. *Harbin Normal University*. 2015, 06.
 18. Li Shiqiang, Sun Ling, Li Ji. Relationships between exposure to media violence and loneliness in college students [J]. *Studies of Psychology and Behavior*. 2015, 13(3): 361-366.
 19. Wang Yu, Zhang Lihong, Qiao Yiyuan, et al.. Study on relevance between interpersonal trust and loneliness of college students [J]. *Journal of Qiqihar University of Medicine*. 2017, 38 (8): 951-954.
 20. Chen Hailong, Peng Runyu. Relationship among loneliness, self-esteem, and social skills of college students [J]. *Science of Social Psychology*. 2014, 29(1):52-56.
 21. Xie Qili, Wan Rong, Zhang Rui, et al.. Perceived Discrimination and Loneliness among the rural impoverished college students: The mediating effect of core self-evaluation and friends-support [J]. *Psychological Development and Education*. 2016, 32(5): 614-622.
 22. Zhang Yuding, Xu Bibo. Correlations of college students' adult attachment, social support, and loneliness [J]. *Journal of Ningbo University (Educational Science Edition)*. 2014, 36(1): 9-13.
 23. Li Xiaoling, Tang Haibo, Ming Qingsen, et al.. Relationship between loneliness and self-harmony: Mediating role of coping styles [J]. *Chinese Journal of Clinical Psychology*. 2014, 22(3):530-532.
 24. Guan Haoqi, Chen Lilan. Mobile phone addiction and loneliness among college students: The mediating effect of interaction anxiety [J]. *Chinese Journal of School Health*. 2015, 36(8): 1164-1170.
 25. Luo Qing, Sun Xiaojun, Tian Yuan, et al.. Relationship between shyness and loneliness of college students: moderating effect of network social support [J]. *Educational Research and Experiment*. 2016, (3):87-90.
 26. Wang Xiangdong, Wang Xilin, Ma Hong. Rating Scales for Mental Health (Expanded Edition) [M]. Beijing: *Chinese Journal of Mental Health*, 1993: 284-287.
 27. Xie Yaning. Preliminary study on Reliability and Validity of Simplified Coping Style Questionnaire [J]. *Chinese Journal of Clinical Psychology*,1998(02):53-54.
 28. Zheng Richang. *Psychological Diagnosis for College Students* [M]. Jinan: Shandong Education Press, 1999: 324-339.
 29. Murphy pm, Kupshik GA. Loneliness, stress, and well-being: a helper'guide [M]. New York: Tavistock Routedge. 1992.