

The Effect of Perceived Social Support on High School Students' Death Anxiety under the Long-Term City Closure under the COVID-19——Take Ji'an No.1 Middle School as an Example

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Abstract: The COVID-19 epidemic outbreak has had a profound impact on all aspects of daily life and has caused anxiety worldwide. The purpose of this study was to investigate the current situation of death anxiety among high school students and its relationship with social support. In this study, 552 questionnaires (221 males and 331 females) were collected from five classes of students in Ji'an No. 1 Middle School, and the questionnaire was distributed according to the principle of convenience sampling. Statistical analysis of the data by SPSS, the subjects had high death anxiety scores ($42.74 \pm 9.07 > 35$), and there was a significant negative correlation between apprehending social support and death anxiety ($r = -0.096, p < 0.05$), where there was a significant negative correlation between the family dimension and other dimensions of social support (strangers, government, etc.) and the level of death anxiety of high school students ($r = 0.097, p < 0.05$; $r = -0.106, p < 0.01$), and perceived support negatively predicted death anxiety. Death anxiety among high school students in home isolation during the COVID-19 epidemic is not optimistic, and increasing social support, especially other government-type support and family support, can alleviate their anxiety.

Keywords: Death anxiety; Perceived social support; High school students; COVID-19

1. Introduction

The spread of the covid-19 epidemic, which first appeared as a strong death threatening event (Chen Xiaoman, Yao Suyang, and Huang Rui, 2021)[1], has greatly increased people's perceived emotional experience of death. Death Anxiety is an emotional state of fear or dread that arises when individuals are reminded of the inevitability of death (Zhang Xiangkui, Guo Juan, Tian Lumei, 2005)[2]. The threat of death is the most fundamental and pervasive source of adaptive and defensive mechanisms in human beings, and death is an inherent and insoluble adaptive problem, and death anxiety exists in both conscious and unconscious forms, as pointed out by Yalom (2000)[3]

Death anxiety is a complex psychological state that changes constantly with time, transforms in the surrounding environment, and major events that happen to oneself. It is also influenced by a variety of factors, such as gender, age, religious beliefs, geography, and self-esteem, which are all factors that affect individuals' death anxiety. According to a review by Kong Yaya et al. (2021)[4], research on death anxiety has been increasing year by year, and there are more studies on the Seniors, self-esteem, and death attitudes. The study by Xue Dini and Liu Tuo (2021)[5] showed that the relationship between different media content and positive or negative emotions differed, and thus differentially predicted the level of death anxiety; Chen Xiao-man et al. (2021) [1] showed that death anxiety contributes to some extent to material looting, and conformity can affect the relationship between the two; and in another study by Chen Xiao-man et al. (2021),[6] it was found that girls were more likely to have death anxiety than boys in epidemics, and that death anxiety leads to feelings of self-uncertainty; Zhao Xia et al. (2021) [7] also found that death anxiety among elderly caregivers during the epidemic was not optimistic.

Perceived social support is an individual's subjective perception and evaluation that he or she is supported, understood, and respected by the outside world. The exploration of perceived social support has also deepened under the COVID-19 epidemic. Lu Xiao-hua et al. (2022)[8] found that increased

social support was effective in coping with stress and that social support worked on stress through the mediating role of shame and loneliness; Dai Zhen-wei et al. (2022)[9] found that the level of mindfulness improved the psychological well-being of undergraduate nursing students through the mediation of direct effects and perceived social support. The social support buffering model suggests that perceived social support can inhibit or buffer the negative effects of stressful events on individuals (Lu Xiao-hua et al., 2022). [8]Most previous studies have shown that social support has a mitigating effect on death anxiety, but some studies have also suggested that social support may be transformed into stress, which in turn may exacerbate death anxiety in individuals (Peng Yun-shi et al., 2017).[10]

Relatively few previous studies have been conducted on death anxiety and perceived social support among high school students. The city of Ji'an was at risk for the epidemic at the time of this study, and the city was basically closed to the public and residents were quarantined at home, so that residents were not allowed to go out and had to wait for volunteers to distribute food packages. Accordingly, this study proposes the following hypotheses: 1: death anxiety among high school students in Ji'an City is at high level under the COVID-19 epidemic; 2: perceived social support among high school students is significantly negatively related to the level of death anxiety under the epidemic and has a negative predictive effect.

2. Method

2.1. Design

Using questionnaires. The Chinese version of Templer's death anxiety scale (CT-DAS) was selected to measure the degree of death anxiety of the subjects, and the 2001 version of the Perceived Social Support Scale (PSSS), a scale developed by Jiang Qianjin, was used to measure the degree of perceived social support of the subjects.

2.2. Subjects

Five classes of high school students were selected in the first and second year of Ji'an No.1 Middle School using convenience sampling method. A total of 552 valid questionnaires were collected by excluding 48 invalid questionnaires. The subjects' ages were distributed from 15 to 18 years old, including 221 males (40.04%) and 331 females (59.96%), of which 253 (45.83%) were in the first year of high school and 299 (54.17%) were in the second year of high school. The information of the seniors was not collected because of the imminence of the college entrance examination and the fear of affecting them.

2.3. Measurement instruments

2.3.1. Self-designed demographic questionnaire

The general information form included age, gender, grade, and from town or countryside, etc.

2.3.2. Chinese version of the CT-DAS

The study used the Chinese version of the Death Anxiety Scale (T-DAS) developed by Yang Hong (2011)[11] after cross-cultural adaptation of the Templer's Death Anxiety Scale (T-DAS). There were 15 items, 9 of which were scored positively and 6 (items 2, 3, 5, 6, 7, and 15) were scored negatively. In this study, the CT-DAS was scored according to Yang Hong's (2013)[12] study, and the scale was changed to a Likert five-point scale following the criteria of the later version of the T-DAS. The scores ranged from "strongly agree, somewhat agree, not sure, not quite agree, and strongly disagree". The total score ranges from 0 to 75, with the higher the score, the higher the level of death anxiety, based on the yes/no version of the scale. The high score standardized five-point scale was defined as high death anxiety with a score of 35. The Cronbach's alpha coefficient for this scale in this study was 0.821.

2.3.3. This study used the 2001 version of the Perceived Social Support Scale (PSSS)

PSSS developed by Jiang Qianjin, which has good reliability and has been used by most researchers. The scale was originally developed by foreign scholar Zimet in 1987, and used 12 items to measure the degree of support from family, friends, and others. In the adaptation process, Jiang Qianjin changed the source of support from "leaders, relatives, and colleagues" to "teachers, classmates, and relatives" to measure the support from family, friends, and others (teachers, classmates, and relatives). The scale

measures the level of social support with a total score, and the higher the score, the higher the level of social support the individual feels. Family support includes items 3, 4, 8, and 11, friend support includes items 6, 7, 9, and 12, and other support includes items 1, 2, 5, and 10. The scale is a 7-point scale, with options transitioning from 1=strongly disagree to 7=strongly agree, with 1 being scored as 1, 2 as 2, and so on for each subscale. The Cronbach's alpha coefficient for this scale in this study was 0.937.

2.4. Statistical methods

SPSS 25.0 statistical software was used for data entry and statistics. Independent samples t-test, Pearson correlation, and linear regression were used for analysis.

3. Results and analysis

3.1. Common method bias test

Harman's one-way test was performed using SPSS25.0. The results showed that there were five factors with characteristic roots greater than one, and the variance explained by the first factor was 27.99%, which was less than the critical value of 40%. Therefore, there is no serious common method bias in the data of this study.

3.2. Descriptive statistics of variables

Table 1: Descriptive statistics of death anxiety and comprehension social support

	N	Scores of Death anxiety		Scores of Perceived social support	
		M	SD	M	SD
Male	221	44.45	8.99	56.48	14.51
female	331	41.60	8.96	57.72	13.43

As shown in Table 1, male high school students had higher mean values of death anxiety than female high school students, and there was no significant difference between death anxiety and perceived social level in urban and rural areas, gender, and grade level ($p=0.415$; $p=0.756$; $p=0.832$). There were significant differences in the scores of questions 4, 6, 9, and 15 on the Death Anxiety Scale by gender ($F=9.89$, $p<0.01$; $F=9.86$, $p<0.01$; $F=10.78$, $p<0.01$; $F=5.30$, $p<0.05$); there were no significant differences in the scores of questions "I can get emotional help and support from my family when I need it" on the Perceived Social Support Scale by gender ($F=9.89$, $p<0.01$; $F=9.86$, $p<0.01$; $F=10.78$, $p<0.01$; $F=5.30$, $p<0.05$); ($F=3.95$, $p<0.05$); the question "I can get emotional help and support from my family when I need it" on the Appreciative Social Support Scale had significant urban-rural differences ($F=3.95$, $p<0.05$).

3.3. Variable correlation analysis

Table 2: Analysis of high school students' death anxiety related to perceived social support

	1	2	3	4	5
1 Death anxiety	—				
2 Perceived social support	-0.096*	—			
3 Social support in the family dimension	-0.097*	0.871**	—		
4 Social support in the friend dimension	-0.038	0.853**	0.582**	—	
5 Other dimensions of social support	-0.106**	0.912**	0.711**	0.727**	—

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

Table 2 shows that there was a significant negative correlation between perceived social support and death anxiety ($r=-0.096$, $p<0.05$), where social support in the family dimension was significantly correlated with death anxiety ($r=0.097$, $p<0.05$); social support in other dimensions (e.g., strangers, colleagues, government) was strongly and significantly negatively correlated with death anxiety ($r=-0.106$, $p<0.01$); while social support in the friend dimension was not significantly correlated with death anxiety.

3.4. Variable regression analysis

Table 3: Regression analysis of perceived social support and death anxiety

	B	SD	F	ΔR^2	t	P
perceived social support	-0.063	0.028	5.100	0.009	-2.258	0.024*

In Table 3, the linear regression analysis showed that there was a significant linear relationship between perceived social support and death anxiety level ($p=0.024<0.05$), and the regression equation was $y=46.330-0.063x$, which negatively predicted the level of death anxiety.

4. Discussion

Many features of the COVID-19 epidemic are associated with death anxiety, which is considered a threat to human survival (Özgüç Safiye et al., 2021) [13] and can cause people to experience death, and high school students, as the cornerstone of the future development of our country, should be given special attention to their psychological condition. Russac, Gatliff, Reece and Spottswood (2007) [14] found that death anxiety is higher in adolescents than in adults, with a peak in death anxiety around age 20. This study confirms that death anxiety among high school students in the epidemic closure state is not optimistic, which is consistent with the research findings of Özgüç Safiye (2021)[13] and others: death anxiety was relatively high during the COVID-19 epidemic; male high school students had higher levels of death anxiety than female high school students, which is different from most previous studies; there were no significant differences in death anxiety by grade, urban and rural areas, and gender, indicating that high school students in both urban and rural areas were in a similarly high level of death anxiety during the epidemic closure state. There was no significant difference in death anxiety by grade, urban and rural areas, and gender, indicating that both urban and rural high school students were in a similar high level of death anxiety under the situation of epidemic closure and control; perceived social support was significantly negatively correlated with death anxiety and could predict the level of death anxiety, whereas the family dimension of perceived social support, and other dimensions of social support (e.g., strangers, colleagues, government, etc.) were significantly correlated with death anxiety, implying that family support had an important influence on death anxiety of high school students; the role of government and other people's support should not be underestimated. During the closure of the city, the death of others will undoubtedly also aggravate people's death anxiety, which warns us to intervene and guide the emotional state of high school students in time and strengthen death education.

From the data, we can find that the level of perceived social support among high school students in Ji'an is medium to high. We learned from the interviews that due to the small geographic space and high frequency of interpersonal interactions in Ji'an, many people provided help (food, shelter, etc.) to volunteers and related personnel online and through friends during the epidemic closure; the government distributed free basic grocery packs to residents; and citizens actively signed up as volunteers, which greatly increased the perceived social support level of high school students and suppressed the growth of death anxiety.

5. Shortcomings and perspectives

Shortcomings: The questionnaire of this study was distributed online, which could not 100% ensure the accuracy and authenticity of the completed questionnaire; the outbreak was sudden, and it was not possible to measure death anxiety before and after.

Prospective: This study is a survey study based on the sudden outbreak condition in Ji'an City, and based on this study, we can also conduct another survey on high school students who resume normal life and study after the end of home isolation to examine the different situations in the two conditions and to prepare a defense basis for future major events.

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